LOOSE TO TIGHT COUPLING:

THE CAUSES AND CONSEQUENCES OF ORGANIZATIONAL STRUCTURE ON SCHOOLS, TEACHERS, AND STUDENTS, 1987-2007

by

MARIA THERESE PAINO

(Under the Direction of Linda Renzulli)

ABSTRACT

For decades, educational scholars have claimed that public schools are loosely coupled organizations, but research does not fully address how schools create the coupling structure. This dissertation addresses the causes of coupling, before turning to the consequences tight coupling has on both teachers and students. Throughout the dissertation, I rely on perspectives of neo-institutionalism and coupling to address three empirical questions: (1) how do federal policy, state characteristics, local factors, and principal attributes affect school-level couplings? (2) How do federal policy eras, state characteristics, local-level coupling, principal attributes, and teacher characteristics affect the formal relationships between principals and teachers? And (3) how does tight coupling in schools affects teachers' social bonds and student deviance at the school-level? Utilizing six waves of the Schools and Staffing Survey (SASS), I rely on OLS regression and fixed effects regression models to analyze my research questions. At the school-level, findings suggest three major influences on coupling within schools. First, federal policies

have had a non-linear effect on school-level coupling. Second, the relationship between the district and the school affects school-level coupling. Finally, principals play a key role in shaping the coupling within the school, and coupling is a gendered process. At the teacher-level, my results suggest that teachers who instruct in tested subjects report tighter coupling than those who teach in non-tested subjects. Further, the gender combinations of principal and teacher are important for understanding how teachers experience different degrees of loose-to-tight coupling. The final empirical chapter investigates the consequences of tight coupling for teachers and students at the school-level and draws upon insights from social control theory. Findings suggest negative effects for both teachers and students. First, tight coupling increases deviance among students within the school. Second, strong occupational social bonds among teachers reduce student deviance. Finally, tight coupling weakens teachers' occupational social bonds.

INDEX WORDS:Tight Coupling, Loose Coupling, Neo-institutionalism, Gender,Educational Policy, Social Control Theory, Teachers, Students, Deviance

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DEDICATION

For my Granny, Eileen Margaret Smith

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CHAPTER 1

INTRODUCTION

Teachers desire autonomy, control, freedom, and loose coupling in their classrooms (Ingersoll 2003; Lee, Dedrick and Smith 1991). After years of professional training in higher education, teachers expect to have control over their own classrooms, and believe that principals should trust in their abilities and training. Not only do teachers want the freedom to teach as they see fit, they believe each classroom is a unique learning environment that requires individualized instruction and attention. Recent research suggests that times have changed, and gone are the days when teachers could close the proverbial classroom door and teach using tactics, techniques, materials, and approaches they deem valuable for their classroom. But have schools really changed over time? Or, does recent research emphasize tight links between principals and teachers, even though schools largely look the same over time? If schools have changed, then who or what is responsible for the change? A small snapshot in time cannot truly answer this question. And if schools have changed, understanding the effect on teachers and students is crucial for educational research. Throughout this dissertation, I address these questions, and shed light on organizational processes of coupling.

Historically, educational scholars have agreed that schools are loosely coupled organizations, meaning that the sub-parts of the schools are linked and responsive, but largely remain autonomous (Bidwell 2001; Coburn 2004; Gamoran and Dreeben 1986; March and Olsen 1976; Rowan 1990; Weick 1976). This assumption has persisted since the 1970's. In fact, schools' loose coupling label is so pervasive that schools have become the archetype of loose

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coupling, and are often used as an example to portray the ideal-type of loosely coupled organizations. However, recent research calls the loose coupling model of schools into question, and suggests that schools may be tightening up the internal coupling (Hallett 2010; Rowan 1990).

The vast majority of research on schools' coupling looks at consequences of loose coupling. Specifically, research underscores why loose coupling is ideal (Cohen and March 1974; March and Olsen 1976; Meyer and Rowan 1977; Rowan 1981; Sauder and Espeland 2009), why teachers prefer loose coupling (Ingersoll 2003; Lortie 2002), and how teachers attempt to regain a loosely coupled structure when faced with threats to loose coupling (Coburn 2004). More recently, sociologists note that tight couplings produce turmoil (Hallett 2010). And while researchers speculate on the causes and origins of the coupling, there is a paucity of research that investigates how schools develop different levels of coupling (Diamond 2007; Rowan and Miskel 1999; Scott 2001; Young 2006). Scholars typically attribute tight couplings to federal policies, state accountability mandates, or local curriculum decisions (Hallett 2010). In essence, multiple levels of the public education system are charged with producing and maintaining couplings, with much attention focused on the role of high stakes accountability reforms handed down from various levels of the government in recent years (Coburn 2004; Diamond 2007; Elmore, Abelman and Furman 1996; Hallett 2010; Spillane and Burch 2006). These speculations, however, challenge findings in educational policy research that support the image of classrooms disconnected from the institutional environment (Eagly and Johnson 1990; Gilbertson 1981; Gross and Trask 1976; Pitner 1981; Shakeshaft 1987). Moreover, educational research on coupling is overwhelmingly dominated by qualitative analyses, case studies, or small-scale quantitative analyses limited to several states or districts (Aurini 2012; Coburn 2004;

Darling-Hammond and Wise 1985; Diamond 2007; Floden et al. 1988; Gamoran and Dreeben 1986; Hallett 2010; Rosenholtz 1987; For an exception see Ingersoll 2003).

Using quantitative analyses, and a representative national sample of schools, my research questions are broadly based: First, how does the institutional environment affect organizational structures for schools and teachers? And second, how do social forces, particularly within schools, influence outcomes for their actors such as school deviance and occupational bonds? This dissertation addresses three empirical questions: (1) how do federal policy eras, state characteristics, local factors, and principal attributes affect school-level couplings? (2) How do federal policy eras, state characteristics, local-level coupling, principal attributes, and teacher characteristics affect the formal relationships between principals and teachers? And (3) how does tight coupling in schools affect teachers' social bonds and student deviance at the school-level?

Regardless of whether or not the organization of schools has actually changed over time, recent federal policies, such as No Child Left Behind (NCLB), are widely criticized as harming the environment of schools (Cochran-Smith and Lytle 2006; Le Floch, Taylor and Thomsen 2006; Mathis 2003; Orlich 2004; Valli and Buese 2007; Weeden 2005). Believed to have the largest impact, federal policies are criticized for not taking individual classroom or school needs into consideration when imposing academic accountability standards. NCLB is not the first federal level policy for US public schools, however, and previous federal policies (e.g. Elementary Secondary Education Act – ESEA) had similar academic goals. Federal policy eras could be crucial to our understanding of schools, but studying schools within one federal policy era, such as NCLB, is not enough to indicate whether or not federal policy eras lead to change within schools. In order to truly determine whether or not federal policies *have* changed schools

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over time, analyses of schools' organization must consider a time period long enough to encompass multiple policy eras.

This dissertation highlights the federal policy eras over the last several decades. I trace federal policy eras from *A Nation at Risk*, through the re-authorization of the Elementary Secondary Education Act (ESEA) as the Improving America's Schools Act (IASA), and up to No Child Left Behind (NCLB). Federal policies garner the most attention from media, policy-makers, and even lay-people, but educational research fails to consider how multiple federal policy eras affect coupling of schools.

Despite the fact that the majority of educational research on coupling underscores the outcomes that arise due to tight couplings, this dissertation also contributes to that dialogue by examining the relationship between tight coupling and teachers occupational bonds and student deviance. After determining the sources and origins of tight coupling within schools, I specifically analyze *how* tight coupling has an impact on two of the most important groups located within schools – teachers and students.

In order to test the research questions in this dissertation, I rely on a theoretical foundation of neo-institutionalism and a coupling perspective. These theories provide the scaffolding for the entire dissertation. In addition to coupling and neo-institutionalism, I supplement the theoretical framework with multiple theories found in vastly different literatures. First, I borrow from social psychological work on legitimacy. Legitimacy is a central theme in organizational research, and social psychologists have contributed to our understanding of legitimacy among individuals. Blending these theoretical perspectives is appropriate for this dissertation, where I examine contributors of school-level coupling, but also consider how individuals within schools, such as principals, shape the couplings within schools.

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In the final empirical chapter of this dissertation I address how tight coupling influences student deviance and teachers' relationship to the occupation of teaching. For this chapter, I buttress the theories of neo-institutionalism and coupling with a criminological theory – social control theory. Organizational theorists predict that tight coupling will produce chaos, disorganization, and negative outcomes for the organization and the organizational actors. Criminologists and scholars of deviance make predictions about how and why deviance occurs in particular contexts. The joining of these two divergent theoretical perspectives is ideal for this dissertation because each theory addresses the gaps of the opposing theory. The combination of these theoretical perspectives enhances our understanding of coupling, deviance, and social bonds.

Organization of Dissertation

My dissertation is organized into eight distinct chapters. In chapter 1, I introduced the major problem, my research questions, and outline the goals and objectives for the dissertation. Chapter 2 sets up the theoretical framework of loose coupling and neo-institutionalism. I rely on these two theories for the sum of the dissertation, and while I supplement these theoretical foundations with other theories in later chapters, neo-institutionalism and coupling are central to this research. Neo-institutionalists have carefully improved the theory of neo-institutionalism over many years, but coupling remains a somewhat vague concept for organizational scholars. Thus, chapter 2 revisits the many terms associated with coupling (e.g. loose coupling, tight coupling, recoupling, decoupling), and clearly delineates what each term means for this dissertation. Chapter 3 traces the history of federal policies over the last few decades, highlighting the standards based reform movement. I revisit *A Nation at Risk*, the

reauthorization of the Elementary Secondary Education Act (ESEA), and No Child Left Behind (NCLB). This chapter provides a background on federal level policies and helps place the findings from this dissertation in context. In chapter 4, I discuss the data I use for the analyses and summarize the variables for each empirical chapter. I also highlight the structure of the data and exclusions from this study. Chapter 5 addresses how multiple levels of the public education system contribute to tight coupling at the school level. Chapter 6 is very similar, although it focuses on individual teachers. In Chapter 7, I concentrate on the consequences of tight coupling for both teachers and students. I assess the relationship between tight coupling and student deviance at the school level, and I analyze the effects of tight coupling on teachers' occupational social bonds. Chapter 8 concludes the dissertation and summarizes the major findings, reiterates the empirical limitations, discusses the practical implications, and remarks on theoretical insights.

CHAPTER 2

THEORY

Educational scholars have described schools as loosely coupled organizations for decades (Bidwell 2001; Coburn 2004; Gamoran and Dreeben 1986; March and Olsen 1976; Rowan 1990; Weick 1976). Organizational scholars of coupling and neo-institutionalism generally agree that schools function well because they rely on loose coupling. Scholars suggest that loose coupling protects individuals and sub-units of an organization during times of uncertainty (Weick 1976). The internal structure of a school can affect individuals who work or are associated with the organization (e.g. teachers, students). The traditional conceptualization of schools as loosely coupled organizations could be outdated, and if couplings are changing, then educational scholars need to understand *how* and *why* schools develop couplings, and how those couplings affect individuals associated with public schools.

Organizational theories help scholars understand and explain phenomena occurring within an organization or the institutional environment. In this dissertation I first draw on insights from the theoretical foundation of institutionalism, a perspective that speaks to why organizations look alike and how organizations adopt formal policies that comply with institutional requirements. Second, I consider the concept of loose coupling, a perspective that helps explain how and why organizational activities are not always closely linked. Theoretically, loose coupling is not novel and tenets of institutional theory address organizational motivations to loosely couple activities. Compared to its theoretical contemporaries, however, the concept of loose coupling is far more ambiguous, more difficult to define, and harder to analyze empirically due to the lack of a consistent theoretical foundation. Together, I use these macro frameworks to examine how the institutional environment affects the organizational structure of school and how the organizational structure of schools affects teachers and students.

Throughout this dissertation, I draw on multiple theoretical frameworks to inform each empirical chapter. But, I dedicate this theory chapter to organizational foundations of neoinstitutionalism and organizational coupling because they are important and relevant for each of the three empirical chapters in this dissertation. I use neo-institutionalism and coupling first to understand precipitating factors in how schools create their organizational structures. Second, I examine how teachers differentially experience the organizational structure within their schools. Third, and finally, I use theories of neo-institutionalism and coupling to identify how the organizational structures influence student deviance at the school level.

Neo-Institutionalism

I use neo-institutionalism to set up the theoretical structure of this dissertation because it helps explain how organizations adapt in response to environmental pressures. Theoretical principles of neo-institutionalism lend themselves to incorporating a perspective of loose coupling. I only briefly outline neo-institutionalism in this section because the background of the theory is important but it is not the primary focus of my theoretical foundation. Neoinstitutionalism is consistently applied in studies of education or schools and has premises that help me think about the organizational concept of coupling.

Neo-institutionalism is a theory of adaptation, specifically, adaptation in the context of an uncertain environment (DiMaggio and Powell 1983; Meyer and Rowan 1977). This perspective on organizational behavior argues that activities within an organization are predicated on

political and social pressures which impart legitimacy (Meyer and Rowan 1977; Scott 1987), and relies on the assumption that organizations can modify internal structures in order to survive. Institutional theorists contend that the institutional environment can deeply affect the creation of formal structures within an organization (Meyer and Rowan 1977). Early adopting organizations of innovative structures that improve efficiency of an organization become legitimized in the environment, and those organizations failing to adopt this structure are viewed as "negligent" or "irrational" (Meyer and Rowan 1977). For example, if schools choose to report school-wide academic achievement scores in an online format for parents and community members then they may be more likely to receive benefits as a result. Neo-institutionalists would then predict that all schools will adopt this form of organizational behavior, in order to maintain legitimacy and public support. In some cases, the formal structure becomes a legal mandate, in which case the organizations have no choice but to adopt the structure regardless of efficiency, but the organizations are viewed as effective and legitimate organizations of their form (Meyer and Rowan 1977). New policies (e.g. NCLB) could impose rules that all schools must publicly report school-wide achievement data, resulting in a systematic and widespread change among all public schools.

Meyer and Rowan (1977) purport that formal structures of organizations signal the demands of their activities. Moreover, they reflect the "institutional myths" of the environment and organizations ceremoniously adopt these myths in order to garner and maintain legitimacy. Ideas of structure are rooted in societal values. Specifically, organizations will implement the "vocabularies of structure" (i.e. using legitimate words) established within their environment (e.g. specific job titles, procedures or policies, organizational roles). If schools wish to retain funding assistance and community support, then they will be more likely to make the reported

test scores easy to understand, or even employ individuals to assist teachers in their endeavors to collect and report achievement data. The acceptance and exhibition of these institutionally preferred "trappings of legitimacy" assist in protecting the impression of organizational action based on "good faith" (DiMaggio and Powell 1983). Thus, acquiring legitimacy in the institutional environment helps secure organizational survival.

Neo-institutional theorists further assert that formal structures of legitimacy may diminish efficiency and encumber the organization's ability to compete within their technical environment. But, institutional myths are based on the assumption of rational effectiveness (DiMaggio and Powell 1983; Meyer and Rowan 1977). For example, if teachers devote too much time to data collection and reports then it is possible that lesson planning will take a backseat, since time is zero-sum. In order to decrease the negative impact, organizations will frequently decouple their core activities from the structures of legitimacy. For instance, organizations will decrease, or altogether abandon, evaluation in an effort to sustain their external image that prominently displays the formal structures of legitimacy (DiMaggio and Powell 1983). In my previous example of achievement data reports, if teachers only report general averages in order to meet guidelines then they could preserve ideal activity structures. This creates a gap between formal structures and actual activities within the organization. In doing so, the organization protects its efficiency, through decoupling, while simultaneously communicating effectiveness and legitimacy.

Institutional pressures create homogeneity of organizational structures within the institutional environment. The acceptance and implementation of structure increases isomorphism within the population. Coercive isomorphism occurs when an organization responds to pressures from other organizations upon which they are dependent, or to the cultural

expectations within society. Pressures can manifest in the form of legal mandates, political or governmental orders and incentives, or more general social pressures of conformity (i.e. environmental friendliness given recent green movements). For instance, coercive isomorphic pressures (e.g. state or federal level accountability) on schools could certainly result in a change in practices within the school (e.g. teaching to the state test) due to the abundance of oversight and dependence on financial assistance from external sources. Thus, organizations progressively conform in order to satisfy external organizations or institutional movements. Such isomorphic pressures imply a tight link, or coupling, between organizational processes and behaviors.

Using a theory of neo-intuitionalism is consistent with previous research on systems of educational organization (i.e. Brint and Karabel 1991; Renzulli 2005; Rowan 1982; Weick 1976). Research within the new institutionalism perspective of organizational theory generally rejects the idea that the market and efficiency are powerful forces behind organizational change (Brint and Karabel 1991). Rather, this line of research posits that organizational change is predominantly driven by an attempt to generate and maintain a legitimate presence within a society that possess public opinion, knowledge, and embedded values about what organizations should look like. These tenets contribute to explanations of "loose coupling" between formal organizational structures and concrete activities (Brint and Karabel 1991; Weick 1976). Meyer and Rowan (1977) use educational systems as their archetypical example of how organizations are "order-affirming" rather than "task-performing" systems. Rowan (1982) studied public school structures given the context of the institutional environment, and finds that public school structures develop from a set of institutional norms which leads to organizational isomorphism with regard to the norms, values and "technical lore." He finds that districts possessing agreeable relationships among schools, the government, and regulatory agencies are more likely

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to experience a stable dispersion of innovations. In districts where agreeable relationships do not exist, innovations move much more slowly and are largely unstable (i.e. uncertain). Moreover, Rowan (1982) asserts that the loss of support from the institutional environment will result in the desertion of previously reputable norms.

Brief History of Coupling

The concept of loose coupling originated when organizational studies that relied on alternative theoretical foundations failed to explain observed findings in organizational behavior and structure (Lutz 1982; Thompson 1967). Orton and Weick (1990:203) refer to loose coupling as a "linguistic Trojan horse," because the concept of loose coupling occurred prior to the theoretical development. Scholars discovered a common theme in organizations. Systems worked together, but remained largely separate from one another in daily decisions and movements. The tie that keeps the two systems linked is often a shared vision or organizational goal, rather than constant connectivity or persistent interdependence. Where other organizational theories fail to explain these occurrences, loose coupling gives a name and understanding to the oft present organizational structure.

Loose coupling is likened to other organizational conceptualizations such as organized anarchies or garbage can organizations which encompass flexibility among subunits, allowing the organization a greater chance of survival (Lutz 1982). A model of loose coupling is often presented in studies of educational organizations due to their unique hierarchy and product (i.e. knowledge). Weick's (1976) influential piece on coupling in K-12 schools implied that loose coupling was an ideal management strategy because it allows schools to function in uncertain environments. Indeed, loose coupling should be strived for as an organizational goal in public schools, because it allows separate departments to operate independently, a preferred outcome for many scholars of education. Since his work, other organizational scholars used loose coupling as a foundation for their studies on organizational structures within schools, although the primary emphasis in recent research is on loose coupling in university systems, rather than primary and secondary institutions. Before delving into the nuances of coupling, I will first review the relevant literature of neo-institutionalism, then further develop definitions and explanations of coupling, and finally discuss how the two theoretical foundations speak to one another.

Coupling

The uncertainties that surround operationalization of "coupling" result in a disparate body of work where coupling is not specified consistently, and theoretical extensions are diverse and disjointed. This dissertation first addresses the theoretical gaps in the perspective of coupling within organizations. In this chapter, I synthesize the theoretical and empirical findings in a way that moves the theory of loose-coupling forward. I revisit definitions and usages of the term, its related terms (e.g. tight coupling, decoupling, recoupling) and create a unified language for the discipline.

The term "coupling" refers to how closely related formal organizational structures (e.g. policy) are to the real technical activities occurring within the organization (Weick 1976). Also commonly "defined as the degree to which events within one part of a system are felt by other parts of that system" (Bossert et al. 1982: 245). Varying degrees and changes in coupling can exist within an organization: tightly coupled, loosely coupled, non-coupled, decoupled (or uncoupled), and recoupled. Theorists contend that as systems become more tightly coupled the

units are highly responsive and are not independent of one another. In contrast, in systems portrayed as loosely coupled, units are not responsive to one another and are highly independent from one another (Orton and Weick 1990). Organizational coupling may not be static, however, and the degree to which organizational units depend on one another may change over time. Despite all these variations, researchers have focused the majority of empirical work on the principle of loose coupling (vs. tight coupling) (Bossert et al. 1982; Lutz 1982; Weick 1976).

Loose coupling is a term often credited to Karl Weick (1976), who expanded the concept with his groundbreaking piece on educational systems, although Glassman (1973:73) previously defined loose coupling as present when organizational units have very few items in common with one another or the items that are interconnected are weakly connected. Even earlier, Thompson (1967) identified the loosely coupled behavior in organizations. His work pointed out the inconsistencies between organizational language and activities. But, it is Weick's influential work on schools as loosely coupled systems that spurred many scholars to adopt and pursue loose coupling in their own work (Lutz 1982). Indeed, many educational scholars address coupling, teachers' control, and organizational activities since Weick's initial arguments (see, for example Davies, Quirke and Aurini 2006; Hallett 2010; Ingersoll 2003; Lortie 2002; Sauder and Espeland 2009).

Scholars created a new language and perspective within organizational studies, particularly within the institutional framework, when proposing we focus on loose coupling, or this "soft side," of organizations. The explanation of loose coupling suggests coupled units are open and receptive, but each unit is its own entity and that degrees of coupling can fluctuate over time. If organizations are broken into smaller sub-divided entities, they become small selfperforming systems, in which case Weick (1976) suggests that loose coupling is the "glue" holding everything together. According to Weick, loosely coupled systems are not only widespread, they are vital for some organizations to succeed. A loose coupling of activities, actors, technologies, and policies facilitates our understanding of how organizations endure during times of uncertainty.

Loosely coupled systems depart from Weber's formal, and ideal bureaucratic structure (Weber 1968) despite their top-down organization, and educational scholars stress that schools are unique from typical organizations (Bidwell 2001; Meyer and Rowan 1977; Meyer and Rowan 1978). Thus, schools should not look like Weber's ideal types of organizations because they serve a unique purpose – to educate children. Indeed, schools possess many key features of a bureaucracy (Williams 1992), but the common goal of schools lies in knowledge production at the ground level. Children are not like widgets, placed into a machine in order to produce the same outcome over and over in a systematic manner. Children are unique, with individual needs, learning styles, goals, and problems. Similarly, classrooms are individualized environments, and loose coupling allows teachers to adjust when faced with uncertainty in their classroom. Nor are schools profit-seeking organizations that typically possess a top-down structure that creates a natural hierarchy.

Schools do possess a hierarchical nature, but the bottom level of the pyramid is wide. Many teachers make up the bottom section of the hierarchy and pyramid, and they typically only work for one principal. Because schools are distinct in their educational form, organizational scholars often view educational organizations as different from traditional, profit-seeking, tightly coupled organizations. Essentially, teachers' day-to-day commitments to teaching and instruction dominate our perceptions of school organization, diminishing focus from the bureaucratic factions located at the top (Cognard-Black 2004). Scholars likened classrooms and schools to egg crates (Lortie 2002), where each teacher and classroom maintains a unique identity but appear largely homogenous within the larger school system. Further, Bidwell (2001) states that schools are formal organizations that are remarkably stable over time, implying that the organizational structure of schools fundamentally remains the same.

Weick (1976), in looking to define a loosely coupled system, argues that several identifying features will be present: circumstances where multiple paths will lead to the same outcome, a lack of synchronization, a dearth of regulation, and extremely connected networks with sluggish feedback times. For instance, a lack of regulation in schools exists when principals do not continuously supervise teacher activities, or in schools where sanctions and rewards are not given out by the district. In the case of multiple paths leading to the same result, teachers who are given curricula but allowed to determine their own teaching techniques or styles are likely to produce similar results (e.g. test scores) despite their differing teaching strategies.

The common thread in loosely coupled organizations is the ability for organizational actors to retain autonomy, engage in experimentation and in innovative practices (Peters and Waterman 1982). In schools, Weick uses the example of the counselor's offices and the principal's office, where each entity is connected but they preserve self-governance within the separate offices. He emphasizes the term loose-coupling's connotations with words such as "impermanence, dissolvability, and tacitness" (Weick 1976:3). Here Weick highlights the importance of separateness in schools in order to reduce conflict between organizational components. By underscoring the utility of a loosely coupled structure, Weick applauds loose coupling as an ideal management strategy in his research.

Despite organizational scholars' formulation and extension on the topic of loose coupling, the concept is not consistently used in organizational literature, because the term refers to processes and activities which are difficult to measure. Organizational theorists disagree on the specific definition of a loosely coupled organization (Glassman 1973; Weick 1976) and choose a wide array of measurable, and non-measurable, activities to analyze in empirical work. For instance, researchers often ask organizational actors how they feel about the linkages between organizational subsystems and how it differs from their previous or ideal circumstances. Asking individuals to recall a previous time could introduce bias and contributes to the disorganization of the coupling literature (Sauder and Espeland 2009; Young 2006). For example, if teachers are unhappy with their current organizational structure, then they may recollect the past as better. Specifically, Hallett (2010) conducts qualitative interviews, and teachers often compare their current principal's leadership style with the previous principal, but Hallett's research does not span both principal's eras. The scholarship on loose coupling in organizational theory considers diverse types of organizations, such as schools (Meyer and Rowan 1978), higher education (Sauder and Espeland 2009) aircraft engine control systems (Brusoni, Prencipe and Pavitt 2001), and National Collegiate Athletic Association (NCAA) (Bossert et al. 1982). The diversity in the types of organizations examined may contribute to the uncertainty of the term and the lack of consistency between studies.

Due to the possible confusion about the meaning of the term "loose coupling," it is important to clarify what I mean by loose coupling for this dissertation. A loosely coupled system will function with organizational activities that marginally mirror the formal structures and policies (Weick 1976). Essentially, loosely coupled systems act as neo-institutionalism's myth and ceremony where institutional actors retain autonomy, yet are linked to other individuals or organizational subunits. For instance, principals advise teachers on techniques they should use in their classrooms, but only rarely observe or supervise actual classroom activities allowing teachers to close the symbolic classroom door and run their own classrooms. This type of organizational behavior is consistent with Meyer and Rowan's (1978) suggestion that loose coupling is only present in technical activities and outcomes in schools, whereas instructional goals or activities are left up to teachers.

Educational scholars argue that loose coupling is ideal because organizational actors can adjust to individual environments as needed. Congruent with the examples in higher education, teachers in primary and secondary schools dislike heavy monitoring and losing control in their classrooms. Most often, state or district standards and curricula dictate parameters for teacher instruction, resulting in less autonomy than teachers desire and scholars found in the past (Ingersoll 2003). Teachers argue that each classroom is a different learning environment. Standardization of practices, materials, and curriculums does not allow for the degree of individuality in classrooms that require unique learning styles and communities.

In the event teachers can preserve a classroom that is loosely coupled with administrative bodies and policies, then teachers can create distinct learning communities as necessary. In a qualitative cross-case study exploring the relationship between the institutional environment and classroom instructional practices, findings indicate that the environment does shape reading instruction in elementary classrooms in important and significant ways (Coburn 2004). Coburn's conclusions include a suggestion that teacher autonomy is a "bounded autonomy," (2004:234) where teachers mediate the relationship between the environment and practice by calling on their preconceived notions of teaching. Coburn's study indicates how teachers favor loose coupling, and when faced with institutional pressures to conform teachers try to protect as much autonomy as possible in an effort to retain control over their classrooms and learning communities.

Individuals housed in organizations may seek loose coupling as an ideal organizational structure due to their desire to retain control and at the same time maintain legitimacy. Specifically, teachers believe their training prepares them to teach classes without a constant monitor or performance evaluations. Regarding the desire for loosely coupled systems, Lortie (2002) found that teachers have very strong beliefs about their autonomy in the classroom and school. A multitude of studies support the image of classrooms disconnected from the institutional environment, and large scale reform efforts fail to take effect inside the walls of classrooms (Eagly and Johnson 1990; Gilbertson 1981; Gross and Trask 1976; Pitner 1981; Shakeshaft 1987). But more current research implies that instructional practices are increasingly managed by a centralized authority and teachers have fewer opportunities to close the classroom door, resulting in a tightly coupled system.

Tight Coupling

In direct contrast to the concept of loose coupling, tight coupling brings the formal policies and practices of an organization to life, as evidenced by their daily activities. Tight coupling often occurs as a response to isomorphic pressures from the environment. Much like loose coupling is consistent with neo-institutionalism's premises of myth and ceremony, tight coupling harmonizes well with the assumption that organizations respond to coercion when provoked by the institutional environment. In schools, a tight coupling between principals and teachers exists when principals inform teachers on techniques to use in their classrooms, and follow-up these advisements with activities such as classroom surveillance and observation. In my example of principals' surveillance of teachers, tight coupling between teachers and principals is a direct result of the accountability pressures faced by teachers. Essentially,

teachers are coerced through formal structures and a potential fear of consequences into executing what the principal demands.

Davies, et al (2006) specifically hypothesize that environments of accountability will engender coupling between classrooms and test standards. In this vein, research investigating the role of recent high-stakes educational policy finds that teachers' classroom instruction is affected by multiple factors, one of which is standards-based reform (Diamond 2007). Other influential factors in Diamond's (2007) research include other teachers, textbooks, the teacher's own beliefs, students, the principal, and the vice-principal, but Diamond does specify the important role of standards and required tests for teachers' instructional practices in his case studies. He is also careful to remind readers that his results are not generalizable beyond the case studies. Nonetheless, Diamond's work supports the hypotheses put forth by Davies, et al.

In more nuanced research, educational scholars suggest that the institutional environment is important, but only when policy is enacted and enforced by organizational leaders (i.e. principals in schools). A four-site case study in the San Francisco Bay area found that teachers' classroom practices are tightly coupled with the institutional environment if the principal agrees with the mandates; otherwise, teachers retain more autonomy in the classroom (Young 2006). In this case, the principal "mediates" the relationship between the external environment and teachers, implying that the role of principal is vital in shaping the coupling of educational organizations. In this example, the tightly coupled organization's technical-core of activities substantially reflects the formal policies and structures in place.

Organizational and educational scholars predict that organizational actors will prefer loosely coupled systems to tightly coupled systems, and empirical research supports this prediction for a wide array of occupations. Specifically in schools, scholars find that teachers favor loosely coupled systems, implying that tight coupling likely occurs when coerced, and not by choice. Research in institutions of higher education further confirms hypotheses that tight coupling is a result of isomorphic coercive pressures, and not a preferred choice. In their study of law school rankings, Sauder and Espeland (2009) found that the law school rankings by an external organization – US News and Rankings – affect law schools by coercing them into valuing the items highlighted in their formula that create the rankings. The formula that determines rankings does not value innovative or diverse organizational objectives (e.g. fostering unique career goals among law students) resulting in organizational change and a systematic tightening of coupled activities within law schools because deans feel compelled to conform to the formula. In the case of law schools, the deans do not wish to comply with the measures in the formula but believe they have no choice, especially when innovative successes are quickly emulated by other law schools. As a result of the coercive isomorphic pressure, law schools are homogenous institutions

Decoupling and Recoupling

Decoupling and recoupling are terms used in the coupling literature, but their use is not always consistent. Orton and Weick (1990) argue that a decoupled system possesses distinctiveness (i.e., separateness) but not responsiveness. Whereas, a tightly coupled system is responsive without being distinctive, and Orton and Weick further argue that decoupling is different from non-coupled systems which have neither responsiveness nor distinctiveness (loose coupling is defined as a system that is both distinctive and responsive). They refer to this understanding of loose coupling as the "dialectical interpretation of loose coupling" (Orton and Weick 1990: 205). In these understandings of the term, decoupling is not a process but a state of being. Recoupling is rarely mentioned in the literature and is not clearly defined, despite its seeming similarities to "decoupling." The concepts decoupling and recoupling insinuate change and the words "decouple" and "recouple" are most often used as verbs. Decoupling and recoupling implicitly refer to processes that occur within the organization, because they suggest a *shift* in how the organization experiences coupling. Therefore, I argue that decoupled or recoupled systems or organizations have experienced change and a decrease in linkages between organizational subsystems.

I argue here that decoupled systems are those that move from tightly coupled to loosely coupled systems. Similarly, if a system with any degree of coupling shifts to a non-coupled system it should also be considered a process of decoupling. In order to illustrate these processes, empirical research must scrutinize the organizational structure, over time. Either of these progressions indicates a reduction in coordination between formal policies and organizational activities. If organizational scholars use the term decoupled as a state of being, or as a synonym to "loose coupling" the implication of change is not present. My work corrects this error by using language that is consistent with observed processes.

Recoupling is less popular in the initial organizational studies on organizational coupling, but it recently garnered more attention in empirical studies (see, for example Espeland 1998). Recoupled organizational structures are those that were loosely coupled (or non-coupled) and modified to systems of tighter coupling. In a recoupled scenario, organizational activities and formal structures speak harmoniously to one another. Hallett (2010: 74) defines recoupling as "the process of creating tight couplings where loose couplings were once in place." He extends this argument by specifying that "re" indicates a change or a turn in direction, such as "recoupling" (i.e. loose to tight). Much like the discussion of decoupling, in order to measure a change such as recoupling, a study must rely on longitudinal data, because a cross-sectional analysis will not properly specify a change in relationships.

Organizational scholars interested in recoupling hypothesize that specific institutional environments will encourage recoupling within organizations. Not all, but many studies that refer to tight coupling declare it to be a new system and a change compared to an old, more preferred, organizational structure (see for example, Hallett 2010). In doing so, organizational scholars implicitly use the language of recoupling in discussions of tight coupling. If a shift in the environment or a policy change provokes a change in the organizational structure of specific organizations, then it is likely that an organization did not always experience tight coupling.

Organizational theorists further argue that tight coupling, which can occur through a process of recoupling, will engender chaos and disorganization within an organization. In the case of schools, school policies may prevent teachers from utilizing multiple teaching techniques in the classroom when faced with diverse learners, and as a result of a stringent policy teachers and students may experience social disorganization, dissatisfaction, or even chaos. Recent research using one case study supports this hypothesis, and finds that schools may recouple organizational activities to exist as tightly coupled organizations. Outcomes are chaotic for teachers in these unyielding organizational environments (Hallett 2010). Neo-institutionalists in particular contend that organizational myths protect an organization, suggesting that tight coupling is not beneficial when faced with an uncertain environment.

Hallett (2010) refers to the recoupling process as the "myth incarnate" because the formal policies and regulations are brought to life inside an organization. Like the discussion from tight coupling, the move towards compliance shows that the organization no longer operates using myths or ceremonies in order to convey legitimacy. Instead, organizational actors are faced with

a tangible process where the official policies have an actual effect on decisions and behaviors. Much like Young's (2006) findings, Hallett finds the principal is the impetus behind the tight coupling. If organizational managers mediate the relationship between the institutional environment and the organizational structure, then principals in schools possess a great deal of control and power over the school, teachers, and students. If Hallett and Young's assertions are correct for most schools, then the formal policies and actual practices of schools are contingent upon the administration.

Hypotheses that chaos and disorganization will result as a response to tightly coupled organizational structures mirror the feelings teachers possess on the process of recoupling or tight coupling in their schools. Teachers express a desire to maintain autonomy and appreciate when the principal "let's them do their job," (Hallett 2010; Young 2006) implying that the principal has no jurisdiction in the classroom, and that this is the desired organizational structure. In tightly coupled schools the principals are specifically blamed for looking over teachers' shoulders and micro-managing classroom activities (Hallett 2010; Young 2006). The teachers' responses are consistent with the educational research that favor and promote loosely coupled schools and school systems.

Control and Autonomy

Terms such as "autonomy" and "control" suggest a power struggle between individuals within an organization. If teachers are stripped of autonomy through tightly coupled systems, then they effectively lose power, because autonomy suggests power over one's own work. Power could include the ability to design lessons, choose texts, create tests, choose test days, produce standards, and so forth. Teachers are interested in preserving their classroom autonomy, because they believe they possess the required knowledge in order to effectively and efficiently run a school classroom. When teachers are autonomous as a result of loosely coupled systems they possess more power than teachers in tightly coupled highly directed schools. Thus, power becomes a primary focus in the loose coupling literature because the theoretical foundation implicitly states that loose coupling could be a measure of power (Jacobs 1989). It is uncommon for scholars to specifically discuss autonomy, coupling, and power in this direct way, but the measures of coupling often revolve around power struggles between individuals or organizational entities.

My conceptualization of coupling (i.e., the formal relationships between principals and teachers) includes control and autonomy, but goes beyond these two concepts. Coupling comprises elements of control, such as who decides organizational rules or who makes decisions on the division of labor. In the case of schools, for instance, allowing teachers to have a say over homework assignments in their own classrooms would loosen the coupling within the school. But, an important component of coupling is how interconnected various parts of the organization are to one another. If teachers often work together and have a great deal of input for various school policies or decisions, then the coupling is tighter as a result of individuals working together. Essentially, teachers have a higher reliance upon one another. Thus, while autonomy and control remain central tenets of coupling, my concept is distinct because it moves beyond these foundational building blocks. While coupling can occur throughout the entire hierarchy of the public school system, this dissertation highlights the linkages between teachers and principals.

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Linking Neo-Institutionalism with Coupling

Neo-institutionalism and coupling are explicably connected through the basic tenets of both organizational perspectives. As a theory, neo-institutionalism is well-developed and understood, but the theoretical foundation of organizational coupling is underdeveloped, despite its wide use in empirical analyses. Bringing both perspectives together for this dissertation is important, because it advances the theoretical framework of coupling while drawing from a strong foundation of an organizational theory that helps explain adaptation among institutions. Both organizational paradigms are well suited for studying schools because education systems produce a framework of legitimate educational categories (i.e. teachers, students, and curricula) which lend themselves to creating a "collective normative order" (Brint and Karabel 1991). In schools there is remarkable variation in both "competency" and "task-performance" within organizational categories. Consequently, the *categories* of formal structure are identical across educational organizations, but the concrete *behaviors* of individual actors are vastly different, often said to result in a "loosely coupled" system for schools (Weick 1976).

There are two predominant theoretical linkages between neo-institutionalism and coupling. First, neo-institutionalisms principles of "myth" and "ceremony" are realized when organizations, such as schools, engage in exercises of deliberate "loose coupling," which shield them from external environmental pressures. For instance, in knowledge producing organizations, such as schools, the goals for all organizational actors is to ensure that students learn. When teachers choose elements for their preferred classroom environment, such as independent instructional practices or disciplinary sanctions, the system contains independent, autonomous teachers who share the general vision of the school. In this example the school is

comprised of loosely linked units (e.g. teachers and administrators) and embodies a loosely coupled system consistent with both loose-coupling and neo-institutionalism.

Second, the isomorphic pressures highlighted in institutional theory, which help explain why organizations look the same, are mirrored when organizations tightly couple organizational activities. Isomorphic pressures appear to preclude attempts of loose coupling or systems of buffering, because they should be more likely to result in tightly coupled systems. Indeed, researchers have found that organizational facades of myth and ceremony serve to protect organization from uncertain environments. If coercive pressures prohibit organizations from adopting structural myths that do not align with day-to-day activities, then organizational forms should look like one another and simultaneously experience tight coupling between systems. Finally, organizational theorists argue that a tightly coupled system would surely result in chaos, disorganization, conflict, and perhaps reduce the chances of survival (Meyer and Rowan 1977; Weick 1982). Thus, neo-institutionalism integrates the notion of coupling as a central theoretical component.

Why the Focus on Loose Coupling in Schools?

The identifying components of loosely coupled systems may appear negative in nature, but Weick (1976) asserts that this level of coupling is beneficial for a number of reasons. First, the organization is not as drastically affected by swiftly changing environmental uncertainties. Second, there is an increased level of responsiveness to the environment. Third, it allows the organization to respond with solutions. And finally, there is greater autonomy for organizational actors. These benefits decrease the odds that the organization will perish. A loosely coupled system is difficult to change, and this may be problematic for systems interested in reorganizing their activities or structure. Educational scholars argue that loosely coupled systems should *not* change (Gamoran and Dreeben 1986; Weick 1982). The scholarship on teacher satisfaction perennially finds that teachers take exception to the intrusion of school administrators who are often far removed from classroom instructional practices (Becker 1953; McPherson 1972; Rowan 1981; Washburne 1957). Thus, it may come as no surprise that educational scholars advise an organizational environment that protects a loosely coupled system.

Educational scholars suggest that loose coupling is a recipe for educational success, and they are reluctant to see any utility in top-down, traditional, hierarchical structures that will seemingly result in tight linkages within the organization. Indeed, the organizational hierarchy structure in public education systems is so abhorred by scholars, they refer to it as a *Schimpfwort* (German for "a dirty word") (Boyd and Crowson 2002). While organizational scholars in the private and corporate sector moved ahead with studies of traditional hierarchies and found that a "one size fits all" model is not ideal, educational scholars were latecomers to this line of research. More recently, educational scholars have joined this discussion and discovered interesting findings. For instance, satisfaction among teachers is not necessarily contingent upon the organizational structure of the school, but on the view that the administration and the structure is "legitimate" (Verdugo et al. 1997). Borrowing from the corporate world, however, educational scholars may learn that an "ideal type" for educational systems may not be realistic, and advocating for one particular management model could be in vain.

Researchers often argue that schools do not change and are remarkably stable institutions (Bidwell 1965; Williams 1992), and although the recent literature on tight coupling challenges that claim, it has not produced much counter evidence. Hallett (2010), for instance, writes that teachers spoke of previous principals who structured the school using a loosely coupled system,

but he is cautious to highlight that this interview is based on an interpretation of their current chaotic situation. He implies that individuals reflect on the past, by considering their present (Maines, Sugrue and Katovich 1983; Mead 1932), but it is not always reliable when individuals are unhappy in their present conditions. Hallett himself did not witness the previous principals' control and power within the school. Nonetheless, the trend in educational research suggests a change is present and schools are possibly reorganizing into tightly coupled systems, on both a micro and a macro level (Coburn 2004; Diamond 2007; Young 2006).

Theories of adaptation, such as neo-institutionalism, assert that organizations change when faced with uncertainty or isomorphic pressures (Powell and DiMaggio 1991). Empirical research finds that organizations do change when faced with external pressures (Haveman and Rao 1997), in the socialization of important or relevant professionals (Lounsbury 2001), and in order to obtain legitimacy by looking like other organizations (Ruef and Scott 1998). The aforementioned types of adaptation result from coercive, normative, and mimetic isomorphic pressures, respectively. Haveman and Rao (1997) examine how organizations in the early thrift industry adopt changes in an attempt to ensure survival when faced with both technical and institutional pressures. In his study of recycling programs on college campuses, Lounsbury (2001) draws on Meyer and Rowan's normative isomorphic force in order to understand how some college campuses incorporate particular staffing arrangements rather than increasing the duties to current college employees. The latter is an example of mimetic isomorphism, where colleges and universities adopt a recycling program as a ceremonial attempt to achieve legitimacy. Similarly, Ruef and Scott (1998) investigate how hospitals survive by seeking managerial and technical legitimacy. These empirical works demonstrate how organizations are capable of change, particularly when faced with a varying external environment. When change

occurs in the institutional environment, organizations may need to adapt in order to survive. Moreover, organizational researchers document successful adaptation endeavors, suggesting that schools could follow a similar pattern when faced with a dramatically shifting institutional environment. Despite the lack of empirical evidence that schools change, there are theoretical reasons (and examples in different organizational forms) to suggest that schools could change. Before delving into my conceptualization of coupling, I want to first underscore the hierarchical nature of public schools.

Hierarchical Nature of Schools

Schools are unique organizations because they are financially dependent on other governing bodies, such as the district, the state, and the federal government. The interior of schools is vertically organized, and while this is consistent with many other types of organizations, schools are unique in that individuals near the bottom of the ladder are the ones directly responsible for providing the product to the client. Teachers must conform to institutional goals and objectives, but teachers are ultimately the individuals bestowing knowledge and skills on the students.

In schools, teachers report to principals, principals report to superintendents/district, the district reports to the state, and the state reports to the federal government. The hierarchical entities are primarily connected through linkages of accountability, and an important type of loose coupling is between hierarchical levels. Accountability exists in the form of reports, such as test scores, dropouts, graduation rates, retentions, and other quantifiable measures. Studies of coupling between hierarchies in schools are common due to the nature of schools (Coburn 2004; Diamond 2007; Hallett 2010; Meyer and Rowan 1978).

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Conceptualizing Coupling - Macro, Meso, and Micro

There are many ways to theorize and measure organizational structure, but this project focuses on one particular type of organizational structure – coupling. Coupling events often include technical couplings (e.g. technology, task, role) and authority couplings (e.g. positions, rewards, sanctions), since these components keep the organization in sync (Weick 1976). Within the educational system couplings exist within schools (e.g. principals-teachers) directly outside of schools (e.g. school board-principal, district-principal), and at the state and federal level (federal/state-local/school).

Each level of the educational system is important, and I have broken the hierarchies into three meaningful categories – macro-level, meso-level, and micro-level structures. The macro level includes federal policies and state accountability structures. At the meso level, I am specifically interested in the relationship between the local district or school board and the schools. Finally, the micro level structure occurs within the confines of the school between principals and teachers. See Figure 2.1 for a depiction of these levels.



Figure 2.1: Levels in the US Public Education System (Macro, Meso, and Micro)

All levels of the US public education system are vertically related. Examining every structural level related to schools, over a period of time, addresses variability and temporality with regard to how coupling changes or exists within school systems. Time and the institutional climate could affect coupling within an organization. Moreover, if loosely coupled systems are valid and advantageous for specific organizations, then scholars predict that a shift away from loose coupling could result in disadvantages or instability within the organization. It is thus important to understand how coupling exists at the micro level – between principals and teachers.

Throughout this dissertation, I break down the levels of the public education system into three distinct categories: macro-level, meso-level, and micro-level. The micro-level of the public education system focuses on principals, teachers, and processes that occur within the walls of schools. The pyramid in Figure 2.1 shows principals and teachers at the bottom of the pyramid. Coupling can occur on multiple levels, but the coupling that occurs within the school (i.e., between principals and teachers) is the most discussed type of coupling for public schools. I specifically refer to coupling within the school as micro-level coupling, and I define micro-level coupling as the formal relationships between principals and teachers. This is consistent with other coupling conceptualizations (Hallett 2010), and I do focus the majority of my attention on micro-level couplings.

The public education system has multiple levels, however, and I also consider macrolevel and meso-level structures. Macro-level structures include both the federal and state level. For example, federal policies and state accountability standards are located within the macrolevel structures. Macro-level structures are located at the top-most triangle or slice of the public education pyramid (see Figure 2.1). At the meso-level, I focus on the school board and/or the school district. The local government is situated in the middle of the public education pyramid, and the local governing bodies are between the macro-level federal or state structures and the micro-level school structures (i.e., principals and teachers). For instance, I take into account coupling at the meso-level, and conceptualize this level of coupling as the formal relationship between the school board/district and the school. For the remainder of the dissertation, I will employ language that is consistent with these hierarchical levels.

As outlined above, studies on organizational coupling in schools primarily rely on crosssectional or qualitative data, especially because organizational scholars encourage thick description ethnographies (Lutz 1982), and criticize the work of scholars who use case studies (see for example, March and Olsen 1976). The call for ethnographies and nuanced studies of organizational structure may have dissuaded quantitative researchers from joining the discussion in large numbers, but the contribution of longitudinal data is necessary in order to understand change and predict structure. Qualitative data could demonstrate change for a short period of time, but it cannot also depict a generalizable trend for all organizations of the same type. Empirical discussions that specifically call out or even allude to recoupling often neglect the longitudinal aspect of the conversation in their reliance on case studies. Similarly, case studies and qualitative work can comment on potential predictors of couplings, but they cannot intimate widespread or generalizable effects. This has left a significant gap in the literature, where coupling in organizations is described and analyzed as a state of being which contributes to various outcomes for organizational actors or clients.

The last decade in organizational education research proposes a growing trend in organizational recoupling in the public school system. This is in contrast to the previous organizational studies of schools which show very little change in organizational couplings.

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Although the majority of this research is qualitative and based on case studies, it does suggest the possibility of a general pattern. Alternately, extreme case studies of public schools could be driving the pattern observed in educational research and thus may not be indicative of the larger population.

My dissertation is timely and necessary, given both the empirical studies that find accountability policy structures are a major factor in organizational activities within schools and the current state of educational policy in the US. Research demonstrates how the majority of institutions are facing increased pressure to display evidence of accountability through official and measurable quantities (Espeland and Sauder 2007; Power 1994; Strathern 2000). Recent policy changes, starting with the report *A Nation at Risk*, contribute to an institutional environment that favors high accountability. Thus the current external environment is ideal for this study of coupling within schools. My dissertation will measure trends, changes and patterns over time. Findings from empirical studies on coupling in educational environments are congruent with the standards-based reform policy trends documented by educational scholars.

Empirical studies of recoupling in education suggest there could be a fairly consistent pattern, with educational organizations moving towards more tightly coupled systems when reality has shifted too far from organizational ideology. For instance, when a principal believes that teachers are not adhering to the educational mission and goals of the institution, s/he may decide to reinvigorate the links between formal structure and myth (Hallett 2010; Young 2006), thereby eradicating the symbolic myth. Recent literature demonstrates a trend that often relies on the role of the principal in reaffirming any system or executing any change within the school. Despite the case-study nature of the educational research, I do expect the relationship between principals and teachers to dominantly shape the couplings within the walls of the school. By pinpointing the factors that contribute to organizational structure, it may be possible to identify how organizations choose to adapt over time when faced with uncertain institutional environments. In addition, if the principal experiences the effect of meso-level coupling between district/state and schools (e.g. sanctions or rewards), then I expect the principal to pass this pressure along to teachers in the schools.

The later chapters of this dissertation will use the organizational structure of coupling as an independent variable that predicts outcomes for teachers and then students. Most studies of coupling address either the outcomes of coupled structures or the factors that contribute to various degrees of coupling. Very few studies examine the combined elements that create organizational coupling, and then subsequently look at how tight or loose couplings affect the actors and/or clients of that particular organization (for exceptions see, Bossert et al. 1982). Using schools as an empirical example of coupling, I will specifically advance the theoretical field of neo-institutionalism and coupling. These are all unique features in my dissertation, and it may help organizational scholars consider organizational structures of coupling in other industries or organizations.

CHAPTER 3

CURRENT STATE OF EDUCATION IN THE US

In order to understand and analyze the organizational structure of public schools, it is necessary to review the relevant policies that influence schools. Federal level policies are not new to the public education system, and this section will address the state of US educational policies from the mid-eighties through the present, an era defined by educational scholars as the Standards Based Reform (SBR) movement. The decade of the 1980s brought an end to mandatory desegregation movements, and schools returned to a model of neighborhood schools across the nation (McDermott 2011). The role of the federal government steadily increased, and public schools became a hot topic among presidents and congress, centralizing it as a federal issue for the country. Indeed, many scholars attribute tighter school coupling to the increasing role that federal policies play in public education. Briefly, I outline the major policy decisions and changes over the last three decades (Please see Figure 3.1 for a brief timeline).

Mandatory desegregation and busing efforts may have failed the disadvantaged minority students when dissolved by local and state governing bodies (Frankenburg and Orfield 2007), but the controversy and debates increased interest in the growing achievement gap between Black and White students. Public battles, campaigns, and court decisions brought racial inequalities and excessive inequities to the forefront of public discussions. In fact, throughout the discussions of racial inequalities a growing concern about the quality of the public education system, in general, began to take place (Orfield and Eaton 1996). At the state level, concern had been mounting for years. But, this growing unease about our increasingly deteriorating public

school system, at the national level, began with the report, *A Nation at Risk*. For many education scholars, *A Nation at Risk* marks the beginning of the standards-based reform movement in 1983 (McDermott 2011).





Reagan/Bush Administration

When Ronald Reagan took office in 1981, he made it clear that his primary objective for educational reforms was to shift the control back to individual states. Republicans advocated to eliminate the federal department of education altogether (DeBray-Pelot and McGuinn 2009). Reagan appointed Terrel H. Bell as his secretary of education, with the hopes that Bell would assist in the formal dissolution of the secretary of education position. Rather than concede this control and the position, Bell summoned a committee that would evaluate the American public schools system at the national level. The overall findings from the National Commission on Excellence in Education's foray into the American educational system generated the sentiment that our nation is at risk, in terms of the state of educational achievement and success in the US. Bell's efforts allowed for the creation of the National Commission on Excellence in Education due to his worry over "the widespread public perception that something is seriously remiss in our educational system" (Education 1983). The commission was tasked with the responsibility of evaluating the quality of the American schools. The long term goals of the commission, and the report, were to provide helpful critiques and assistance to the public and private schools and universities. In doing so, Bell guaranteed his position and reneged on his promise to terminate the department (Davies 2007). These efforts yielded the final product – A Nation At Risk. A Nation at Risk claims that the US educational system is plagued with mediocrity and is falling in rank to other industrialized nations. The report was released in April of 1983, and instantly became a call to action on the part of the American people. By the end of the Reagan administration, full scale efforts for SBR developments were growing at the national level. Lamar Alexander, the governor of Tennessee, became the chair of the National Governor's Association (NGA) in 1985, and determined that the NGA would focus on education as its main concern. As a result of this goal, the NGA became the primary perpetuator of SBR goals and plans for the nation. A five year agenda, Time for Results - published in 1986, followed and reported annual progress made towards national level reform (McDermott 2011).

Throughout the 1980s, many states constructed policies that penalized low-performing schools, and most state-wide policies highlighted accountability by focusing on enacting performance standards (McDermott 2011). Despite the sanctions, most state governments did not interfere with schools or districts. As states increasingly adopted accountability reforms, it

became clear that high standards were driving the new state level policies. The states spearheaded many accountability reforms, and federal policies were designed in response to changes made at the state level (McDermott 2011).

When George H. W. Bush (Republican) took office in 1989, the political culture was highly conservative, in spite of the efforts to centralize the American education system through standards-based reform. President Bush openly supported the SBR trend, and within his first year in office he had met with the NGA and agreed to establish national level goals. The Charlottesville "Education Summit" of 1989 was the product of this agreement. The collaboration of the president and state level politicians constructed a new level of teamwork between the federal and state-level government. By identifying goals for schools (e.g. high school completion, reading and language skills, math abilities, teacher quality), President Bush and the NGA endorsed the "performance-accountability" structure of SBR (McDermott 2011). By the year 1994, forty-two states were on board with designating content standards for academic disciplines. Thirty of those forty two states had also gone so far as to create student-level standards with the content standards in mind (Jennings 1998). A nationally centralized education system is consistent with SBR efforts, but is not often supported by conservative politics.

Accountability standards at the state level brought with them the promise of sanctions to schools that did not meet those academic benchmarks. In the eighties and early nineties, for the first time in history, the policies of accountability were complemented by sanctions such as "school improvement programs" held by state level departments of education. The most enduring outcome of these reforms were those that restructured and reorganized state departments of education and policy ideas around performance standards(for a more in depth

discussion of individual state programs, please see McDermott 2011). Therefore, while not all states may express commitment to the trend in educational policy, the majority of states participated in the federal government's goals to increase standards and do so using performance-level outcomes. Equity and equality no longer referred to inputs in this new era of educational policy. Instead, equity referred to "high standards for all," and insinuated a move away from basic-level skills (McDermott 2011).

In addition to centralizing public education at the national level, there appeared to be a transferal of power at the state level, as state mandated sanctions for schools or districts indicates a decrease in power at the local and district level. A closer look at initial states enacting state-level policies that issue sanctions to lower-performing schools shows, however, that these states often already possessed more centralized systems at the state level (Manzo 2003; McDermott 2011). State and federal level policies tended to mirror one another through the early nineties and the links between schools and policies grew increasingly tight, as many districts and states complied with the changes at the federal level. With district control over schools decreasing, the 1990's saw an increase in the role of the federal government as a byproduct of enhanced state control. Educational researchers claim the federal government "piggybacked" on the change and sustained its presence in educational policies (Manna 2006; McDonnell 2005).

Clinton Administration

When Clinton took office in the early nineties, the standards-based reform at the statelevel was well under way. More states were joining the bandwagon of SBR, but they were starting to run into obstacles that prevented them from founding policies that would promote performance-based accountability while still adhering to the federal guidelines that would allow them to reap the benefits (McDermott 2011). Bill Clinton's presence in the executive office spurred SBR activists to focus on efforts through the federal government. In general, this proved to be a success for SBR supporters.

Clinton endorsed two major bills during his tenure as president. First, Goals 2000 provided funding in the form of grants for the implementation of SBR, at both the state and district level and requested the conception of the National Education Standards and Improvement Council, which would oversee and guide the improvements. Highly criticized, Republicans accused Democrats of attempting to establish a "national school board" and appropriate power and jurisdiction over the entire public education system (Jennings 1998). The prevailing effect of Goals 2000 lies in the ability of states and districts to acquire federal funds (McDermott and Jensen 2005).

Goals 2000 sought to increase standards for students, but gave states a great deal of latitude in structuring policies. States complied with federal standards by submitting applications that outlined plans for improving academic achievement, providing money to districts, and creating awards for teachers. Goals 2000 allowed states to voluntarily comply with federal goals, and helped establish national standards.

Second, Clinton re-authorized the Elementary and Secondary Education Act (ESEA). The ESEA was originally endorsed in 1965, under Lyndon B. Johnson (Democrat) but it experienced a major reauthorization in 1994 under Bill Clinton (Democrat), with the title Improving America's Schools Act (IASA) of 1994.¹ The ESEA resembles the contemporary No Child Left Behind (NCLB) Act of 2001 in that it has Title I, which is the dominant program for America's disadvantaged students. The ESEA brought the federal government into the forefront of

¹ Between 1965 and 1994, ESEA was also reauthorized in 1972, 1978, and 1988.

educational policy and educational decisions during the initial endorsement. The ESEA went through reauthorization every five years, and continues to live on today under the auspices of the NCLB Act. Thus, while NCLB continually receives negative press as a failing program with an improper implementation, the federal government's involvement in the public education system is not new, nor is it entirely different from previous government acts written by congress.

Despite resistance against a national curriculum, the IASA does include components of national level accountability and an increase in federal standards. Within the IASA framework, states still possess control and autonomy when creating state level standards and accountability; but, once the standards are outlined then schools must continue to meet these in an effort to comply with the IASA. Federal funds are reserved for several programs and agendas important for a growing level of equality within the public educational system. The federal money could be used for professional and instructional resources, such as materials and additional training, or supplemental educational programs and parental involvement plans. Educational researchers suggest that IASA was Clinton's more influential bill, because it created coercive policies for states and local districts. Using SBR conditions as the model, IASA formed provisions and conditions for continuing reception of money (McDermott and Jensen 2005).

The new IASA requirements made the federal goals of education reform unequivocally clear to schools, districts, states, and policy-makers. This bill served to intensify standards-based reform advancements and encouraged state-wide testing in multiple subjects and in multiple grades in order to preserve the influx of federal funding. States maintain discretion under IASA, but they still must administer testing and comply with regulations outlined by the federal government. Clinton's IASA marked the launch of mandated testing at a national level and used terminology such as Adequate Yearly Progress (AYP) that later became associated with NCLB.

Under IASA, schools were expected to meet AYP every year, but sanctions were not handed down until the fourth consecutive year of not meeting AYP. The vocabulary from IASA would reappear under NCLB, but the state-level freedoms would largely dissipate (McDermott and DeBray-Pelot 2009; McDermott and Jensen 2005). Language of accountability at both the state and federal level encourages an increase in tight coupling within schools, because it prompts both administrators and teachers to comply and report academic achievement in order to meet overarching standards.

The Clinton administration picked up where the Bush administration left off, in terms of increasing the role and presence of the federal government in local schools and districts. The most notable mark Clinton left on equity in education was the strengthening of the new definition. The 1970's definition of equity is characterized by complex policies that focused on desegregation, special programs and varied regulations in funding (Nelson 2007). For the Clinton era, equity is more firmly associated with meeting performance standards through academic outcomes, and the driving force behind federal level reforms (McDermott 2011). In fact, IASA arguably produced more fundamental change between federal and state governments than any other bill passed in congress – including NCLB (McDermott 2011). By the midpoint of the first Clinton term, Republican congressional candidates had convinced the general public that suspicion towards the IASA was warranted and the goal for a "national school board" was a real threat to the American educational system; furthermore, Republicans argued for an eradication of the federal-level department of education (Jennings 1998).

The Republican campaigns worked. By the time Clinton's second term began, the Republicans had taken back complete control of the House and Senate. Their presence in Congress allowed for a reduction in funding for Clinton's two major education bills (Goals 2000 and IASA), although they let the bills themselves persist, in name (see Jennings 1998). By 2001, the goals of IASA had not been reached and progress had stagnated due to a lack of support from Congress.

By the late nineties and early part of the twenty first century, the effects of state and federal policy debates had incited responses at the local level, and the local agendas for many school districts had shifted towards ones that favored the improvement of local control (Malen 2003). The early part of the twenty-first century ended the more liberal goals, objectives, and advancements made during the Clinton years, and the country embraced a Republican in the White House, marking another momentous shift in the socio-political climate of the US.

Bush Administration

When George W. Bush (Republican) entered office in 2001, he did not endorse a transfer of power from the federal government to the state and local governments for educational policy. Rather than decentralize the American educational system, he sought to further centralize and strengthen the role of the federal government and its standards. Many civil rights groups supported this idea (Radin 2006), because it acknowledged the goal of providing an equal education to all children, regardless of race and class. Moreover, the latter Clinton term had removed the stringent oversight in IASA, which created anxiety for many groups looking to equalize education (DeBray 2006; McDermott and DeBray-Pelot 2009).

The No Child Left Behind Act (NCLB) of 2001 became official on January 8, 2002, with the implementation to begin immediately. NCLB effectively reauthorized the Elementary and Secondary Education Act (ESEA) and Improving America's Schools Act (IASA) (McDermott 2011), the primary K-12 law from the federal government. Under NCLB the federal government increased its position in the public educational system and placed more pressure on states to achieve a more consistent and standardized level of achievement. The act states its mission as seeking "to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind" (2001). The NCLB bill obtained tremendous support from both parties within congress, and NCLB is considered a standards-based educational reform. This type of federal involvement affects nearly all public school systems in the US because federal standards generate accountability towards one central goal, named by NCLB as an interest in achieving educational equality for all students. NCLB fundamentally unites our 50 states, extraordinarily diverse public schools. and school districts. NCLB is unique from ESEA and IASA because schools are not only accountable to state and federal government demands, and must also meet all guidelines in order to receive monetary support and avoid sanctions.

Standards-based educational reform is based on the notion that increasing standards and setting assessable goals will advance educational outcomes for individual students. It also requires a change in standards for all states, if they wish to continue receiving federal support. The standards are not specifically set by the federal government, but they are loosely based on national guidelines due to more uniformity in educational accountability policies (McDermott 2011). States are required to set their own standards and meet the AYP enforced by the federal government in order to receive funding. The scores of the individual students within each school are used to determine how schools are performing relative to the state's standards (McDermott 2011). AYP is characterized by scores improving for a particular grade, year after year. For instance, ninth graders must do better than previous year's ninth graders, in order to meet AYP. This means that scores of one class are not compared to that same class in the following year in order to determine whether or not they are improving each year, nor is a value-added model

utilized for testing progress in academic achievement. The motivation for a provision such as this one comes from the idea that our scores should be improving year after year, and the overall quality of education should produce better and better students.

NCLB tightened provisions from IASA, especially under Title I funding by expanding federal control over testing. Specifically, students were tested in grades three through eight, rather than just once in elementary school, once in middle school, and once in high school. In the event schools failed to meet AYP, the federal law of NCLB outlined a specific series of interventions for districts to take in schools. Where Clinton's IASA dropped provisions by neglecting to follow-up with schools, NCLB tightened these policies. Overall, NCLB and the second Bush era brought with it a strong push toward a highly centralized educational system at the federal level, and a requirement of state and local district governments to work in concert in order to achieve higher levels of educational equality and achievement (McDermott 2011; McDermott and Jensen 2005).

The legion of high-stakes, standards-based reform policies in the US in the last twenty to thirty years is well documented in the recoupling literature and researchers point to the possibly influential role of standardized testing (Coburn 2004; Davies, Quirke and Aurini 2006; Diamond 2007). The US witnessed a dramatic evolution of educational policy over the last thirty-plus years. The standards-based reforms, while now taken for granted policies, did not arise suddenly. Instead, the standards-based reform movement slowly grew since the publication of *A Nation at Risk*, and the focus transferred from compliance to one of accountability. What was once an emphasis on equality of education through inputs and desegregation orders became a revolution to bring all students to the same performance levels and standards through funding and accountability efforts put forth by both state-level and the federal government. As a result,

the US developed policies where national and state grips on schools and districts, through academic accountability, should have considerably tightened the coupling between schools and the district/state. The increase in accountability policy considerably changed the institutional environment surrounding public schools, suggesting a need for an analysis that systematically updates our understanding of coupling processes in public education.

CHAPTER 4

DATA AND VARIABLES

My primary data for this project comes from the Schools and Staffing Survey (SASS), provided by the National Center for Education Statistics (NCES). This is the best dataset for a study of trends in organizational structure and activities because it is a large, nationally representative dataset with measures of institutional environments and organizational structure available. Moreover, there are currently six waves of data available that span twenty years and multiple socio-political eras (1987-1988, 1990-1991, 1993-1994, 1999-2000, 2003-2004, 2007-2008, waves henceforth referred to by the first part of the academic year. For instance 1987-1988 will be referred to as the 1987 year). The NCES randomly sampled schools for each wave of data collection, and then randomly sampled teachers within each randomly sampled school. The schools were randomly sampled from the Common Core of Data (CCD) census of schools. Each wave of data represents a nationally representative sample, but these data are not the same schools over time. In spite of this constraint, these waves of data are designed to be used together in analyses, and not solely as separate cross sectional analyses. Thus, it will be possible to answer research questions that specifically address temporal issues and examine trends over time.

Within each of the six waves of data, the NCES has four core components to the SASS questionnaires: school questionnaire, teacher questionnaire, administrator/principal questionnaire, and district questionnaire. The questionnaires are completed by various members of personnel within the school. For each school sampled, the NCES then took a stratified sample

of teachers within the school for the teacher questionnaire. In many cases, there is overlap between questionnaires (e.g. principal questionnaire, teacher questionnaire) regarding school and personnel activities, which allows researchers to check for reliability and varying perceptions within the school. Throughout the data collection years, questions have been added, removed, but in many cases stayed very similar in content, thus making temporal analyses possible with comparable variables. Both public and private schools are included in these samples, which also includes charter schools.²

The SASS data is designed for researchers to use at multiple levels within schools. The multiple questionnaires are available separately, but can be easily linked to one another for complex analyses. Linking teacher level data with school level data allows for analyses at either the school level or the teacher level. Thus, aggregating the data up to the school level is encouraged by the NCES and dataset creators, for researchers interested in research questions at the school level. Given the design of the SASS data, it is an ideal data set for me to use in this dissertation because I am interested in school-level and teacher-level analyses. Further, these data include measures for key concepts in this dissertation, unavailable in other nationally representative data sets. For instance, SASS includes information on the organizational structure, student deviance, and teachers' attitudes, identities, and beliefs.

Exclusions

For theoretical and empirical reasons, I exclude some schools, principals, and teachers from my analyses in order to reduce the risk of bias in my final results. The SASS data includes

² Charter schools are only included in the 1999, 2003, and 2007 wave. Charter schools (and BIA schools) are oversampled in order to provide a sufficient number of cases for assessment and analysis purposes.

information from traditional public schools, private schools, charter schools, alternative schools, and special schools. Similarly, teachers are randomly sampled within each of those schools. For this study, I am interested in understanding how traditional public schools create couplings within the school, and how coupling affects the teachers and students within the school. I do not include private schools, alternative schools, or non-traditional schools because their missions and objectives could bias the results of these analyses. For instance, private schools do not adhere to federal policies, nor are they subjected to the same accountability structures as public schools. Furthermore, I exclude teachers who teach in non-traditional classrooms. For example, this includes teachers who teach "pull out classes;" these are classes where they pull students who need remedial assistance from their regular classes. I also exclude teachers who report teaching in non-traditional or alternative classroom settings because their classrooms could be atypical environments. Teachers who instruct in atypical environments may experience different degrees of coupling due to the nature of their teaching assignment. For instance, teachers who work exclusively with students who have behavior problems may have unique experiences that do not truly reflect the couplings across the school, or teachers. In doing so, this study includes traditional public schools and traditional classroom teachers. After excluding all schools that are not traditional public schools, and all non-traditional teachers, I am left with approximately 155,450 teachers who are located within 34,950 schools across all six waves of data.³ When using the entire dataset of 34,950 schools (Table 4.1) and 155,450 teachers (Table 4.2), I will pool the cross-sections of the SASS datasets and use traditional regression models with the pooled data. I discuss my analytic strategies in detail within each empirical chapter.

³ The SASS data is a restricted-use dataset, and this number is rounded in order to protect schools, principals, and teachers.

Table 4.1: Total Number of		Table 4.2: Total Number of	
School	ls by Wave of Data	Teachers by Wave of Data	
Year	Cases (Schools)	Year	Cases (Teachers)
1987	5,180	1987	20,890
1990	6,410	1990	29,340
1993	6,160	1993	29,550
1999	6,040	1999	26,020
2003	5,990	2003	27,100
2007	5,170	2007	22,550
Total	34,950	Total	155,450

Despite the fact that each wave of the SASS data is a new, nationally representative, cross-section of public schools in the United States, there are schools that appear in multiple waves of SASS. In fact, some schools appear in back-to-back waves of SASS. Because most scholars do not utilize all six available waves of the SASS data, the schools that appear more than once in the SASS datasets go largely unnoticed and unused. I take advantage of this feature in my dissertation, by using schools that appear more than once in fixed effects regression analyses. For teacher-level analyses, NCES conducted Teacher Follow-Up Surveys (TFS) after each wave of SASS, and these teachers are a sub-sample of teachers who were sampled in the previous wave of SASS. This allows for longitudinal data analysis with teachers, and many scholars have taken advantage of this data structure (Grissom 2011); see for example, Ingersoll (2001).

A sample of schools (approximately 4650, or 18%) appear in two back-to-back waves of the SASS data. For example, a school could show up in the 1999 wave, and again in the 2003 wave (i.e. back-to-back waves). In addition, a school could not have a second time point of 1987, nor could it have a first time point of 2007, because these are the first and last waves sampled in SASS. To my knowledge, this is the first study to utilize all six waves of the SASS data, and simultaneously take full advantage of the schools that show up more than once in back-to-back waves. For the sub-sample of schools, I will employ a different statistical technique for analyzing within school change – fixed effects regression models. I discuss this in more detail in the analytic strategies located within each empirical chapter.

My rationale for only including schools that appear in successive waves rests on the nature of the expected longitudinal effects. If a school appears in 1987, and then again in 2003, it would seem unreasonable to suggest the macro-level policy era of *A Nation at Risk* played a large role in developing the micro-level couplings of a school in 2003. While time-order is established, the waves are too far apart to suggest that policies in 1987 directly influence the organizational structure of schools in 2003. Similarly, meso-level coupling, or the race or gender of a school principal in 1993 likely has no immediate bearing on the micro-level coupling of schools appearing again in the 2007 wave of the SASS data – fourteen years later. Ideally, I would have schools at each point in time; unfortunately, that is not possible with the SASS data, even if merged with the appropriate TFS. Therefore, in order to capture the true essence of time-order in my analyses, I excluded all repeated cases that did not occur in successive waves. I am left with a sample of 4,650 schools nested within 9,910 cases (Refer to Table 4.3).

Repeated Schools)				
Year	Cases (Schools)			
1987	1,310			
1990	2,620			
1993	2,180			
1999	1,420			
2003	1,440			
2007	940			
Total	9,910			

Table 4.3: Total Number of				
Schools by Wave of Data (For				
Repeated Schools)				
ear	Cases (Schools)			

Socio-Political Data

My supplementary data come from widely available socio-political data that I link to the SASS data by state and year. I created a dataset of socio-political variables in order to consider environmental factors that could influence schools, such as how states voted in presidential elections and state indices of high or low stakes testing. By including variables that address the external environment I am better able to understand how the socio-political environment plays a role in shaping the organizational structuring of schools. These variables include political parties in power, state reforms, home school and charter school laws, and demographic information.

Presidential election data is available from multiple sources, and I use the election maps provided by the US Electoral Maps (Office of the Federal Register 2013) in order to code each state's political climate. Many states do not vary across time, but some states do which makes this data point time-varying. At the state level, I use charter school law information taken from the Center for Education Reform (CER) (Center for Education Reform 2008). I do not include charter schools in my analyses, as I outlined above, but the charter school information indicates how states view educational choice movements. Each state adopted charter school laws in different years, and some never adopt charter school laws. State charter school law data is thus time varying. Also at the state level, I am interested in accountability structures that states impose in order to improve test scores or control schools from the macro-level. For accountability information at the state level I borrow Carnoy and Loeb's state-accountability scale. I combined all of these pieces of information into a small, secondary dataset that I use with the SASS data by merging the information by fips code (i.e., state codes) and survey data year.

Variables

I outline the variables for all empirical chapters below. In the first empirical chapter I address the following research question: How do federal policy eras, state characteristics, local-level coupling, and principal attributes affect the formal relationships between principals and teachers? This question underscores the importance of multiple governing levels affecting the coupling within schools. In this analysis, I use schools as the unit of analysis. Therefore, I have four specific sets of independent variables for the first analysis – federal, state, local, and principal characteristics.

In the second empirical chapter, I explore a similar research question, but I concentrate on teachers: How do federal policy eras, state characteristics, local-level coupling, principal attributes, and teacher characteristics affect the formal relationships between principals and teachers? By including teachers in this empirical chapter, I add another layer of the public education system in my analyses – federal, state, local, principal, and teacher characteristics. My unit of analysis for the second chapter is the teacher. In the third and final empirical chapter I examine the relationship between tight coupling and teachers' social bonds and student deviance. My research question asks how micro-level tight coupling affects teachers' social bonds and student deviance at the school-level, thus my unit of analysis is the school-year. I include four levels of the public education system in this chapter – federal, state, local, and principal attributes.

Most variables are present in multiple chapters of this dissertation. But in order to clearly depict which variables I rely upon, I present three tables of variables where I indicate the relevant empirical chapter(s) for each variable: the dependent variables in Table 4.5, the independent variables in Table 4.6, and the control variables in Table 4.7.

Operationalizing Coupling

Micro-Level Coupling: The micro level of coupling is within the school building, and between the teachers and administrators. Day-to-day activities occur at the micro level and demonstrate the inner-working of the school. The micro level of coupling is particularly important and this dissertation first uses a loose-to-tight coupling scale as a dependent variable in order to understand the precipitating factors that lead to more tightly coupled schools. For the second empirical chapter I use the same coupling scale as an independent variable in order to examine the relationship between coupling and teachers' attitudes or experiences. Again in the third chapter, I use the coupling scale as an independent variable to understand the role of tight couplings play in affecting student disorganization.

Weick's theoretical framework of coupling within schools focuses on technical couplings (e.g. technology, task, role) and authority couplings (e.g. positions, rewards, sanctions). In order to assess coupling at the micro level, it is appropriate to focus on both technical couplings and authority couplings, such as daily tasks or roles, and who makes decisions within the organization. Both pieces of Weick's coupling framework are important because they are indicative of the division of labor, and power structures. Perfect measures of coupling at this level ideally measure who has control and/or autonomy over daily activities within the school and how tightly linked faculty are with administrators.

In order to measure micro-level coupling, I use a scale that represents coupled organizational activities between the teacher and principal. Multiple items contribute to whether or not a system is tightly or loosely coupled at the micro-level. I argue that the primary signs of coupling can be found in elements of control, autonomy (i.e., how tightly linked administrative control is over what teachers do in their classrooms), and the degree of input teachers have in the classroom and school. I use the following measures in my scale: the extent of control/influence teachers have over setting discipline policy, choosing textbooks, choosing content for their classroom, determining the teaching techniques to be used in the classroom, and determining the amount of homework assigned. These scales are standardized and range from 0-4 ($\alpha = .71$).

I draw necessary variables from the teacher questionnaire to create my school-level (i.e. micro-level) coupling scale. Multiple teachers are randomly sampled and surveyed within each sampled school, and I average the teachers' responses to create a variable that indicates the organizational coupling at the school level. The SASS data are designed to aggregate up to the school level, and this is encouraged by the NCES. Questions ask teachers to report how much individual influence or control they possess. For instance, teachers are asked, "How much actual control do you have IN YOUR CLASSROOM at this school over the following areas of your planning and teaching: a) Selecting textbooks and other instructional materials, b) Selecting content, topics, and skills to be taught, c) Selecting teaching techniques, d) Disciplining students, and e) determining the amount of homework to be assigned " The structure of this question calls

for teachers to primarily consider their own classrooms. In general, there is a high correlation of teachers' responses (i.e. teachers who are within the same school as one another) on these questions (Intra Class Correlation: 10-17%). This is important because it indicates the degree to which teachers agree on the organization of activities and power within their own school. But, teachers do provide a range of responses, so I average their answers to create a variable that indicates the general couplings within the school.

Many survey questions in the SASS dataset are useful for constructing my dependent variable, but not all questions were asked during every single wave of the data collection. Due to some inconsistencies, I choose to use variables and questions that are present in all six of the SASS data waves. This excludes some questions that could indicate tight couplings within the school. With these exclusions, I contend my analysis is more robust than an analysis utilizing only a few of the SASS waves, and creates a conservative dependent variable.

The SASS questionnaires asked identical questions, but offered different ordinal response categories to respondents in some waves of data. For instance, the 1987, 1990, and 1993 datasets had six ordinal categories (i.e., 0-5), the 1999 wave had five ordinal categories (i.e., 1-5), and the 2003 and 2007 wave had four ordinal categories (i.e., 1-4) which all asked respondents to answer from strongly disagree to strongly agree.⁴ In order to standardize my dependent variable and make it useful in a model with all six waves of data, I multiplied data by the appropriate scaling factor to place all waves on a 0-4 five point scale. For instance, I multiplied each point on the ordinal scale in the 1987, 1990, and 1993 data by 4/5. Similarly, I multiplied each point on the

⁴ Prior to scaling these data to a consistent scale, I recoded each scale to begin with 0 (e.g. 1999 is 0-4, 2003 and 2007 are 0-3)

that ranges from 0-4 and is consistent with the 1999 wave of data. See Table 4.4 for more detail on the scaling factors. I chose to use this method of standardization for my dependent variable, instead of using Stata's option for scale standardization, because it eases the interpretation of my final models. Each unit increase on this type of standardized scale is more meaningful to readers and scholars because it clarifies the interpretation of "one unit." The scales are constructed and coded in such a way that as the scale increases the degree of coupling between principals and teachers becomes tighter. Lower numbers indicate a looser level of coupling within the school, making this a scale that indicates the concept of loose-to-tight coupling.

ORIGINAL	SCALING FACTOR	RESCALED			
Waves: 1987, 1990, 1993					
6 point Scale		5 point			
Range: 0-5		Range: 0-4			
0	4/5	0.00			
1	4/5	0.80			
2	4/5	1.60			
3	4/5	2.40			
4	4/5	3.20			
5	4/5	4.00			
ORIGINAL	SCALING FACTOR	RESCALED			
Waves: 2003, 2007					
4 point Scale		5 point			
Range: 0-3		Range: 0-4			
0	1 1/3	0			
1	1 1/3	1.34			
2	1 1/3	2.67			
3	1 1/3	4			

 Table 4.4: Scaling Factors for Standardizing Scales*

* All waves are scaled to the 1999 wave.

Meso-Level Coupling: Coupling exists on multiple levels. I include a meso level of coupling as an independent variable to account for the relationship between the school district/school board and the school. Schools are accountable and associated by obligation to external entities, such as district and state school boards. Thus, an analysis of coupling must include this relationship. The local school board and government is an intermediate level between the macro structures of the federal/state governments and the individual schools. Thus, I refer to this level as a meso structure of coupling. Because the local district or school board has a relationship with the school, I expect coupling at the meso level will affect coupling within the school. For this variable, I create a scale using several questions present in all six waves of the SASS data. Similar to my dependent variable for this chapter, there are relevant questions for meso-level couplings across many of the SASS data waves. But, I only use questions available in all waves of the dataset which creates a more conservative independent variable. I include measures for the district's control over hiring teachers in the school, setting curricula, and setting discipline policies for schools. These measures are standardized from 0-4 ($\alpha = .61$). I standardize this variable using the format from my dependent variable. The categories from "strongly disagree" to "strongly agree" are identical to those in the dependent variable across the SASS data waves. Please refer to my description above, and Table 4.4, for a full explanation of coding and standardizing my scales.

Dependent Variables (Table 4.5)

Micro-Level Coupling: I use two variations of micro-level coupling in this dissertation. First, I include micro-level coupling at the school level in Chapter 5 and Chapter 7. But, Chapter 6 focuses on the teacher as the unit of analysis. Therefore, the micro-level coupling variable is

from the teacher's report, and is not averaged with the other teachers' responses. See the description above for more detail on this variable.

Deviance: In the final empirical chapter, Chapter 7, I use school level deviance as a dependent variable. Deviance is based upon a nine item scale that includes: physical conflict, robbery, vandalism, cutting-class, drug use, alcohol use, tardiness, possession of weapons, and student absenteeism ($\alpha = .87$). This nine item scale is measured at the school level; therefore, each teacher's response is averaged with the other teachers who are located within the same school. Each school has one score that is based upon multiple teachers' responses.

Teachers' Social Bonds

In the section below, I present variables that capture teachers' occupational social bonds. Hirschi's (Hirschi 1969) control theory, or social bonding theory, suggests that weak social bonds will result in increased deviance. I fully elaborate upon this theory and the conceptualization of social bonds in Chapter 7. The variables of attachment, commitment, involvement, and belief are the core social bonds of social control theory, and I outline each of these separately.

Attachment: Attachment indicates the degree to which teachers have a positive working relationship with one another. This measure asks teachers if rules for student behavior are consistently enforced by teachers in the school, even for students not in their own classrooms. I average teachers' responses to create a school level variable. Higher numbers indicate greater levels of attachment.

Commitment: Commitment indicates the degree to which teachers are committed to their teaching job. This measure asks teachers to report the extent of teacher absenteeism in the

school. I average teachers' responses to create a school level variable. Higher numbers indicate greater commitment (less teacher absenteeism).

Involvement: Teachers' involvement with the school is measured by looking at the number of hours teachers spend engaging in additional activities for their school. Teachers are required to work a set number of hours in order to receive full pay. This measure indicates how many hours teachers spend doing more than the mandatory workload. Teachers' responses are averaged in order to obtain a school average. Additional hours range from 0-45, but the mean response is between 12 and 13 hours.

Belief: I measure teachers' belief through two measures. The first measure asks teachers "if you could go back to your college days and start over again, would you become a teacher or not?" The responses range from "certainly would not" to "certainly would", coded such that higher numbers indicate "certainly would," and a higher score on belief. I average teachers' responses in order to obtain a school average. My second measure of teachers' belief comes from a measure that asks teachers, "How long do you plan to remain in teaching?" The responses range from planning to leave as soon as possible to as long as I am able. Higher numbers indicate more belief about the occupation. I average teachers' responses in order to obtain a school average.

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		Mean SD		Mean SD		Chapter
Variable	Description and Coding		(OLS)		Effects)	
Loose-to-Tight Coupling (School Level)	Loose-to-Tight Coupling refers to micro-level coupling, and is made up of 5 items that indicate the formal relationship between the principal and teachers. The scaled variable ranges from 0-4. $\alpha = .71$. This variable is an average of teachers' responses who are located within the same school. Source: SASS Questionnaires.	0.90	0.47	0.86	0.44	DV in ch. 5 IV in ch. 7
Loose-to-Tight Coupling (Teacher Level)	Loose-to-Tight Coupling refers to micro-level coupling, and is made up of 5 items that indicate the formal relationship between the principal and teachers. The scaled variable ranges from 0-4. $\alpha = .71$. Source: SASS Questionnaires.			0.87	0.68	DV in ch. 6
Deviance (School Level)	Deviance is measured at the school level, and includes 9 items that indicate the types of deviant behavior. Items include the extent to which physical conflict, robbery, vandalism, class- cutting, drug/alcohol use, tardiness, possession of weapons, and student absenteeism occurs wtihin the school. Source: SASS Questionnaires.			0.98	0.48	DV in ch. 7 IV in ch. 7
Attachment (School Level)	Attachment indicates the degree to which teachers have a positive working relationship with one another. This measure asks teachers if rules for student behavior are consistently enforced by teachers in the school, even for students not in their own classrooms. I average teachers' responses to create a school level variable. Higher numbers indicate greater levels of attachment. Source: SASS Questionnaires.			1.76	0.63	DV in ch. 7 IV in ch. 7
Commitment (School Level)	Commitment indicates the degree to which teachers are committed to their teaching job. This measure asks teachers to report the extent of teacher absenteeism in the school. I average teachers' responses to create a school level variable. Higher numbers indicate greater commitment (less teacher absenteeism). Source: SASS Ouestionnaires.			2.34	0.48	DV in ch. 7 IV in ch. 7
Involvement (School Level)	Teachers' involvement with the school is measured by looking at the number of hours teachers spend engaging in <i>additional</i> activities for their school. Teachers are required to work a set number of hours in order to receive full pay. This measure indicates how many hours teachers spend doing more than the mandatory workload. Teachers' responses are averaged in order to obtain a school average. Additional hours range from 0- 45. Source: SASS Questionnaires.			12.60	4.98	DV in ch. 7 IV in ch. 7
Belief 1 (School Level)	I measure teachers' belief through a measure that asks teachers "if you could go back to your college days and start over again, would you become a teacher or not?" responses range from certainly would not to certainly would, coded with higher numbers indicating "certainly would," and a higher score on belief. I average teachers' responses in order to obtain a school average. Source: SASS Questionnaires.			2.78	0.715	DV in ch. 7 IV in ch. 7
Belief 2 (School Level)	My second measure of teachers' belief comes from a measure that asks teachers, "how long do you plan to remain in teaching?" responses range from planning to leave as soon as possible to as long as I am able. Higher numbers indicate more belief about the occupation. I average teachers' responses in order to obtain a school average. Source: SASS Ouestionnaires.			2.89	0.625	DV in ch. 7 IV in ch. 7

TABLE 4.5: DEPENDENT VARIABLES: DEFINITIONS, SOURCES, AND DESCRIPTIVES

Independent Variables (Table 4.6)

Federal Level Independent Variables

Policy Eras: I use the survey year for each wave of data included in this analysis as a proxy for the socio-political era. As previously indicated, federal level policies have changed over time and I highlight each relevant policy by year.

Year 1987: The survey year 1987 is the first wave of data available after the report, *A Nation at Risk.* I use year 1987 as a reference category in all analyses for the first empirical chapter.

Year 1990: Federal level policies were not drastically changed before the year 1990, and it is seven years removed from *A Nation at Risk*.

Year 1993: As mentioned above, the Bush administration did not pass any new federal level policies, and 1993 is ten years after the report *A Nation at Risk*.

Year 1999: In 1994, Clinton re-authorized the Elementary Secondary Education Act (ESEA) as the Improving American Schools Act (IASA) and the survey year 1999 is the first wave of data after ESEA was re-authorized and affected school systems.

Year 2003: The 2003 wave of data is only two years after No Child Left Behind (NCLB), and is the first wave of data in the NCLB era.

Year 2007: The year 2007 still falls under the auspices of NCLB, much like 1990 and 1993 are still directly following *A Nation at Risk*, but it is six years after the controversial policy.

State Level Independent Variables

Index of High/Low Stakes Testing (Figure 4.1): Carnoy and Loeb (2002) created an index that indicates the degree to which a state participates in high or low stakes testing. They use this measure in their analysis examining the relationship between external accountability student outcomes; they find that states with higher stakes (i.e. more accountability) testing structures

experienced gains in NAEP 8th grade math tests. Each state receives a score and the index ranges from 0 to 5, with 0 indicating a very low level of accountability within the state and 5 a great deal of accountability. For example, Iowa receives a score of 0 because the state does not require any formal accountability measures. But a state like Florida for instance, demands a great deal of what they consider "maximum" requirements. This index is published and available in Carnoy and Loeb's (2002) appendices and they state that this index "captures the degree of state external pressures on schools to improve student achievement according to state-defined performance criteria" (Carnoy and Loeb 2002: 311). While the intent of external pressures is to yield increased results in academic performance, it is possible that the degree of external pressures results in varying degrees of organizational coupling within the school, as teachers and administrators negotiate the requirements of the state.

Election Results by State: In order to gauge the relative liberal or conservative leanings of each state, I coded the direction each state voted in the election prior to the wave of data presented. For example, in models with the 2007 wave of SASS data, I use the results of the 2004 election. Each state is coded as 1 or 0, with 1 indicating the state voted for the republican candidate. The only lack of variance is in the first wave, when all but one state (Minnesota) voted for Reagan in the 1984 election, allowing for almost no variance on this independent variable. Correlations between election results and the accountability index are not high ($\rho_{X,Y}$ =.01). Essentially, high accountability states do not seem more or less likely to vote a particular way in an election, making this a unique political measure for this analysis. For example, Texas is traditionally a "red state" but also has a very high score on the accountability index; similarly, New York has the maximum level of accountability but routinely emerges as a "blue state."



Figure 4.1: Map of High Stakes Accountability

State Charter School Laws: I use a dichotomous variable to indicate whether or not the state has a law permitting charter schools. States adopted charter school laws in different years, and this variable is time varying. This variable controls for the state's general interest in deregulating and loosening oversight from the district and state level. This variable is not included in all waves of analyses, because the first charter school law was not enacted until 1991; therefore, this variable is only present in models from 1993-2007.

Local Level Independent Variables

Meso-Level Coupling: Meso-level coupling is described above and used similarly here. **Bonus:** I use a broad measure of merit pay to indicate whether or not the local district or school uses a system of performance based merit pay or a bonus to reward teachers for their students' test scores. This is a dichotomous variable and refers to the availability of a school wide bonus for all teachers in a school with exceptional performance or improvement. The measure of school wide bonuses also considers incentives outside of the school that are present in the district. The incentive to improve academic test scores within classrooms is present at the school level when school wide bonuses are offered as a reward for school level improvement. All teachers will benefit in circumstances where the school, overall, improves or posts high test scores. This school-wide incentive is a good measure of coercive isomorphic pressures present within the confines of the school.

Principal Independent Variables

Female: I include female principals in these analyses to understand how the principal's gender contributes to the degree of coupling within the school, teachers' social bonds, and student deviance. Male principals are the reference category.

White: The race of the principal is included as a dichotomous variable – white or non-white. Non-white categories of race do not make up big enough groups to parse each race out individually. Non-white principals are the reference category.

Highest Degree Earned: I use a measure of the highest degree the principal has earned to address how the principal's education can have an impact on the organizational structure of the school. Most principals earn advanced degrees ranging from masters and specialist degrees to doctorate degrees. I include the measure for doctorate degree in my models for highest degree earned, and all other degrees as the reference category.

Number of Years as Principal: The number of years a principal served as administrator could affect how principals enact tight coupling within the school or affect teachers' social bonds and student deviance. This is a continuous variable that ranges from 0 to 47. Principals who report 0 are serving their first year as principal, and the average is just over 5 years. Fewer than twenty percent of the principals have more than 9 years prior experience as a principal.

Number of Years Teaching Prior to Principal: The vast majority of principals (more than 99%) taught classes prior to becoming a principal, and it is possible the number of years a principal spent teaching in the classroom will influence how s/he organizes the school and influences teachers and students. This is a continuous independent variable that ranges from 0 to 42. The average is just over 11 years and fewer than eight percent of principals have teaching experience amounting to 3 years or less.

Teacher Independent Variables

Male: I include male teachers in my analyses because teachers' gender could have an impact on how teachers experience coupling within their school. Female is the reference category.Race: Teachers' race is broken into five categories: White, Black, Asian, Hispanic, and American Indian. White teachers are the reference category.

Teaching Experience: The teaching experience refers to the number of years a teacher has spent teaching. This variable includes years spent teaching in other public schools, and years spent teaching in private schools. On average, teachers have just over 15 years of teaching experience.

International control of the second state of the second state second sta	Variable	Description and Coding		Mean SD		Mean SD	
Lecture Lecture Lecture Le			(0)	(OLS) (Fixed Effects)		omptor	
Year 1987 (1987 - 1988 arrey from the SASS questionnaires (A Nation at Risk em) 0.15 0.35 0.13 0.37 0.14 0.5 6, 7 Year 1990 1999-2009 arrey from the SASS questionnaires (ASA en) 0.19 0.39 0.23 0.24 0.5 6, 7 Year 1990 1999-2009 arrey from the SASS questionnaire 0.16 0.37 0.44 0.5 6, 7 Year 2007 2003-2003 arrey from the SASS questionnaire 0.14 0.35 0.09 0.29 ch.5 6, 7 Year 2007 2007-2008 survey from the SASS questionnaire 0.14 0.35 0.09 0.29 ch.5 6, 7 Year 2007 2007-2008 survey from the SASS questionnaire 0.14 0.35 0.09 0.24 ch.5 6, 7 Index Carroy and Laek 2002 Existic Socie of a 15 for republican or 0 for democrat based on how were use electron results from the 2004 existics. 0.40 0.49 0.46 ch.5 6, 7 Carroy and Laek 2002 Listic Si a code at 15 for republican or 0 for democrat based on how were socie electron results from the 2004 existics. 0.40 0.49 0.30 <td></td> <td><u>Federal Level</u></td> <td></td> <td></td> <td></td> <td></td> <td></td>		<u>Federal Level</u>					
	Year 1987	1987-1988 survey from the SASS questionnaires. (A Nation at Risk era)	0.15	0.35	0.13	0.34	ch. 5, 6, 7
Year 1993 1993 1994 1994 1994 1995	Year 1990	(Reference category)	0.19	0.39	0.27	0.44	ch 5 6 7
Yan 1999 1999-2000 survey from the SASS questionnaire 0.16 0.37 0.14 0.33 0.44 0.35 0.55, 57 Yan 2007 2007-2008 survey from the SASS questionnaire 0.17 0.38 0.14 0.35 0.19 0.22 ch, 5, 6, 7 Yan 2007 2007-2008 survey from the SASS questionnaire 0.14 0.35 0.19 0.22 ch, 5, 6, 7 Constraints The accountability, and 5 is the highest kevel of accountability. Source: 2.25 1.49 ch, 5, 6, 7 Carry and Londo 2002 Each state is coded as 1 fore rpublican or 0 for democrat hased on how different times; thus, this vaidable changes over time. States with elar wesc election results from the 2004 election. 0.40 0.49 0.46 ch, 5, 6, 7 State Charter State Charter State Charter This is a chicknomeux variable than indicates whether or not a state has a law that allows charter schools. States adopt charter school laws at echool. This variable is a cell more plays in the highest quarite the law. 2.00 0.46 ch, 5, 6, 7 Merei PaylBons This is a chicknomeux variable tha highest quarite (very righ) and the meso-to-copaling is in the highest quarite (very righ) and the meso-to-copaling is in the highest quarite (very righ) and the meso-to-copaling is the relationship	Year 1993	1993-1994 survey from the SASS questionnaire (IASA era)	0.19	0.39	0.23	0.42	ch. 5, 6, 7
Yar 2003 2003-2004 survey from the SASS questionnaire (NCLB erg.) 0.17 0.38 0.14 0.35 ch.5, 5, 7 Yar 2007 2007-2008 survey from the SASS questionnaire of the accountability index mages from 0.5, and represents the costent 2.25 1.49 ch.5, 6, 7 Index accountability, and 5 is the highest level of accountability, on accountability, and 5 is the highest level of accountability, on a state has exeremal accountability, and 5 and the highest level of accountability, and 5 and the highest level of accountability, and 5 and the highest level of accountability, and the 2004 dection. Data from the 2007 0.62 0.49 0.64 0.48 ch.5, 6, 7 Bise to rate is a dishortomax tracent presidential blacking. Data from the 2007 0.62 0.49 0.30 0.46 ch.5, 6, 7 State Charter This is a dishortomax variable that indicates whether or not a state has a law that allow charter school have accountability, and a coce the acquire the law. 0.40 0.49 0.30 0.46 ch.5, 6, 7 State Charter This is existed coupling is the relationship between the district and the school. This variable is a scale made up of 3 tens that mange from 0.4, and the school and is a coce or any state and reference the accountability. 0.07 0.27 ch.5, 6, 7 Caupling This measure	Year 1999	1999-2000 survey from the SASS questionnaire	0.16	0.37	0.14	0.34	ch. 5, 6, 7
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Interactionability index mages from 0.5, and represents the extent each state has external accountability. O indicates a low level of accountability, and 5 is the highest kevel of accountability. Source: (Carnoy and Loeh 2000)2.251.49ch. 5, 6, 7Election ResultsEach state is coded as 1 for republican or 0 for democrat based on how hey voted in the most recent presidential election. Data of the most charter school bases that code action that ware uses election results from the 2004 for identication. Data of the most recent presidential election. Data of the most recent presidential election.0.620.490.400.460.48ch. 5, 6, 7State Charter School LawThis keed of coupling is the relationship between the district and the school. This variable is a scale made up of 3 items that range from 0.4, but due to non-normality. I include a categories and variable that indicates tread election is subtree of retring by indicates whether or not the local district on reward teachers for their students test scores. This is a dischotomous variable and refers to the availability of a school wide borns for reward teachers for their students test scores. This is a dischotomous variable and referse the availability of a school wide borns for reward teachers to the availability of a school wide borns for remark teachers for their students test scores. This is a dischotomous depresed teacher to the availability of a school wide borns for rem	Year 2007	2007-2008 survey from the SASS questionnaire	0.14	0.35	0.09	0.29	ch. 5, 6, 7
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TABLE 4.6: INDEPENDENT VARIABLES:	DEFINITIONS, SOURCES	S. AND DESCRIPTIVES
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Highest Degree Earned: Teachers possess various degrees: Doctorate, Masters, Bachelors, and Associates. I measure teachers' highest degree obtained for these analyses. In my analyses, I use both Bachelors and Associate degrees as the reference category, although Associate degrees represent less than one percent of the highest degrees obtained.

Teaching in a Tested Subject: This is a dichotomous variable that indicates whether or not the teacher is teaching primarily, or some of the time, in a tested subject. I operationalize "tested subject" as teachers who teach math or reading classes. This excludes teachers who may teach a section "out of their area." Importantly, it includes teachers who are in elementary schools and teach all subjects throughout the day.

Teaching the Same Students: This is a dichotomous variable, and specifies whether or not teachers instruct the same students throughout the day.

Control Variables (Table 4.7)

It is possible that school level factors could play a role in how school employees organize the internal activities of a school. The demographics of a school may motivate administrators, teachers, and staff to tightly or loosely couple based on needs unrelated to policies, accountability structures, rewards, or the local school board. Controlling for these school-level factors ensures that I am not capturing an effect that is also explained through other organizational components.

Environmental Characteristics

Location: The NCES codes the United States using four regions: Northeast, Midwest, South, and West. I use this coding in my analyses to control for the region of the country. For many policy decisions, states often adopt policies in neighboring states and policies diffuse due to proximity. South is the reference category.

Setting: Public schools in different types of metropolitan areas may face different institutional environments due to district requirements and community needs or demands. Controlling for the urbanicity of the school's location is therefore important in order to assess the role that the community plays in organizational structuring. I create three categories from a total of seven possible categories (i.e. urban/city, suburban, town/rural). Urban is the reference category. *School Demographics*

Grades Served: Public schools can be elementary, secondary, or combined. Organizational structures may vary based on the level of students served in the school. If administrators are more concerned with teachers' practices in certain grades, then it is important to control for the grades served in the school. I use the school level indicated on the school questionnaire to determine the grade levels of the school. I code this variable as elementary, secondary, or combined. I include elementary in my models, with secondary and combined as the reference category.

Enrollment: Schools vary widely in their size and numbers of students served. The number of students is usually a good measure of the size of the school. Although, a school may look bigger if it is combined (K-12) and another school has the same number but only serves grades 9-12. Controlling for the grades served should preclude this from becoming an issue. I use a continuous measure of school enrollment for this control variable.

% of children eligible for Free Lunch: I use the measure of eligibility for free lunch to indicate the relative poverty of the school and serve as a proxy for the general socio-economic status of the school.

Racial Composition of School: I control for the racial composition of the school, using percentages of White, Black, Hispanic, Asian, and American Indian. Percent White is the reference category.

Teachers in a Tested Subject: For the school-level analyses, I control for the percentage of teachers who teach in a tested subject, and report on micro-level coupling. This percentage only indicates the percentage of *responding* teachers for the SASS data, not the actual percentage of teachers in a tested subject for the entire school.

Duplicate School: In school-level analyses, I control for whether or not the school appears in the SASS data more than one time. This is a dichotomous variable, and I include this variable to ensure that duplicate schools are not biasing my results by driving the analyses. Because this variable may not fully capture the effect of duplicate schools, I also ran all OLS models with duplicate schools excluded from the analysis. The fixed effects regression models *only* include duplicate schools.

Variable Description and Coding		Mean	SD	Mean	SD	Chapter
Northeast	School is located in the northeast	0.16	LS)	(Fixed I	<u>inects)</u>	ah 5 6 7
Northeast	School is located in the uniterest	0.10	0.37			cli. $5, 0, 7$
Midwest	School is located in the midwest	0.25	0.44			ch. 5, 6, 7
West	School is located in the west	0.25	0.43			ch. 5, 6, 7
South	school is located in the south (Reference category)	0.33	0.47			ch. 5, 6, 7
Urban	School is located in an urban setting	0.21	0.40			ch. 5, 6, 7
Suburban	School is located in a suburban setting	0.31	0.46			ch. 5, 6, 7
Rural	School is located in a rural setting (Reference category)		0.50			ch. 5, 6, 7
Grades Served	Grades served in the school. Elementary schools are coded as 1. Combined and secondary schools are coded as 0.		0.50			ch. 5, 6, 7
Enrollment	The number of students enrolled in the school	634.47	499.28	653.24	504.32	ch. 5, 6, 7
Percent Free Lunch	This variable is the percentage of students who are eligible to receive free lunch in the school (range: 0-100).	36.27	26.19	34.07	25.14	ch. 5, 6, 7
Percent White	Percent of White students enrolled in the school. (Reference category)		29.98	74.88	29.24	ch. 5, 6, 7
Percent Black	Percent of Black students enrolled in the school.	12.03	22.04	11.09	21.75	ch. 5, 6, 7
Percent Hispanic	Percent of Hispanic students enrolled in the school.	8.35	17.44	6.88	15.37	ch. 5, 6, 7
Percent Asian	Percent of Asian students enrolled in the school.		9.29	2.97	10.82	ch. 5, 6, 7
Percent	Percent of American Indian students enrolled in	2.62	12 50	1 10	1451	-h 5 6 7
American Indian	the school.		15.58	4.18	14.51	cn. 5, 6, 7
Teachers in a	The percent of teachers who responded within		33.42	47.94	32.14	ch. 5, 7
Tested Subject	the school, and teach in a tested subject.					
Duplicate School	Some schools apper more than once across all waves of the SASS data. I control for schools that appear more than once (coded as 1).		0.50			ch. 5, 7

IADLE 4.7. CONTROL VARIADLES, DEFINITIONS, SOURCES, AND DESCRIPTION	TABLE 4.7: (CONTROL	VARIABLES:	DEFINITIONS	SOURCES.	AND	DESCRIPTIVES
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CHAPTER 5

SCHOOL-LEVEL COUPLING

Historically, educational scholars have agreed that schools are loosely coupled organizations, meaning that the sub-parts of the schools are linked and responsive, but largely remain autonomous (Bidwell 2001; Coburn 2004; Gamoran and Dreeben 1986; March and Olsen 1976; Rowan 1990; Weick 1976). This assumption has persisted since the 1970's. In fact, schools' loose coupling label is so pervasive that schools have become the archetype of loose coupling, and are often used as an example to portray the ideal-type of loosely coupled organizations. However, recent research calls the loose coupling model of schools into question, and suggests that schools may be tightening up the internal coupling (Hallett 2010; Rowan 1990).

The vast majority of research on schools' coupling looks at consequences of loose coupling. Specifically, research underscores why loose coupling is ideal (Cohen and March 1974; March and Olsen 1976; Meyer and Rowan 1977; Rowan 1981; Sauder and Espeland 2009), why teachers prefer loose coupling (Ingersoll 2003; Lortie 2002), and how teachers attempt to regain a loosely coupled structure when faced with threats to loose coupling (Coburn 2004). More recently, sociologists note that tight couplings produce turmoil (Hallett 2010). And while researchers speculate on the causes and origins of the coupling, there is a paucity of research that investigates *how* schools develop their couplings (Diamond 2007; Rowan and Miskel 1999; Scott 2001; Young 2006). Scholars typically attribute tight couplings to federal policies, state accountability mandates, or local curriculum decisions. In essence, multiple levels

of the public education system are charged with producing and maintaining couplings, with much attention focused on the role of high stakes accountability reforms handed down from various levels of the government in recent years (Coburn 2004; Diamond 2007; Elmore, Abelman and Furman 1996; Hallett 2010; Spillane and Burch 2006). These speculations, however, challenge findings in educational policy research that support the image of classrooms disconnected from the institutional environment (Eagly and Johnson 1990; Gilbertson 1981; Gross and Trask 1976; Pitner 1981; Shakeshaft 1987). Moreover, educational research on coupling is overwhelmingly dominated by qualitative analyses, case studies, or small-scale quantitative analyses limited to several states or districts (Coburn 2004; Darling-Hammond and Wise 1985; Diamond 2007; Floden et al. 1988; Gamoran and Dreeben 1986; Hallett 2010; Rosenholtz 1987). Therefore, it is not clear that the levels and causes of tight coupling found in these studies are typical.

Local processes, whether at the district level or within the school itself, may have a considerable impact on coupling. Principals play a key role in shaping the relationships between principal and teachers (Lee, Smith and Cioci 1993; Price 2012), and educational scholars highlight noteworthy differences between male and female principals leadership styles (Lee, Smith and Cioci 1993; Price 2012). If principals are integral in dictating the couplings within a school, then coupling may be a gendered process. Additionally, multiple levels of the public school system may work in concert, with no single level independently dictating the way in which schools acquire tight or loose couplings.

Using quantitative analyses, and a representative national sample of schools, this chapter addresses the following research question: how do federal policy, state characteristics, local factors, and principal attributes affect school-level couplings? I seek to understand how tiered levels of the US public school system contribute to micro-level coupling. I define micro-level coupling as the formal relationship between the principal and the teachers within the school. First, I am interested in how federal level policies and accountability structures at the macro level – federal and state – affect the internal environment of schools, in this case the micro-couplings. Second, I consider the role of local governments and school boards in shaping the degree of micro-coupling within the school. Third, and finally, I include principal characteristics in my assessment of micro-coupling.

Organizational Coupling within Schools – Micro-Level

Schools depart from the ideal-type Weberian model of bureaucracies (Weber 1968), despite their top-down organization. Indeed, schools possess many key features of a bureaucracy (Williams 1992), but the common goal of schools lies in knowledge production at the ground level. Essentially, teachers' day-to-day commitments to teaching and instruction dominate our perceptions of school organization, diminishing focus from the bureaucratic factions located at the top (Cognard-Black 2004). Scholars likened classrooms and schools to egg crates(Lortie 2002), where each teacher and classroom maintains a unique identity but appear largely homogenous within the larger school system. Further, Bidwell (2001) states that schools are formal organizations that are remarkably stable over time, implying that the organizational structure of schools fundamentally remains the same.

Empirical literature from the seventies, eighties, and early part of the nineties largely supports the loose-coupling argument, and solidifies the assertion that schools remained stable throughout history. In general, scholars underscore the principal-to-teacher relationship, indicating that teachers desire control over their classrooms and principals exclude themselves from many day-to-day teaching and learning activities. Teachers do not enjoy much authority at the school level (Lee, Dedrick and Smith 1991; Renzulli, Heather Macpherson and Beattie 2011), but Hanson notes teachers possess a "degree of autonomy surrounding the conduct of affairs in the classroom, as well as the discretion to make curricular decisions within welldefined limits" (1989: 37). Meyer and Rowan (1978) find further evidence of loosely coupled systems in schools, with teachers overseeing the lion's share of instructional decisions. Similarly, teachers strongly desire and seek to retain autonomy in their classrooms (Lortie 2002). The emphasis on autonomy, control, and input over classroom behavior signifies the sizable importance of relationships between teachers and principals in the loose coupling discourse.

Recent educational research suggests a shift in the organizational paradigms of schools. Over the past twenty years, scholars note a steady trend from loose coupling to tight coupling within schools. Specifically, teachers seem to report a decline in autonomy over classroom and school-related decisions, and scholars largely credit the standards-based reform movement for this shift (Coburn 2004; Diamond 2007; Hallett 2010; Ingersoll 2003; Young 2006). Young's (2006) study suggests the institutional environment helps shape the coupling in schools, but highlights the important role of the principal in enacting the mandates. With few exceptions, contemporary educational research attributes the shifting trend in couplings (from loose to tight) to macro-level structures (e.g. federal policy, state accountability structures).

At their core, the empirical studies of coupling focus on the consequences of loose or tight coupling, without fully exploring the causes. For instance, Hallett (2010) reports chaos and disorganization due to tightly coupled structures, while briefly acknowledging the federal policies. Likewise, Coburn (2004) and Ingersoll (2003) both find that teachers favor loosely coupled school environments when faced with increased institutional pressures, but these studies cannot completely investigate the role of macro (i.e., federal and state) or meso (i.e., local) level institutional structures. The impetus behind organizational couplings, and the perhaps changing trend, is largely neglected. Outcomes as a result of schools' organizational structure are certainly important, but understanding how couplings develop and change is the first step.

In order to fully understand how schools create couplings within their walls, I take into account four levels of the educational system – federal, state, local, and principal – to offer a comprehensive analysis of public schools. In keeping with previous educational scholarship, I focus on the formal relationships between principals and teachers within schools in order to assess micro-level coupling. Below, I outline all four hierarchical levels and hypothesize how each contributes to micro-level coupling.

Federal Policy – Macro Level Structures

Federal policies and reports, such as *A Nation at Risk*, the Improving American Schools Act (IASA), a re-authorization of the Elementary and Secondary Education Act (ESEA) and No Child Left Behind (NCLB), are fundamentally designed to affect the national population of public schools. Policy-makers assume that policy efforts will result in tangible changes or outcomes at the school level. However, research has found that many broad policies fail to take form within the walls of schools (Eagly and Johnson 1990; Pitner 1981; Shakeshaft 1987). Nonetheless, the spirit of these federal education policies (e.g. NCLB, IASA) assumes that schools will feel the impact of the policy. Moreover, neo-institutionalists predict that accountability structures promote tighter coupling between hierarchies (Davies, Quirke and Aurini 2006). Given the explicit goals of federal policies, to increase academic accountability among public schools, I hypothesize that federal level policies will tighten the couplings within schools.

H1a: In years immediately following federal level education policy we will see *tighter* coupling between principals and teachers.

Many educational researchers focus on the consequences of the NCLB policy era, and while these studies find mixed results, there is evidence that NCLB introduced a great deal of confusion and chaos at the school level (Darling-Hammond 2007a; Darling-Hammond 2007b). Neo-institutionalists discuss the implications of chaotic environments, and predict that organizational actors will actively loosen structures of coupling when faced with chaotic institutional environments (Weick 1976). Not all federal policies or eras induce chaos however. Educational researchers primarily focus on NCLB when analyzing disordered federal policy, and *A Nation at Risk* and IASA did not garner the same degree of negative attention (McDermott 2011). Therefore, I hypothesize that different federal policy eras will prompt different couplings within schools.

H1b: In years immediately following the federal level education policy of NCLB we will see *looser* coupling between principals and teachers.

State Characteristics – Macro Level Structures

State level characteristics are also important in shaping individual schools. Each state creates accountability structures that can vary widely depending on the political climate of the state. Federal policies request test scores (e.g. NCLB's Adequate Yearly Progress – AYP), but states have the power to increase standards, test more frequently, or standardize curriculums.

Educational researchers document the broad differences between states, suggesting that states fall along a continuum, in which some states have a very low level of accountability, while others exhibit a high level of accountability, or fall somewhere in between (Carnoy and Loeb 2002).

Academic accountability and performance standards create environments where schools must comply with norms at the state level. States retain a great deal of control over public schools, and have the power to dictate standards above and beyond the federal-level mandates. I categorize state characteristics as macro-level structures because all public schools in a given state are subject to the same rules and regulations as other public schools within the state. Though not as pervasive as federal-level policies, state accountability structures and laws often diffuse across states (for an example of charter school laws see, Renzulli and Roscigno 2005). State governments will frequently adopt similar policies (i.e., to their neighboring states) resulting in homogenous regulations. While the intent of external pressures is to yield increased results in academic performance, it is possible that the degree of external pressures results in varying degrees of organizational coupling within the school, as teachers and administrators negotiate the requirements of the state. Analogous to my hypotheses at the federal level, I hypothesize that state macro-level accountability structures play an important role in determining the micro-level couplings within schools.

H2: State level accountability structures will be associated with *tighter* coupling between principals and teachers.

Local Characteristics – Meso Level Structures

Local governments and school boards oversee many organizational aspects within schools and still wield substantial control over their local schools (Diamond 2007), despite concerted centralization efforts by the federal and state governments. Macro structures at the federal and state level should trickle down to local schools, but local school boards and governments can require schools to adhere to additional district-level guidelines. Coupling can occur on multiple levels in the tiered public education system. For example, local governments may shape hiring decisions or discipline policy. I refer to the local government and school board level as the meso-level, because it is the intermediate level, or the go-between, connecting the macro-level (federal and state) structures and the micro-level (school level). I hypothesize that tighter coupling from districts to schools will influence the couplings within schools.

H3: Tighter local-level coupling will be associated with *tighter* coupling between principals and teachers.

Principal Characteristics

Principals play an important role in the school, as noted by previous educational research (Young 2006). In case study analyses, qualitative researchers primarily comment on the importance of macro structures affecting school level organization (Coburn 2004). Other qualitative research on teachers suggests that principals may disrupt the teachers' preferred structure within the school (Weiss and Cambone 1994). Indeed, even in studies touting federal or state policies as the overarching factor in shifting organizational structure of schools, the qualitative data illuminates the role of the principal. Teachers commonly report losing autonomy because principals do not "let them do their jobs" (see for example, Diamond 2007; Hallett

2010). This qualitative data provided from the teachers' perspective implies that the principal enacts policies within the school. Case studies, while rich in individual school-level data, cannot tap the nuances of principal leadership with only one or a few cases. The principal is held constant, and the effects on coupling could be a result of macro or meso structures. But, the effects on coupling could also be a result of principal leadership. Including principal characteristics in this study is important because it adds a fourth dimension of control over the coupling within schools.

In order to more thoroughly explore the role of principals, I unite neo-institutionalism with a social psychological framework, focusing on the role of legitimacy for both the organization and the individual (this is consistent with Johnson, Dowd and Ridgeway 2006). Organizational research highlights the importance of legitimacy for organizational survival (Meyer and Rowan 1977; Scott 1987), and social psychological research emphasizes legitimacy for individuals in positions of power (Zelditch Jr. and Walker 2003). Principals are in positions of power, and must acquire legitimacy for their leadership role while simultaneously maintaining organizational legitimacy for the school. Fusing these perspectives provides an effective way to analyze how schools produce couplings, given the overlapping concern for legitimacy.

Legitimacy is a keystone for the theory of neo-institutionalism (Meyer and Rowan 1977; Scott et al. 2000). Organizations must convey legitimacy to society in order to acquire public approval (Seyfarth and Bost 1982). Often, organizations achieve legitimacy by creating and preserving what neo-institutionalists call taken-for-granted systems (DiMaggio 1997). In schools for example, taken for granted systems include teachers located in classrooms, and the role of guidance counselors, principals and vice-principals, and other administration, faculty, or staff. In general, the public knows what to expect from each entity within the school. Principals and vice-principals perform administrative duties, guidance counselors advise students, and teachers instruct students. By adhering to these taken-for-granted structures, schools consistently validate themselves to the public.

In an effort to understand the legitimacy of formal authority structures, scholars argue that legitimacy is conferred upon a social object (e.g. school principal) if "it is in accord with the norms, values, beliefs, practices, and procedures accepted by a group" (Zelditch Jr. 2001: 33) . Similarly, social psychologists stress that the individual's personal beliefs about legitimacy are inconsequential, rather legitimacy is given when individuals are regarded as legitimate by broader understandings of beliefs, values, and norms (Berger et al. 1998; Johnson, Dowd and Ridgeway 2006; Ridgeway and Berger 1986). In schools, principals acquire legitimacy by embracing rules or regulations that bestow legitimacy upon themselves by the teachers, staff, and general public. In some cases, this may only require assuming the title of "principal." However, if organizational actors resist viewing the principal as a legitimate source of power then principals may feel it necessary to enact power through other means (Ridgeway and Berger 1986).

Historically, females often encounter resistance when assuming positions of leadership, and employees favor working for men over women (Kanter 1977; Ridgeway 1997). The role of principal is not dissimilar from other types of managerial positions and educational research on principals' gender reveals a similar pattern (Eagly and Karau 2002; Weiss and Cambone 1994). The gendered norms of schools place males in administrator/principal positions and females are tasked with teaching the students (Lee, Smith and Cioci 1993). By and large, this pattern persists across public schools today.

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Research on principals' leadership styles finds key differences between men and women principals. Female principals are more likely to communicate with teachers, stop into classrooms, walk through the hallways, and know the general pulse of the school (Ingersoll 1996; Pfeffer 1981). In contrast, males engage in traditional non-participatory management styles, relying on authoritative directives that are not followed up with communication, trips around the school, or time spent in classrooms (Lee, Smith and Cioci 1993). The differences in leadership styles could be a result of women actively seeking legitimate power within the school. Frequently communicating with teachers, and following communication up with a classroom visit suggests a tightly coupled structure when schools house female principals. In light of concepts drawn from social psychologists and previous research by educational scholars, I expect schools headed by female principals to differ from those headed by males.

H4a: Female principals will be associated with *tighter* micro-level coupling (principals and teachers).

Tighter coupling within the school could result from principals' daily activities and general leadership styles, but consistent findings report preferences for male leadership (Kanter 1977; Lee, Smith and Cioci 1993; Ridgeway 1997). Thus, female principals could enact school policies and regulations, already viewed as legitimate, in order to gain control over a school. Social psychologists contend that organizational actors can acquire legitimacy through sources of authority (Fauth 1984; Tyler 2006; Wingfield 2009; Zelditch Jr. 2001). For principals, authority comes from higher powers (e.g. local level government). Consequently, multiple hierarchical levels function harmoniously to shape the coupling of schools. Finally, in order to bring multiple levels of the public school system together, I make predictions concerning meso level coupling and female principals.

H4b: Female principals will *strengthen* the relation between meso-level coupling (local government and the school) and micro-level coupling (principals and teachers).

Analytic Strategy

This analysis proceeds in two steps. First, using all of the pooled waves from 1987-2007, I use an OLS regression to analyze the general trends of coupling and compare schools to one another. Second, I uniquely employ a fixed effects regression model to analyze within-school change in those schools that appear more than once in the dataset and in back-to-back waves.

For the OLS regression, I utilize a stepwise approach where I enter each of the four hierarchical levels of interest – federal eras, state laws and accountability structures, local characteristics, and principal attributes—in a sequential fashion. Introducing the independent variables from the most macro-level to more micro-level reflects how tiered levels within education are often perceived. Nesting each hierarchical level in models is preferable to using only one complete model because it more clearly reveals the relationships between the tiered levels. Using OLS regression⁵ and the adjustments for standard errors to deal with non-independence of cases (schools are nested in states), I include a series of five models for these analyses. The intra-class correlation (ICC) is significant at .10, or ten percent, indicating that 10% of the variance is due to schools nested within states. It is thus appropriate to run all

⁵ OLS regression is the most appropriate method for the initial analyses because the SASS data does not sample the same schools over time. Thus, fixed effects, random effects, and growth models are inappropriate models when using all of the data.

analyses using the cluster command because it is possible that results could reflect within-state estimates.

The first model in Table 5.1 includes only federal policy eras, and allows me to test the direct relationship between federal policy eras and micro-coupling within schools. By tracking the relationship between policy eras and school coupling, it is possible to examine the general trends of coupling over time. Although not the same schools over time, the representative samples of schools in the US can indicate general trends of coupling within schools. Model 2 in Table 5.1 introduces the state-level variables and examines how all macro levels have an influence on micro-level coupling. I step local-level coupling and bonus structures into the third model in Table 5.1. This allows me to model the effect that all three governmental levels have on micro-level coupling. By including multiple measures of the principal's characteristics, the fourth model in Table 5.1 introduces the final level of control over school couplings. In the fourth model, we see how all four tiered levels independently contribute to the internal coupling of schools. Finally, Model 5 of Table 5.1 addresses the potential interaction between meso-level (local government) and principal-level characteristics.⁶

In the second step, I use fixed effects regression in order to model *within* school change. These models enhance my findings below because they more clearly delineate time-order and show patterns of change within schools. For the fixed effects regression, I construct my nested models in the same manner as my OLS regression analyses. A key exception is the exclusion of

⁶ Due to the large number of cases, I ran all models shown here using a ten percent random sub-sample of the data. In order to sample the data, I randomly selected ten percent of cases from each data wave to form a smaller dataset. This created a random, stratified subsample. The large number of cases in the complete sample presents a potential issue with statistical power, but findings using the subsample of data replicate the ones shown in this chapter. Therefore, I feel confident in these data and results, and present findings using the complete data.

non-time-varying independent and control variables.⁷ The Hausman test indicates that a fixed effects model fits the data better than a random effects model, and hence, fixed effects results, which indicate the average within-school association between the independent variables and micro-level coupling, are both empirically and theoretically appropriate (Halaby 2004; Johnson 1995; Johnson 2005). The fixed effects models include only a small sub-sample of the entire dataset. While very similar, the sub-sample of schools that appear more than once in the SASS data does significantly differ from the larger sample. Therefore, the fixed effects regression will allow me to make claims about within school changes, but it is not generalizable to the overall random samples initially constructed by SASS. Most independent variables, and key demographic features (e.g. state location), are not significantly different from the larger sample, but the micro-coupling dependent variable is significantly different from the total sample at the .001 level. For instance, the sub-sample scores are slightly lower on both micro-level and meso-level coupling.

My rationale for only including schools that appear in successive waves rests on the nature of the expected longitudinal effects. If a school appears in 1987, and then again in 2003, it would seem unreasonable to suggest the macro-level policy era of *A Nation at Risk* played a large role in developing the micro-level coupling of a school in 2003. Similarly, meso-level coupling, or the race or gender of a school principal in 1993 likely has no immediate bearing on the micro-level coupling of schools appearing again in the 2007 wave of the SASS data – fourteen years later. Ideally, I would have schools at each point in time; unfortunately, that is not

⁷ Fixed effects models only include time-varying independent variables, because variables that do not vary over time are accounted for in the structure of the fixed effects regression. Fixed effects models analyze change within schools, rather than between schools, therefore rendering the inclusion of non-time-varying variables unnecessary. The exclusions for these analyses include: index of high stakes testing, location, setting, and grades served. Similarly, I do not cluster for non-independence in the data (i.e., schools nested within states) because schools existence in states remain constant over time.

possible with the SASS data, even if merged with the appropriate TFS. Therefore, in order to capture the true essence of time-order in my analyses, I excluded all repeated cases that did not occur in successive waves. I am left with a sample of 4,650 schools nested within 9,910 cases.⁸

Results

OLS Models

Model 1 in Table 3.1 tests the direct associations between federal policy era and microlevel coupling and is relevant to hypotheses 1A and 1B. I find a significant positive association between the 1999 wave and micro-level coupling (principal-teacher). Relative to 1987, the 1999 wave is the only era with a positive association to micro-level coupling. The NCLB era (2003), relative to 1987, has a significant negative association with micro-coupling, and that association persists for the 2007 era. These results suggest partial support for hypothesis 1A because the IASA era produced tight coupling within schools. Although NCLB was proclaimed as a solution for public schools, designed to put all public schools on the same page across the US, the NCLB eras (2003 and 2007) are negatively associated with tight coupling in schools. Therefore, my finding in Model 1 of Table 5.1 also supports hypothesis 1B. In the NCLB policy era, schools report looser coupling than in the 1987 period.

Model 1 in Table 5.1 demonstrates an important pattern across US public schools, and speaks to the general trends in coupling. Current developments in educational research suggest a recoupling movement in public schools, but Model 1 does not depict a steady increase in coupling across public schools. Instead, Model 1 illustrates a non-linear trend, where microlevel coupling loosens, and tightens, then loosens, and tightens again. I graph this pattern in

⁸ These numbers are rounded due to the restricted nature of the SASS data.

	Model 1	Model 2	Model 3	Model 4	Model 5
Socio-Political Factors					
Year 1990	-0.050 ***	-0.052 ***	-0.050 ***	-0.055 ***	-0.055 ***
Year 1993	-0.065 ***	-0.075 ***	-0.071 ***	-0.078 ***	-0.079 ***
Year 1999 (ESEA)	0.042 **	0.038	0.041 *	0.030	0.030
Year 2003 (NCLB)	-0.080 ***	-0.076 ***	-0.078 ***	-0.093 ***	-0.093 ***
Year 2007	-0.031 *	-0.026	-0.028	-0.043 *	-0.043 *
Reference is 1987 (ANaR)					
State Characteristics					
High Stakes Scale		0.013	0.013	0.013	0.013
Republican State (Reference – Democrat		-0.022	-0.021	-0.021	-0.021
Charter Law		-0.022	-0.021	-0.021	-0.021
Local Characteristics		-0.005	-0.005	-0.007	-0.000
Tight Meso Coupling (Local Cost to School)			0.034 ***	0.031 ***	0.018 *
Pafaranaa is 0.2			0.034	0.031	0.018
Reference is 0-5			0.005	0.004	0.004
During l's Characteristics			-0.005	-0.004	-0.004
Eamala Drin ain al				0.060 ***	0.052 ***
remaie Principal				0.000	0.032
				-0.005	-0.003
Highest Degree - Docotorate (Reference=All				0.002	0.002
Other Degrees)				0.003	0.003
# of Years as Principal				-0.002 ***	-0.002 ***
# of Years Teaching prior to Principal				0.000	0.000
Interaction Term					
Female Principal x Tightest Meso-Coupling					0.036 **
Controls					
Location					
Northeast	-0.099 *	-0.099 *	-0.099 *	-0.098 *	-0.098 *
Midwest	-0.168 ***	-0.155 **	-0.154 **	-0.152 **	-0.152 **
West	-0.107 *	-0.094	-0.093	-0.097	-0.097
Setting					
City	0.183 ***	0.184 ***	0.183 ***	0.175 ***	0.175 ***
Suburban	0.132 ***	0.128 ***	0.127 ***	0.122 ***	0.123 ***
School Demographics					
Free Lunch	0.000	0.000	0.000	0.000	0.000
Black Percentage	0.003 ***	0.003 ***	0.003 ***	0.003 ***	0.003 ***
Hispanic Percentage	0.002 ***	0.001 ***	0.001 ***	0.001 **	0.001 **
A sian Percentage	-0.002 *	-0.002 **	-0.002 **	-0.002 **	-0.002 **
American Indian Percentage	0.001	0.001	0.001	0.001	0.001
Enrollment	0.000 ***	0.000 ***	0.001	0.000 ***	0.000 ***
Elementary School	0.000	0.000	0.000	0.100 ***	0.000 ***
Percent of Teachers in Tested Subject	0.002 ***	0.002 ***	0.002 ***	0.002 ***	0.002 ***
Durlicete School	0.002	0.002	0.002	0.002	0.002
Constant	-0.007	-0.002	-0.002	-0.001	-0.001
$\frac{1}{N-24040}$	0.041	0.028	0.022	0.055 ****	0.033 ***
11 - 34740 P. Sauerad	0.210	0.22	0.221	0.225	0.225
x = -20.05 ** = -0.01 *** = -0.001	0.219	0.22	0.221	0.225	0.225
· h<0.03 ** h<0.01 *** h<0.001					

Table 5.1: OLS Regression of Micro Coupling on Socio Political and Principal Characteristics

Note: Schools are clustered in states

Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

Figure 5.1. The relevant federal reports and policies (i.e., *A Nation at Risk*, IASA, and NCLB), are noted on the appropriate year within Figure 5.1 and supply a reference point for when couplings tighten or loosen. Although I did not hypothesize about the trends in coupling across time, they are interesting to observe and call into question the countless qualitative reports of recoupling and increased tighter coupling over the last two decades. Post analysis Wald tests for Model 1 in Table 5.1 reveal that most contrasts between successive years are significantly different from one another (with 1990 to 1993 as the exception). For instance, the observed tightening in micro-coupling from 2003 to 2007 is a statistically significant change.

Figure 5.1: Graph of Model 1 from Table 5.1 (Federal Policy Eras→School coupling)



Model 2 introduces state level characteristics. Contrary to hypothesis 2, none of the state characteristics are significantly associated with micro-level coupling. Recall these school-level data are clustered by state because the intra-class correlation (ICC) was significant and accounted for 10% of the relationship on the dependent variable. The statistical significance of the ICC denotes the importance of state level characteristics, and while those state level features

modeled in Table 5.1 are non-significant, 10 percent of the variance between schools is due to state-level differences not captured here.

Model 3 steps in the meso-level structures, which include local-to-school coupling relationships and the presence of a performance-based merit pay or bonus system. The coupling scale between the local government and school was a loose-to-tight scale, identical to the micro-level (principal-to-teacher) coupling scale, but preliminary examination of this variable revealed non-normality. Further, preliminary models demonstrate non-linearity in the association between meso-level coupling and micro-coupling. Given this non-normality and evidence of non-linearity, I divided the meso-level coupling variable into quartiles, and entered this variable into the regression model as a categorical predictor. Quartile comparisons were then made via Wald tests (using alternative out-groups/reference categories). These tests revealed that the bottom 3 quartiles did not differ from one another in their associations. Hence, I account for this non-linearity by dividing my meso-level coupling variable into tight coupling (4th quartile) or not (bottom 3 quartiles).

Hypothesis 3 predicts a significant positive relationship between local coupling relationships and micro-level coupling. As expected, tight meso-level coupling is positively associated with tighter micro-level coupling, supporting hypothesis 3. Model 3 suggests that when meso-level coupling is tightest (i.e., in the 4th quartile), there is an increase of .034 on the micro-level coupling scale. Finally, the availability of a merit-based bonus has no significant association with the degree of coupling within schools. Looking at the combination of federal, state, and local level characteristics in Model 3, it is important to note that the majority of federal

policy eras remain significant (with 2007 being the exception), suggesting that both federal and local elements shape school environments.

Model 4 brings together all four levels of the public school system (federal, state, local, and principal), and explores the role of the principal. I find that schools with female principals are more tightly coupled at the micro level. Although other principal attributes are nonsignificant, Model 4 does support hypothesis 4a. Looking at the nested models in Table 5.1, we see that the meso-level coupling remains positively significant across models, as do federal policy eras. While Table 5.1 conveys how all levels of socio-political factors can matter for schools, it does not adequately speak to the potential interaction between these levels of analysis, particularly between principals and local-level factors. As a result, I ran an interaction between meso-coupling and female principals to test my final hypothesis. These results are presented in Model 5. In Model 5 the coefficient for the interaction is significant, which means the association between meso-level coupling and micro-level coupling does vary by principals' gender. The coefficient for meso-coupling in Model 5 no longer represents a general effect. This model shows the association between tight meso-level coupling and micro-level coupling when the principal is male. The interaction term helps us calculate the association between tight mesocoupling and micro-level coupling for female principals ($b_{meso} + b_{mesoxfemale} = 0.018 + 0.036 =$ 0.054). Thus, tight meso-coupling is associated with a .054 point increase in micro-level coupling when the principal is female and only a .018 point increase in micro-level coupling when the principal is male. I graph this interaction in Figure 5.2. As shown, compared to male principals, female principals are associated with tighter micro-level coupling ($b_{female} = .052$) directly, and female principals also strengthen the relationship between local-level coupling and micro-level coupling, a finding which supports hypothesis 4b. A slope test revealed that the

relationship between meso-level coupling and micro-level coupling is statistically significant for both male and female principals, but significantly stronger for female principals.

Although I did not explicitly hypothesize about school demographic characteristics, some important and interesting findings in these models are also worth mentioning. First, the general socio-economic status, as measured through free lunch eligibility, is not a significant predictor of tightly coupled school environments, but the racial composition of the school is significantly associated with tighter micro-level coupling. Racial demographics are an important aspect of school environment. As the percentage of minority populations of Black students and Hispanic students increase within the school, schools experience tighter coupling. These two findings are notable, because they emphasize the persistent role of race, but not class, in the US public school system. Second, and perhaps unsurprisingly, elementary schools (relative secondary or combined schools) are positively associated with tighter coupling. Third, as the percentage of responding teachers who teach in tested subjects increases, there is a positive and significant association with levels of micro-level coupling. This finding indicates the important nature of tested subjects, and warrants further investigation in future research. Finally, schools that appear multiple times in my data are not significantly affecting the results presented here. The variable for a duplicate school is not a significant predictor of micro-level coupling.⁹

⁹ I also ran these models without repeated schools and the results did not differ substantively.



Figure 5.2: Graph of Interaction Between Principal's Gender and Meso-Level Coupling

Fixed Effects Models

I present a set of fixed effects models below in order to assess how changes in the federal policy eras, state characteristics, local factors, and/or principal affect the micro-coupling *within* schools. Unlike the previous OLS regression models that examined effects on micro-coupling across schools in the US, the fixed effects regression analyses focuses on the same schools over time. I nest the fixed effects models in the same order as the previous OLS models. Overall, I find that the patterns in the fixed effects models are similar to those in the OLS regressions.

	18		1	
	Model 1	Model 2	Model 3	Model 4
Socio-Political Factors				
Year 1990	-0.020	-0.020	-0.020	-0.021
Year 1993	-0.025	-0.021	-0.020	-0.023
Year 1999 (ESEA)	0.122 ***	0.137 ***	0.139 ***	0.134 ***
Year 2003 (NCLB)	-0.016	0.001	0.002	-0.003
Year 2007	0.063 *	0.079 *	0.081 **	0.076 *
Reference is 1987 (ANaR)				
State Characteristics				
Republican State (Reference = Democrat		0.000	0.000	0.001
Charter Law		-0.022	-0.022	-0.024
Local Characteristics				
Tight Meso-Coupling (Local Govt to School)			0.003	0.002
Reference is 0-3				
Bonus			-0.012	-0.013
Principal's Characteristics				
Female Principal				0.039 *
Non-White Principal				0.031
Highest Degree - Docotorate (Reference=All				
Other Degrees)				-0.037
# of Years as Principal				-0.001
# of Years Teaching prior to Principal				0.000
Controls				
School Demographics				
Free Lunch	0.000	0.000	0.000	0.000
Black Percentage	-0.001	-0.001	-0.001	-0.001
Hispanic Percentage	-0.001	-0.001	-0.001	-0.001
Asian Percentage	0.001	0.001	0.001	0.001
American Indian Percentage	-0.003	-0.003	-0.003	-0.003
Enrollment	0.000	0.000	0.000	0.000
Percent of Teachers in Tested Subject	0.001 ***	0.001 ***	0.001 ***	0.001 ***
Constant	0.830 ***	0.829 ***	0.828 ***	0.831 ***
N=9910				
R-Squared	0.049	0.049	0.049	0.052
* p<0.05 ** p<0.01 *** p<0.001				

Table 5.2: Fixed Effects Regression of Micro Coupling on Socio Political and Principal Characteristics

Following NCES convention, I have rounded sample size numbers to the

nearest ten in order to protect the identities of respondents.

Model 1 in Table 5.2 demonstrates how changes in federal policy eras affect coupling within schools. The findings here are similar to those above, although only 1999 and 2007 are statistically significant in Model 1. I graph the results of Model 1 in Figure 5.3, and a post analysis Wald test reveals that most subsequent years are significant from one another (again, with the exception coming from 1990 to 1993). Thus, the observed decline in micro-coupling

from 1999 into 2003, and the ensuing tightening in micro-coupling from 2003 to 2007, are both statistically significant changes.



Figure 5.3: Graph of Model 1 from Table 5.2 (Federal Policy Eras→Micro-Level Coupling)

The second model in Table 5.2 steps in the time-varying state characteristics, while still accounting for federal policy eras. The federal policy eras remain significant, although the state characteristics do not have a significant effect on micro-level coupling. In Model 3 of Table 5.2, I introduce local and district-level features. I use the same categorical meso-level coupling variable for these analyses, although a change in meso-level coupling is not a significant predictor of change in micro-level coupling within schools. For the fourth and final model, I step the principal's characteristics into the table. Similar to analyses above, the principal's gender is an important predictor in micro-level coupling, although other principal's characteristics remain non-significant.

Interpreting the effect of principal's gender in Model 4 of Table 5.2 differs from the interpretations in the OLS models. In the fixed effect regression models, the significant

coefficient indicates that a *change* from a male principal to a female principal results in tighter micro-level coupling within the same school. Model 4 illustrates that when a school goes from a male principal to a female principal, the school experiences a .038 increase in micro-coupling.

Supplemental analyses (not shown here) explored the interaction between meso-level coupling and female principal, but the results were not statistically significant. School demographic characteristics, such as racial composition and the percent of students who are eligible for free lunch, are not significant in the fixed effects models. The percent of teachers who teach in a tested subject (and responded to the SASS survey) is significant, and the models in Table 5.2 show that as the number of responding teachers who teach in a tested subject increases, micro-level coupling tends to tighten. The fixed effects models control for all time-invariant characteristics of schools and thus do a better job than OLS models in accounting for potential differences between schools that might influence coupling. Overall, the fact that the results for the OLS and fixed effects models are similar suggests that the OLS models do not suffer from much omitted variable bias.

Discussion and Conclusion

The findings from this study provide a national and generalizable empirical example and test of neo-institutionalism and organizational coupling. Empirically, many studies of coupling focus on the outcomes of tight coupling, but this study evaluates the impetus for tight coupling without focusing on products of the organizational structure. Rather than speculating on the possible causes and contributors of school-level coupling, I measure how four levels of hierarchy in the public education system contribute to tight coupling within schools.

Broadly, my results show the relationship between the tiered levels of public education system and micro-level coupling. Tight coupling is not merely a result of one hierarchical level exerting an overwhelming influence on the interior structure of schools. These results suggest that some federal level policy eras are more relevant than others. State level factors had no significant relationship with school level organization, despite the overwhelming credit often bestowed upon states and "state's rights" in education policy. Local government coupling relationships (i.e., meso-level coupling) influence tight coupling at the micro-level; stronger ties at the local level encourage tighter coupling within the school. Finally, many principal characteristics are not significantly related to tightly coupled structures within schools, but I do find that female principals positively influence tighter couplings. Furthermore, when female principals administrate in schools with a strong local government influence, the relationship to tight coupling is strengthened. State level characteristics were not significant, but the ICC of 10 percent suggested states do matter for school level coupling. Research geared toward finding relevant state level characteristics would help shed light on how states play a role in the microcoupling process. Importantly, state funding decisions, budget allocations, and financial circumstances may play a prominent role in school level organizational structures.

Theoretically, this research addressed and tested two major tenets of neo-institutionalism and coupling. First, neo-institutionalists and organizational scholars of coupling argue that creating or increasing accountability standards will engender tight coupling within an organization. Second, neo-institutionalism posits that chaos and disorder will stimulate loose coupling within an organization. Interestingly, testing these two hypotheses resulted in competing hypotheses in our standards-based reform era. This chapter addresses multiple levels of the US public education system, a system that has gone through a unique policy
transformation in the last few decades. Federal policies structured around accountability gradually increased demands on public schools, culminating in the NCLB-era. Unfortunately, NCLB, while good in theory, was perhaps poorly executed through direction, funding, and mandates (Mathis 2003; Orlich 2004; Weeden 2005). Recall that educational researchers criticize NCLB as being chaotic and confusing for schools, principals, and teachers (Cochran-Smith and Lytle 2006; Le Floch, Taylor and Thomsen 2006; Valli and Buese 2007). The presence of a federal policy that simultaneously produces increased accountability standards and chaos for schools creates an interesting tension for this research and organizational research in general. My findings in this study suggest that NCLB is negatively associated with tight coupling, and the confusion surrounding the federal policy was a stronger force than the pressure of accountability standards. This result is important, but it is possible that it is distinct to public schools. The public education system could be an exceptional organizational form, meaning that not all organizations may respond similarly when faced with competing pressures of accountability and chaos. Thus, I suggest organizational scholars in general take up this question for other types of organizations.

The general trend in micro-level coupling is non-linear, and while organizational scholars know that organizations change (Aldrich and Reuf 2006), it is unclear how often an internal organizational structure shifts. With regard to US public schools, the micro-couplings change at least every three to six years. Importantly, the coupling within schools does not steadily increase or decrease over time. The picture presented in this paper suggests movement, but it is also possible that change is temporary or never strays too far from an average. If other organizations are like schools, then this pattern may be present across other organizational forms. Particularly if organizations are subject to policy changes from external governing bodies like schools experience with federal policy or state/local control, then they may be more likely to experience a shift in internal organizational structure. Organizations not subjected to external governing boards may be less likely to encounter structural adjustments.

My findings have several important implications regarding the demographic control variables, such as the school's grade level, race, enrollment, and setting, which are all significant. Particularly interesting is the finding that schools with higher percentages of Black or Hispanic students are positively associated with stronger coupling between principals and teachers. This finding suggests that students' race is an important element for shaping the formal relationships between principals and teachers. It is possible that a larger percentage of minority students push principals to tighten up their relationships with teachers because they perceive a higher percentage of minority population to be different from a White student body. Interestingly, schools with higher percentages of students eligible for free lunch are not associated with tighter coupling between principals and teachers. Together, these findings suggest that race, not class, is important in predicting tight coupling within schools. Larger schools (evidenced in the enrollment variable) or schools with more students in general, were also positively associated with tighter levels of micro-coupling. This finding could imply that more students present a burden for faculty, and administrators need to tighten up their relationships with teachers in order to retain control over the student population. These findings suggest that contextual and demographic characteristics of a school could be vital for understanding the nuance and processes behind internal organizational structures.

This chapter depicts school level structures, but does not take into account how individuals may experience tight coupling differently within the organization. In particular this study does not explore individual teachers' responses. In order to assess teachers' feelings the data must be disaggregated to the teacher level, rather than the school level, and future research should address this level of analysis.

Policymakers may find these results especially interesting, given overarching federal policy goals in the US. Indeed, if policymakers hope that principals and teachers are forming tight linkages within schools, and that teachers are all on the same page within the same school, then the non-linear relationship between federal policy eras and micro-coupling present a unique dilemma for shaping future federal level policies. There was a significant dip in micro-level coupling from 1999 to 2003, which may surprise educational scholars and policymakers alike. But, the 2007 year does depict an increase in micro-level coupling (from 2003), and it is possible that schools had begun to rebound from the initial shock of NCLB mandates. Regardless, paying close attention to the trends of micro-coupling across public schools will be important for those interested in the organizational structure of schools.

CHAPTER 6

TEACHER-LEVEL COUPLING

Teachers prefer loosely coupled structures in schools, largely because loose coupling helps teachers maintain autonomy and control over their own classrooms, a commonly sought after condition for teachers (Ingersoll 2003). Further, educational scholars extensively report that teachers believe loose coupling is ideal for performing their jobs as instructors (Cohen and March 1974; March and Olsen 1976; Meyer and Rowan 1977; Rowan 1981; Sauder and Espeland 2009, and they actively attempt to preserve loosely coupled structures when they believe it to be threatened (Coburn 2004). Recent research on coupling in schools, however, suggests that loosely coupled structures may be dying out for public school teachers, due to the recent proliferation of accountability based federal policies (Coburn 2004; Diamond 2007; Hallett 2010).

Over the last several decades, federal policies have increased mandates and demands on public schools. Educational scholars note that *A Nation at Risk*, the federal report conducted in the early eighties, set the standards based reform (SBR) movement in motion (McDermott 2011). Over the course of the nineties and early part of the twenty-first century, the Elementary Secondary Education Act (ESEA) was reauthorized as the Improving American Schools Act (IASA) under Clinton, then again as No Child Left Behind (NCLB) under Bush. Each successive federal policy called for increased standards among students. The overall goal for each policy was to raise academic scores, and primarily in both math and reading – traditionally tested subjects. While academic accountability is the federal government's goal for public schools, not all teachers are teaching in tested subjects. Teachers are employed to teach science, social studies, foreign languages, art classes, and so forth. As a result, not all teachers are furnishing test scores to their district or state in an effort to meet federal standards of Adequate Yearly Progress (AYP) set forth by IASA, and then amplified by NCLB. If scholars believe that loose coupling is dissipating as a result of tightening federal policy mandates, but not all teachers are required to comply with test scores, then it is possible that teachers are experiencing different couplings as a result of their teaching assignment.

Instructional subjects are not the only differences among teachers. Teachers also vary by demographic characteristics such as race and gender. The majority of teachers are white and female, and the majority of principals have been white and male (National Center for Education Statistics 2013).¹⁰ In public schools, gender plays an integral role in leadership styles among principals (Lee, Smith and Cioci 1993; Price 2012) and attitudes among teachers (Klassen and Chiu 2010; Liu and Ramsey 2008; Ma and MacMillan 1999). The formal relationships between principals and teachers are the heart of the coupling within schools. These formal relationships might vary by race, gender, or the teacher's instructional area. Hence, ascertaining the overall coupling of schools is useful, but the nuances of schools' couplings are found between teachers.

The previous chapter focused on school-level coupling (i.e., micro-level coupling), and considered how schools, on average, created couplings. This chapter steps further into the school building, and opens the classroom doors by looking at the teachers. Teachers occupy separate classrooms, teach different subjects, and possess diverse demographic backgrounds. Accordingly, teachers may differentially experience coupling within schools, even when located

¹⁰ More recent statistics suggest that principals are only 50% male (National Center for Education Statistics 2013).

within the *same* school. I am interested in exploring how couplings are formed for teachers, and I have two major goals for this empirical chapter. First, I explore the relationship between accountability standards and tight coupling, across federal policy eras from 1987-2007. Second, I investigate the complex relationship between demographic characteristics (i.e., gender and race) and tight coupling. By bringing these two pieces together, I shed light on the multi-faceted influences on coupling in the public education system.

Micro Coupling

Understanding what factors contribute to coupling at the school level is important, and illuminates general school wide practices. The image of schools as egg-crates (Lortie 2002), where each individual classroom occupies a space in the carton and the classrooms look very similar to one another but still operate as autonomous spaces, dominates our understanding of how schools and classrooms function. Organizational scholars agree that schools are formal organizations, and their organizational structure is fairly constant over time (Bidwell 1965). The organization of schools includes the internal organization of classrooms. Despite many federal policy attempts, educational scholars fail to document substantial change within schools and classrooms (Pitner 1981; Shakeshaft 1987). The previous chapter's focus on school level coupling elucidates the relationship between macro or meso structures and micro-level coupling. In this chapter, I depart from my focus on the school as a whole, and address the individuals who are in charge of carrying out the day-to-day instruction of students – teachers.

Recall from the previous chapter, I conceptualize micro coupling for schools as the formal relationships between principals and teachers. For a full treatment of coupling (history, loose, tight, etc), refer to Chapters 2 and 5. The relationships between principals and teachers

affect the overall organizational structure of a school, but these formal relationships also may differ at the classroom level. For this empirical chapter, I again consider four hierarchical levels, before adding the dimension of teachers' characteristics. Teachers are a crucial element of the formal principal-teacher relationship, and teachers could have a substantial impact on how classrooms are organized within schools. Therefore, I consider all levels on the public education pyramid (recall Figure 2.1) in order to assess micro-level coupling at the teacher level: federal policies, state structure, local/district government, principal attributes, and teacher characteristics. In the sections below, I outline each of the levels of the public education system, and hypothesize about their relationship to micro-level coupling at the teacher level.

Macro and Meso Structures

Neo-institutionalists focus on why organizations engage in isomorphic behaviors, and how organizations modify themselves in the face of uncertain environments (DiMaggio and Powell 1983; Meyer and Rowan 1977). Overarching policy shifts that came from the standards based reform movement (henceforth SBR) have targeted public schools over the last few decades. The previous chapter's findings indicate that federal policy eras are important in predicting the internal structure of schools, but not as federal policy writers had probably hoped. While the relationship between federal policies and tight coupling within schools is a non-linear pattern, the SBR movement was designed to tighten the relationships between principals and teachers. Indeed, NCLB is negatively and significantly associated with tight formal relationships between principals and teachers, at the school-level.

Institutional pressures often come from macro structures, and in the case of public schools the institutional pressures are federal level policies. Institutional pressures result in

homogenous organizational structures across organizational forms. As schools accept and implement policy demands within schools, the overall structures of schools will begin to resemble one another, and schools will resemble one another in appearance. For neoinstitutionalists, federal level policy mandates exemplify coercive isomorphism. Coercive isomorphism exists when an organization complies with pressures from other organizations upon which they are dependent. Pressures can manifest in the form of legal mandates, political or governmental orders and incentives, or more general social pressures of conformity (i.e. environmental friendliness given recent green movements). Federal policies occurring in the SBR movement (i.e. IASA, NCLB) create mandates for public schools, and schools must comply with standards or risk losing federal support. Standards for public schools typically revolve around academic accountability because policy makers continue to be interested in improved academic achievement in public schools.

Neo-institutionalism addresses accountability with regard to coercive isomorphism, and suggests that accountability structures will yield a tightly coupled structure, where organizational actors are virtually forced into tightly coupled systems (Davies, Quirke and Aurini 2006). Accountability structures vary by organizational form, but for schools accountability typically refers to academic achievement. Accountability structures occur when academic achievement standards are introduced and enforced. The SBR movement has steadily increased the role and oversight of the federal government. While the goals may slightly differ from policy to policy (i.e. ESEA sought to reduce the racial gap in achievement, and NCLB sought to increase standards in general), the overarching goal remains strongly rooted in academic standards. Accountability mandates are an important part of macro-level structures in public school policy,

and standards primarily refer to increasing educational outcomes for students, and these are often measured at the school level.

Federal policies tend to focus attention on traditionally tested subjects – math and reading. While all schools focus on math and reading, and the scores at the school level are important for federal policies, not all teachers within the school engage in teaching math and reading to students. Thus, accountability may significantly affect math and reading teachers, whereas other subjects such as social studies or foreign languages co-exist, but are fairly unaffected by policy shifts. School-level coupling is important for understanding the general trends in coupling (as I did in the previous chapter), but it does not fully capture how teachers' experiences of couplings vary.

In fact, teachers in tested subjects often report experiencing more contact with their supervisors, when they compare themselves to teachers who teach in non-tested subjects in their school (Grissom, Kalogrides and Loeb 2013). Furthermore, principals also adjust instructional time for tested subjects in order to meet federal standards of AYP (McMurrer 2008; Rouse et al. 2007). The previous chapter highlighted the negative association between NCLB and tight coupling, but fails to consider how teachers who teach tested subjects may not be representative of the school as a whole. So while we have a better understanding of how school coupling in its entirety relate to issues of accountability, we do not thoroughly have a grasp on accountability as it relates to individual teachers. In order to fully explore this issue of accountability among teachers, I examine how the individual teachers experience changes in federal policy eras. Thus, I predict that while schools on average experience a more loosely coupled structure in the SBR era (i.e. IASA and NCLB), teachers who sometimes or always teach math or reading will report a more tightly coupled relationship with their school's principal.

H1: Teachers who primarily teach traditionally tested subjects of reading and math will report tighter coupling.

Accountability is an important issue for public schools, and federal policies. But, my previous empirical chapter highlights how uncertain federal policy eras (i.e. NCLB) do not result in tighter relationships between principals and teachers at the school level. NCLB is regarded as poorly mandated, poorly implemented, and poorly funded by many educational scholars (Bracey 2005; Darling-Hammond 2007a; Le Floch, Taylor and Thomsen 2006; Mathis 2004). Organizational scholars emphasize the relationship between uncertain environments and loosely coupled organizational structures (Meyer and Rowan 1977; Weick 1976). Indeed, for schools, the relationship between NCLB (compared to other recent federal policy eras) and tight coupling is negative. My findings from the previous chapter are in keeping with organizational theory that suggest uncertain environments generate loose coupling within organizations (Aldrich 2008; Meyer and Rowan 1977).

Organizational theory, combined with my school level findings, suggest that teachers will also experience loose coupling when faced with uncertain federal policy eras. After all, individual teachers make up the schools, and so we may expect teachers to simply be a microcosm of the school setting. On average, in most federal policy eras after *A Nation at Risk*, schools report looser coupling across all schools. During uncertain policy eras, neoinstitutionalists and organizational scholars of coupling would predict loosely coupled structures for teachers who teach in tested subjects. Teachers who instruct in math and reading are the only ones who must produce achievement scores in order to comply with adequate yearly progress (AYP) guidelines.

H2: All teachers will report *looser* coupling during the federal policy era of NCLB, compared to other federal policy eras.

In hypothesis 1, I predict that teachers who teach in tested subjects will report tighter coupling across *all* policy eras. Compared to NCLB, *A Nation at Risk*, and IASA did not draw the same amount of backlash among teachers, principals, and the public (McDermott 2011). NCLB introduced more stringent requirements, and demanded that schools comply, or risk federal sanctions. Therefore, I create specific hypotheses for the NCLB era. Teachers who instruct in tested subjects, such as reading and math, are the ones who are tasked with dealing with federal policy requirements head on. In these particular classrooms, teachers are constantly working to keep their students grades above the standard for AYP, and consistently improving from year to year. Despite policy requirements, teachers may respond to the demands of AYP by doing whatever possible to improve students' test scores. Thus, I create two competing hypotheses to explore the multifaceted relationship between federal policy eras, tested subjects, and coupling.

H3a: Teachers who primarily teach traditionally tested subjects of reading and math will report *tighter* coupling during policy eras that highlight their focus of AYP (i.e., NCLB).H3b: Teachers who primarily teach traditionally tested subjects of reading and math will report *looser* coupling during policy eras that highlight their focus of AYP (i.e., NCLB).

Federal policies are not the only macro structures guiding schools' coupling. States still have a great deal of influence over how schools look, and the goals associated with educational outcomes. Findings at the school level did not reveal any significant relationships between state characteristics and coupling. Yet, teachers may experience state mandates differently from other teachers, even when working within the same school. State policies strongly resemble federal policies, albeit on a slightly smaller scale. States dictate the number of tests (in addition to the federally mandated tests) and days of testing schools have. Some states order more or less testing than others, and have even been ranked on a continuum from low-stakes to high-stakes by virtue of their testing structure (Carnoy and Loeb 2002). Given the state control over schools, I make hypotheses, similar to those at the federal level, for organizational structure, based on state accountability structures.

H4: Teachers who work in states with higher-stakes testing structures will report *tighter* coupling.

Principals, Teachers, and Principal-Teacher Relationships

The previous empirical chapter revealed how the principal's gender influenced tight coupling at the school level. Female principals sought legitimacy as administrators, and may have to seize power through any source of legitimate means available. Furthermore, when the local/district government is tightly coupled to the school, and a female principal is in command, the relationship to tight coupling is strengthened. Given the importance of the role of principal, I expect the principal to play an integral role in shaping the couplings for teachers. Principals do not exist solely as figureheads within their schools, nor do they necessarily stay within the confines of their physical office. Rather, principals could patrol the school's hallways, meet or converse with teachers about teaching practices, actively monitor classroom activities and behaviors by watching classes, and so forth.

Principals interact with teachers, but teachers also play a crucial role in shaping the school environment. Teachers actively participate in the school culture, but bring their own personal perspective to the job. For instance, teachers have beliefs about what their job should look like, and most teachers seek relative autonomy in their instructional position (Lortie 2002). More concretely, teachers trust their training and professional development, so they do not believe principals should be looking over their shoulder or micro-managing their teaching practices (Young 2006). The qualitative literature highlights teachers' resistance to tight coupling efforts from the principal and factors within the institutional environment (Coburn 2004; Hallett 2010).

The previous empirical chapter suggests that female principals create more tightly coupled structures. If principals attempt to tighten the relationships within the school, and some teachers respond differently from others, the teachers' response could vary by gender. The response by teachers' gender could also be more pronounced if the principal is a female, which is likely given the last chapter's findings. In addition, there is empirical research, albeit very limited and possibly dated, that suggests that male teachers respond negatively when they work for female principals (Petty and Lee 1975). Male teachers often possess a strong desire to retain autonomous power within their classrooms (Lee, Smith and Cioci 1993). Male teachers want autonomy, and it is possible that males feel entitled to a loosely coupled structure, and thus become more irritated at any sign of the principal tightening the formal relationships to teachers.

A discussion of teachers' gender is not complete without considering the extensive work addressing males who work in female dominated occupations. Teaching became a female dominated occupation in the late 1800s and remains so today such that male teachers often have different experiences within the occupation compared to their female colleagues (Williams 1992; Williams 1995). It would be nearly impossible to fully discuss how teachers differentially experience coupling, without taking into consideration widely cited processes and phenomena such as the glass escalator (Budig 2002; Williams 1992). As mentioned above, some studies suggest that female principals and male teachers do not always have positive relationships (see for example, Lee, Smith and Cioci 1993), although male teachers may simply feel entitled to a loosely coupled environment. Consequently, I explore both of these issues with regard to the teacher's factors

Teachers could experience different treatment, based on demographic characteristics. In the previous chapter, I make predictions about the principal's gender, in order to examine how principals exert power and shape coupling within their school. But, the teacher's gender is also important, and it is impossible to assess how the teachers' gender plays a role at the school level. If the majority of teachers are female, and they report similar couplings, this could conceal how gender influences perceptions or experiences of tight coupling within the school.

The teaching occupation is dominated by women (66% in this nationally representative sample, with 83% female in elementary schools, and 55% female in secondary schools).¹¹ Male teachers are considered "tokens" (Kanter 1977), and tokens have different experiences from the dominant group within an occupation or profession. At 66% female, Kanter would define the occupation of teaching as "tilted." (Kanter 1977: 199). A "tilted" occupational environment

¹¹ These numbers come from the SASS dataset, and after exclusions are slightly lower than national averages. In the United States, in 2007-2008, females made up 76% of public school teachers (National Center for Education Statistics 2013)

produces varied outcomes for those who work there, and Kanter expects the minority group to be disadvantaged, although in this case the minority group is male teachers.

Much of the research on tokens focuses on females in male dominated occupations (Kanter 1977), and assess females' negative experiences. When women work in male-dominated fields, they experience constant reminders that they are outsiders and different from the men who are the numerical majority. For instance, men exaggerate the differences between men and women by heightening the boundaries and visibility through jokes, interruptions, and isolation. Empirical research of women in male-dominated work supports Kanter's conclusions (Gustafson 2008; Spangler, Gordon and Pipkin 1978). Kanter (1977) suggests that the theoretical perspective of tokens in the workplace is applicable to all individuals who have salient demographic characteristics (i.e. race, gender). She proposes that Black individuals in predominantly white environments, or males in primarily female occupations, should encounter a similar experience.

Unlike female tokens, however, when males are the minority in an occupation, their experience clearly differs from that of the women (Young and James 2001). Men are less likely to enter stereotypically feminine jobs than women are to enter male-dominated occupations or professions (Jacobs 1989). But, men receive advantages and privilege due to their gender when they do enter those feminine occupations (Williams 1992). For example, when males are nurses, elementary school teachers, librarians, or social workers, they receive structural benefits which develop their careers. Men still receive criticism from external parties, but their supervisors and coworkers encourage men to occupy more "masculine" stations within the organization. Williams (1992) refers to this process as the "glass escalator," where men are pushed forward for promotions and advances at an accelerated pace, and struggle to stay in place. The Glass Escalator effect, or the practice by which men receive advantages over women in female dominated occupations, occurs due to multiple processes. Jobs dominated by women are thought to require "feminine" traits (e.g. caring, compassion, empathy) in order for individuals to be successful within those occupations and careers (Charles and Grusky 2004; Wingfield 2009). But the assumption that these job demands hinder men's chances at success is inaccurate. In fact, the perception that men are not adequate in providing proper care in female dominated occupations is what propels them to higher paying and higher status positions within their field (Williams 1995). Men receive job transfers or promotions in order to remove them from positions viewed as too feminine. Similarly, outsiders view men in female-occupations as "asexual," "wimpy," "gay," or "pedophiles," (Williams 1992) and as a result, the outside opinions propel administrators to relocate men to "more legitimate positions for men" (Williams 1992: 263). Males move up the career ladder regardless of their supervisor's gender (i.e., women are also more likely to promote men). Thus, men receive advantages from internal processes, but also due to public opinions and concerns.

Males are under-represented in the field of teaching, and based on previous findings that men experience the glass escalator effect rather than the negative consequences due to their status as tokens (Cognard-Black 2004), I am interested in considering how men's potential glass escalator experience contributes to our understanding of coupling within schools. If men are interested in "riding" the glass escalator to positions of authority (e.g. principal), then we may expect these men to possess tighter formal relationships with current administrators, regardless of the principal's gender. Because evidence suggests that men receive advances from administrators and public concerns, who initiates the tighter relationship is somewhat unimportant. A tightly coupled relationship between principal and teacher may indicate that a teacher is being groomed for a future position as an administrator. Lortie (2009) notes that the majority of teachers who eventually become principals receive assistance from current supervisors during their transition, and the next generation of principals are mentored into their new role. This grooming process begins prior to the transition, and highlights the relative importance of principal-teacher relationships. If, in fact, men are more likely to advance at a faster rate, then I expect to see male teachers report tight couplings.

H5a: Male teachers will report tighter coupling, relative to the female teachers.

Recent research on the glass escalator suggests that not all men have the opportunity to skate to positions at the top of an organization. In fact, race plays an important role in sending men to higher status positions, and white men garner more advantage than Black men (Wingfield 2009). In a study of male nurses, Wingfield (2009) found that while white men are assumed to be in positions of authority, and Black men are assumed to be janitors or house-keeping staff by the patients in the hospital. Her over-arching findings suggest that interactions within female-dominated professions are both raced and gendered. As a result, Black men are not primed to ride the glass escalator, and the glass escalator is largely an occurrence for white men. Given the previous findings on race, I make another hypothesis about male teachers riding the glass escalator in schools. Because few principals are a racial minority (less than 14% in my sample), I predict that being a male will not be enough for men to receive preferential treatment in educational settings.

H5b: White males will report an increase in tight coupling, relative to minority men.

Principals and teachers have daily interactions, and must work together given the nature of the organization of schools. The previous empirical chapter demonstrated how principals play a role in shaping school's couplings, and highlighted the importance of principals' gender. In keeping with previous literature on principals and teachers, I find that the principals' association with micro-level coupling does vary by gender. Understanding the role that principals play in contributing to the coupling of schools is important, but it could not address how principals and teachers interact with one another because disentangling teachers is not feasible at the school level.

Qualitative research on principal-teacher relationships indicates that female principals are commonly associated with a hands-on approach to administrative duties. Interviews and classes, and generally expect more communication from the teachers who work for them (Charters Jr. and Jovick 1981; Fauth 1984; Gilbertson 1981; Gross and Trask 1976; Pitner 1981; Regan 1990). These findings also suggest that male teachers are much more likely to experience displeasure at these expectations and tight formal relationship. In circumstances where a teacher works under a principal with an authoritarian administrative style, teachers are likely to complain that they "just want to do their job" and they wish to be left alone in order to accomplish this task (Hallett 2010). Although not fully explored in the literature, it appears as though this is even more the case for male teachers working for female principals (Lee, Smith and Cioci 1993).

Even within the same school, male teachers and female teachers report different degrees of effectiveness for the same principal. When female principals supervise male teachers, male teachers report the principals as "relatively ineffective" but female teachers rate their female principal as "above average" (Lee, Smith and Cioci 1993: 162). If male teachers are simply carried along on the glass escalator, then I expect tight coupling to be present regardless of the principal's gender. But, because most evidence suggests that tightly coupled structures are undesirable, it is possible that male teachers who work for female principals report higher levels of coupling, relative to male teachers who work under male principals. I am attentive to the glass escalator literature and the literature on female principals and male teachers, and will explore the multiple gender combinations that are possible between principal and teacher (e.g. male principal – female teacher, female principal – male teacher, etc), in order to shed light on the possible relationship between gender combinations and coupling.

Analytic Strategy

Much like Chapter 5, I seek to understand how the multi-levels of public education contribute to coupling within schools. Thus, my dependent variable is still a loose-to-tight coupling scale but with teacher as the unit of analysis. But, I incorporate a new set of variables into these models, in order to account for teacher and classroom characteristics. This brings in the final level of the pyramid. By examining individual teachers I can test several hypotheses regarding specific principal-teacher relationships, and various policy eras. The previous analysis focused on the overall school using the averages from teachers' responses. By disaggregating the data from the school level to the teacher level, I can allow the teachers' responses to vary from one another, and I can identify how schools in general may differ from specific teachers.

My analytic strategy proceeds in two major steps, using nested models in OLS regression. The first step in my analytic strategy focuses on the role that accountability plays in shaping coupling within the school. I assess accountability through three smaller sub-steps. First, analyzing the role of macro-structures, meso-level factors, and principal characteristics involves replicating the previous chapters' analysis, using disaggregated data. Second, I add the teacher characteristics to understand a more nuanced story of coupling at the teacher level. Finally, I test multiple interactions between the teachers and federal policy eras in order to identify the complex relationship between teachers and macro structures.

The second step in my analysis highlights gender and race. I also explore the relationship between teachers who teach in tested subjects and gender. Beginning with a replication of Model 1 from Table 6.1, I first test principal-teacher gender combinations and gender-race combinations for the teacher. Finally, I incorporate accountability factors, and assess the interaction between specific principal-teacher gender combinations and teachers who teach in a tested subject. This final step brings together accountability and gender in order to demonstrate the entire picture of coupling within the classroom.

Congruent with my analytic strategy in the previous chapter, I take several steps to ensure sound statistical models. First, teachers are nested in schools, and I adjust for non-independence in the data by clustering the analyses by school. Second, due the large quantity of cases (i.e., teachers), I run all analyses shown in this chapter using a 10% random, stratified subsample of the data. My results are similar, and thus I present the analyses using the complete data in this chapter.

Results and Discussion

The analyses included in this empirical chapter are a logical extension of the previous chapters' results, and begin at the endpoint of the last chapter. Model 1 in Table 6.1 replicates the second to last model from the previous empirical chapter (Model 4 in Table 5.1), but uses the disaggregated data. As expected, the patterns shown here are nearly identical to those in the previous chapter. First, the NCLB policy era is negatively associated with tight coupling for

teachers. Second, tightly coupled relationships between the local/district and schools produce tightly coupled systems within schools. Third, teachers report that female principals, relative to male principals, are significantly associated with tight coupling. Finally, a supplemental model (not shown here) uses the interaction variable of female principal/meso-level coupling and I still find that female principals strengthen the relationship between local-to-school coupling and principal-to-teacher coupling. The results shown here are substantively similar to those presented in the previous chapter, but please see Chapter 5 for a more detailed description and discussion. Given the findings at the teacher level, I move forward to specifically analyze teachers. In the next three models I gradually include more information about teacher characteristics and various interactions between federal policy eras and teachers who instruct in tested subjects. Each model brings us closer to understanding how macro, meso, principal, and teacher qualities contribute to how teachers experience couplings within their school.

For Model 2 in Table 6.1, I introduce classroom and teacher characteristics, and evaluate their influence on couplings within the school. I made several hypotheses about specific classroom and teacher characteristics and I test these in Model 2. First, I examine the issue of accountability by looking at teachers who primarily teach in a tested subject.¹² Academic accountability is an important issue for public school teachers, and those teachers who must report student progress through official test scores are constantly scrutinized (Au 2007). As expected, I see a significant positive association between teachers who instruct in tested subjects and tight coupling. Those who teach in a tested subject are .195 points higher on the scale of coupling, relative to those who do not teach in a tested subject. Recall that the mean is .87 on the

¹² This includes elementary school teachers who teach all subjects throughout the course of the day. It does not include teachers who are teaching an "out of field" class.

	Model 1	Model 2	Model 3	Model 4
Socio-Political Factors				
All Pre-NCLB Era				
Year 1990	-0.062 ***	-0.003	-0.003	
Year 1993	-0.072 ***	-0.053 ***	-0.053 ***	
Year 1999 (IASA)	0.038 *	0.054 **	0.054 **	
Year 2003 (NCLB)	-0.149 ***	-0.092 ***	-0.068 ***	-0.096 ***
Year 2007	-0.049 **	-0.039 *	-0.040 *	-0.116 ***
State Characteristics				
High Stakes Scale	0.018 *	0.018 *	0.018 *	0.017
Republican State (Reference =				
Democrat	-0.008	-0.009	-0.008	0.003
Charter Law	-0.009	-0.008	-0.008	0.026
Local Characteristics				
Tight Meso-Coupling (Local				
Govt to School)	0.018 ***	0.017 ***	0.017 ***	0.018 ***
Bonus	-0.027 ***	-0.026 **	-0.026 **	-0.029 **
Principal's Charactoristics				
Famala Principal	0.057 ***	0.040 ***	0.040 ***	0.040 ***
Non White Principal	0.037	0.049	0.003	0.049
Highest Degree - Docotorate	-0.004	0.005	0.005	0.005
(Reference=All Other Degrees)	0.004	0.005	0.005	0.004
# of Years as Principal	-0.002 **	-0.002 ***	-0.002 ***	-0.002 ***
# of Years Teaching prior to				
Principal	0.000	0.000	0.000	0.000
Toachor's Charactoristics				
Male		0.071 ***	0.071 ***	0.071 ***
Black		-0.078 ***	-0.077 ***	-0.076 ***
Hispanic		-0.025 *	-0.025 *	-0.021 ***
Asian		-0.086 *	-0.086 *	-0.086 *
American Indian		0.020	0.021	0.021
# of Years Teaching		-0.001 ***	-0.001 ***	-0.001 ***
Doctorate Degree		0.065 *	0.066 *	0.066 *
Master's Degree		0.013 *	0.013 *	0.014 **
Teach in a Tested Subject		0.195 ***	0.210 ***	0.189 ***
Teach the Same Students		0.100 ***	0.093 ***	0.092 ***
Interaction Terms				
Tested Subject x Year 2003			-0.091 ***	-0.071 ***
Tested Subject x Year 2007				0.124 ***
Tested Subject x PreNCLB era				
Controls				
Location				
Northeast	-0.107 *	-0.111 **	-0.111 **	-0.106 **
Midwest	-0.155 ***	-0.158 ***	-0.158 ***	-0.155 ***
West	-0.086	-0.103 *	-0.104 *	-0.104 *
Setting				
City	0.162 ***	0.162 ***	0.163 ***	0.167 ***
Suburban	0.108 ***	0.108 ***	0.108 ***	0.115 ***
School Demographics				
Free Lunch	0.000	0.000	0.000	0.000
Black Percentage	0.003 ***	0.003 ***	0.003 ***	0.003 ***
Hispanic Percentage	0.001 *	0.001 **	0.001 **	0.001 *
Asian Percentage	-0.002 **	-0.001 **	-0.001 **	-0.001 **
American Indian Percentage	0.001	0.001	0.001	0.001
Enrollment	0.000 ***	0.000 ***	0.000 ***	0.000 ***
Elementary School	0.234 ***	0.160 ***	0.158 ***	0.157 ***
Constant	0.662 ***	0.550 ***	0.546 ***	0.531 ***
N=155,450				
R-Squared	0.094	0.117	0.117	0.116

 Table 6.1: OLS Regression of Micro Coupling on Socio Political, Principal, and Teacher Characteristics (Academic Accountability Models)

* p<0.05 ** p<0.01 *** p<0.001

Note: Schools are clustered in states

Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

loose-to-tight coupling scale that ranges from 0 to 4. The coefficient of .195 indicates a substantial increase in tight coupling. This finding suggests that academic accountability structures could be effective in tightening the relationships between principals and teachers. Findings at the school level disguise this nuance in trying to understand how schools internally organize themselves.

The second hypothesis I test in Model 2 focuses on federal policy eras, and I predict that all teachers will report looser coupling during those uncertain policy eras. I specifically focus on the NCLB era, due to extensive literature and research suggesting that NCLB produced uncertain and chaotic environments within schools. As predicted in Hypothesis 2, the NCLB era (Year 2003) is significantly and negatively related to teachers' reports of tight coupling. There is also a negative and significant association between the year 2007 (which is still under NCLB) and tight coupling. Furthermore, a post-analysis Wald test confirms that the difference between 2003 and 2007 is significantly different, indicating a reduction in tight coupling from 2003 to 2007.

Looking at the role of gender, we can see that males are .071 points higher on the scale of coupling, than their female counterparts. Model 2 in Table 6.1 shows how teachers differentially report coupling within their respective school, but it does not fully explore the relationship between macro-level factors and accountability structures. Before moving forward to an examination of my other hypotheses, I want to note other intriguing findings in the second model. Teachers who have the same students all day long report tighter coupling, relative to teachers who are teaching different groups of students throughout the day. This is not simply a proxy for teachers located in elementary schools. While most teachers who teach the same students all day long are located in elementary schools, there are many teachers in elementary schools who do not have the same students throughout the day (r = .59). More experienced

teachers also report looser coupling. It is possible that teachers who have enjoyed a longer career in teaching are well-respected by principals (and other teachers) and enjoy more autonomy relative to teachers with less experience. Thus, teachers are left to their own devices within the classroom. But it is also feasible that teachers with more experience teaching are more resistant to a tightening relationship with the principal because they believe they are trained and qualified to teach their students and have been doing so for a long time. In the first scenario, the teachers are trusted by administrators. But in the second example teachers are "stuck in their ways" and hesitant to adhere to any new guidelines.

Black, Hispanic, and Asian teachers report less tightly coupled structures in schools, when compared to white teachers. Moreover, teachers whose highest degree is either a doctorate or a masters degree report tighter coupling. These final elements in Model 2 are notable and suggest that race and education are important in predicting tight formal relationships between principals and teachers. I will explore these characteristics further in my subsequent analysis.

In the third model of Table 6.1, I incorporate an interaction variable, in an effort to better understand accountability processes and the relationship between federal policy eras. This variable represents teachers who teach tested subjects in the 2003 NCLB era. NCLB policy suggests that accountability will increase, but only some subjects endure continuous evaluation under NCLB standards. Thus, I include two components of accountability by specifically examining teachers who are tasked with instructing in tested subjects in the NCLB era. The interaction coefficient in Model 3 of Table 6.1 is negative, and statistically significant, suggesting that the relationship between teaching in a tested subject and tight coupling does vary by policy era. The interaction term helps us calculate the association between teaching in a tested subject and tight coupling during the 2003 policy era ($b_{tested} + b_{testedx2003} = 0.210 + (-)0.091$

= 0.119). Thus, teaching in a tested subject is associated with a .119 increase in tight coupling during the 2003 federal policy era, but teaching in a tested subject during other policy eras is associated with a .210 increase in tight coupling. This coefficient of .210 represents nearly a .33 standard deviation increase. The interaction term underscores how the 2003 policy era weakened the relationship between teaching in a tested subject and tight coupling, although the relationship does remain positive. The NCLB era continues beyond 2003, so I further explore the relationship between time, accountability, and coupling within schools in Model 4 and Model 5.

The fourth model of Table 6.1 includes the interaction of the 2003 survey year and teaching in a tested subject, but I also introduce a new interaction term. I include an interaction between the 2007 survey year and teaching in a tested subject, and these two variables will help shed light on a larger portion of the NCLB era. The first interaction variable, which is when schools are transitioning into NCLB guidelines, is negative and weakens the relationship between teaching in a tested subject and tight coupling ($b_{tested} + b_{testedx2003} = 0.189 + (-)0.071 = 0.118$), although the overall effect is still positive. The second interaction term, when schools are fully immersed in NCLB, is positive, and suggests that coupling is tightened later in the NCLB era, but only for teachers who teach in tested subjects ($b_{tested} + b_{testedx2007} = 0.189 + 0.124 = 0.313$). Therefore, teaching in a tested subject is positively associated with tight coupling, and the magnitude of this relationship is further strengthened in the year 2007.

Recall from Model 2 of Table 6.1 that the 2007 survey year had a negative and significant relationship to tight coupling. The interaction term in Model 4 of Table 6.1 suggests that teachers who teach in tested subjects experience tighter coupling compared to those teachers who are not located in oft tested classrooms. Figure 6.1 shows the interaction of tight coupling by policy eras in a bar graph, which clearly depicts the relationship between policy era, tested

subject, and tight coupling. The second figure, Figure 6.2, also depicts the linear relationship of coupling. In Model 4 of Table 6.1, I do not include each survey year. Instead, I use all pre-NCLB years as the reference category. In doing so, I can compare the 2003 and 2007 NCLB eras to the non-NCLB eras. A supplemental model (not shown here) tests whether or not the effect of testing, or accountability, is statistically different across those three policy eras, and I find that there is a significant difference across all three time-periods.



Figure 6.1: Interaction of Tight Coupling by Policy Eras and Tested Subject

The findings in Model 4 of Table 6.1 tell a detailed story that is not fully captured by only looking at the direct effects of survey year on tight coupling, or by the relationship between tested subjects and tight coupling. By creating multiple interaction variables, and further exploring the relationship between time, accountability structures, and coupling, we have a more complete picture of how schools, but more specifically – teachers – have looked over time. Interestingly, the pattern of coupling loosens from the pre-NCLB era to the NCLB transition era of 2003, and it loosens for all teachers. Teachers who teach in tested subjects report tighter

coupling than those not in tested subject across all three time periods shown. A sizeable change occurs from the pre-NCLB era to the 2003 NCLB transition era, confirming what organizational scholars would predict in chaotic environments. By the 2007 NCLB era, tight coupling had "recovered," but only for teachers in tested subjects. Those who do not teach in tested subjects experienced no real change, however, and they did not experience the same "recovery" in tight coupling. Essentially, teachers in non-tested subjects never return to the level of tighter coupling that existed in the pre-NCLB era, and enjoy loosely coupled structures. In fact, in the Figure below (Figure 6.2), teachers in non-tested subjects report looser coupling over time.



Figure 6.2: Interaction of Tight Coupling by Policy Eras and Tested Subject

I want to remind my readers that the teachers in these analyses are not the same teachers over time. With these data, I am not able to fully assess whether or not a teacher experienced this change over time, whether in a tested subject or not. Nonetheless, I do want to comment on the general patterns over time with these nationally representative panels of data. For example, on average, math teachers in 1993 report tighter coupling than math teachers in 2003. But, average math teachers in 2007 report tighter coupling than the average math teacher in 2003.

The next set of models in Table 6.2 addresses characteristics of race and gender for principals and teachers, before incorporating accountability for a comprehensive model. In Model 1 of Table 6.2, I replicate Model 2 of Table 6.1 from above. Female principals and male teachers both have a direct and positive effect on tight coupling. I re-visit these direct effects, and I am interested in specifically analyzing the relationship between the principal's gender and the teacher's gender. In the previous empirical chapter, findings suggest that schools with female principals experience tighter coupling throughout the school. Furthermore, when female principals work in schools that already possess a tight relationship to the local government, the relationship to tight coupling is strengthened. In light of those findings, I seek to understand how the gender of the teacher interacts with the gender of the principal. Therefore, I created dummy variables with all of the possible gender combinations and include these in Model 2 of Table 6.2 (male principals and female teachers are the reference category because it is the most common arrangement in schools, representing just over 45% of the sample). I find that compared to the common arrangement of male principals and female teachers, female principals with male or female teachers and male principals with male teachers are all positively associated with tight coupling. Post analysis Wald tests illustrate that all gender combinations are significantly different from one another. Compared to one another, the dummy variables with male teachers both have a stronger effect on tight coupling than female principals and female teachers, and the reference category.

Overall, male teachers report tighter coupling, as evidenced in Model 1 of Table 6.2. These findings suggest that perhaps male teachers experience tight coupling more so than the

	Model 1	Model 2	Model 3	Model 4
Socio-Political Factors				
Vear 1990	-0.003	-0.003	-0.003	-0.066 **
Year 1993	-0.053 ***	-0.003	-0.053 ***	-0.053 ***
Year 1999 (IASA)	0.054 **	0.054 **	0.054 **	0.054 **
Year 2003 (NCLB)	-0.092 ***	-0.092 ***	-0.092 ***	-0.092 ***
Year 2007	-0.039 *	-0.039 *	-0.039 *	-0.039 *
State Unaracteristics	0.010 *	0.010 *	0.010 *	0.010 *
High Stakes Scale	0.018 *	0.018 *	0.018 *	0.018 *
Charter Low	-0.009	-0.009	-0.009	-0.008
	-0.008	-0.008	-0.008	-0.008
Local Characteristics				
Tight Meso-Coupling (Local Govt to School)	0.017 ***	0.017 ***	0.017 ***	0.017 ***
Bonus	-0.026 **	-0.026 **	-0.026 **	-0.026 **
Principal's Characteristics				
Female Principal	0.049 ***			0.049 ***
Non-White Principal	0.003	0.003	0.003	0.005
Highest Degree - Docotorate (Reference=All				
Other Degrees)	0.005	0.005	0.005	0.005
# of Years as Principal	-0.002 ***	-0.002 ***	-0.002 ***	-0.002 ***
# of Years Teaching prior to Principal	0.000	0.000	0.000	0.000
Teacher's Characteristics				
Male	0.071 ***			
Black	-0.078 ***	-0.078 ***	-0.078 ***	-0.013
Hispanic	-0.025 *	-0.025 *	-0.025 *	0.008
Asian	-0.086 *	-0.086 *	-0.086 *	-0.024
American Indian	0.020	0.020	0.020	0.077 **
# of Years Teaching	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***
Doctorate Degree	0.065 *	0.065 *	0.065 *	0.066 *
Master's Degree	0.013 *	0.013 *	0.012 *	0.013 *
Teach in a Tested Subject	0.195 ***	0.196 ***	0.193 ***	0.195 ***
Teach the Same Students	0.100 ***	0.100 ***	0.099 ***	0.101 ***
Interaction Terms				
Female Principal/Male Teacher		0.102 ***	0.086 ***	
Male Principal/Male Teacher		0.079 ***	0.080 ***	
Female Principal/Female Teacher		0.060 ***	0.058 ***	
Female Principal/Male Teacher				
x Tested Subject			0.050 **	
Male Principal/Male Teacher				
x Tested Subject			-0.005	
Female Principal/Female Teacher				
x Tested Subject			0.003	
Non-White Male				-0.053 ***
White Female				-0.068 ***
Non-White Female				-0.143 ***
Controls				
Location				
Northeast	-0.111 **	-0.111 **	-0.111 **	-0.111 **
Midwest	-0.158 ***	-0.157 ***	-0.157 ***	-0.158 ***
West	-0.103 *	-0.103 *	-0.103 *	-0.104 *
Setting				
City	0.162 ***	0.163 ***	0.162 ***	0.163 ***
Suburban	0.108 ***	0.108 ***	0.108 ***	0.108 ***
School Demographics				
Free Lunch	0.000	0.000	0.000	0.000
Black Percentage	0.003 ***	0.003 ***	0.003 ***	0.003 ***
Hispanic Percentage	0.001 **	0.001 **	0.001 **	0.001 ***
Asian Percentage	-0.001 **	-0.001 **	-0.001 **	-0.001 **
American Indian Percentage	0.001	0.001	0.001	0.001
Enrollment	0.000 ***	0.000 ***	0.000 ***	0.000 ***
Elementary School	0.160 ***	0.160 ***	0.160 ***	0.160 ***
Constant	0.550 ***	0.547 ***	0.548 ***	0.619 ***
N=155,450				
R-Squared	0.117	0.117	0.117	0.117
* p < 0.05 * * p < 0.01 * * * p < 0.001				

Table 6.2: OLS Regression of Micro C	Coupling on Socio Political, Principal, and
Teacher Characteristics ((Gender and Race Models)

* p<0.05 ** p<0.01 *** p<0.001 Note: Schools are clustered in states Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

female teachers. Or, maybe male teachers simply report tight coupling at higher rates than female teachers due to a different interpretation of the same couplings. In Figure 6.3, I present the results from Model 2 of Table 6.2. The bar graphs are divided by the teachers' gender, and the blue bars indicate a female principal. This figure clearly depicts two important findings. First, male teachers consistently report a more tightly coupled environment, relative to female teachers. Second, female principals are positively associated with tight coupling relative to male principals, regardless of the teachers' gender. Model 1 of Table 6.2 show both of these effects, but Figure 6.3 provides a visual representation of these relationships. The gender combination contrasts are significantly different from one another at the .01 level.



Figure 6.3: Tight Coupling by Principal and Teacher Gender

*All contrasts are significantly different at p < .01

A separate analysis, not shown here, assesses whether the relationship between principals' and teachers' gender are due to a simple match on gender, or if there is something important about the particular gender combinations. I created a dummy variable indicating whether or not a principal's gender matched the teachers' gender. For example, a male principal and a male teacher are coded as 1. A male principal and a female teacher are coded as 0. Excluding the other gender combinations, and including the variable that accounts for a gender match, I evaluated the effect on couplings. The analysis demonstrated that in scenarios where a gender match occurred, there was also a positive significant relationship to tight coupling. This finding also indicates that gender characteristics matter, but the specific gender combinations tell an important and more comprehensive story. Methodologically, the gender combinations also provide a better-fitting model. The R-squared in Model 2 of Table 6.2 shows a better fit than the R-squared of the model with the gender match variable (not shown).

Given the previous findings that show how accountability factors predict tight coupling, I further explore the effects of accountability on teachers. Thus, I created interaction terms with my gender combination dummy variables and teaching in a tested subject. In Model 3 of Table 6.2 I include these three interaction terms (the reference category is still male principals and female teachers). The only gender combination and accountability interaction term that has a significant effect on coupling is female principals and male teachers, when the male teachers are teaching in a tested subject. In scenarios where male teachers work for female principals and teach in tested subjects, a positive association with tight coupling exists. Thus, the already positive relationship is strengthened. Figure 6.4 depicts this strengthened relationship, and the top line shows female principals and male teachers, relative to the other three gender combinations (indicated by the blue line with a square). The left side of the figure shows the main and general effect of the principal/teacher gender combinations, and the right side of Figure 6.4 shows the effect of an interaction between principal/teacher gender combinations result in a

positive association with tight coupling, but Figure 6.4 clearly shows that when male teachers work for female principals, the relationship to tight coupling intensifies.





Teaching in a Tested Subject

The fourth model in Table 6.3 addresses hypothesis 5b, which considers the teachers' gender and race. I predict that white, male teachers will report tighter coupling, relative to minority men. Research on the glass escalator suggests that minority men do not experience the same benefits and treatment as white men (Wingfield 2009). Although tight coupling is rarely viewed as a "benefit" in organizational literature, a report of tight coupling may serve as a proxy for a close relationship between a principal and teacher. In Model 4, I include three gender and race combination variables in order to better assess how race and gender may influence the teachers' reports on coupling. The direct effects of race and gender from Model 1 indicate that non-white teachers have a significant, but negative effect on tight coupling. But, male teachers

report tighter coupling relative to female teachers. The reference category for Model 4 is white, male teachers, and I find that all other combinations have a significant, and negative, relationship to tight coupling. This particular finding suggests that white, male teachers are categorically different from other gender and racial combinations. I portray these gender and race combinations in Figure 6.5 (below). Figure 6.5 clearly illustrates how males, in general, report tighter coupling relative to *all* female teachers. Similarly, white teachers report more tightly coupled structures, relative to their non-white counterparts of the same gender. Post analysis Wald tests show that non-white males are not significantly different from white females, although all other contrasts are significantly different from one another at the .001 level (i.e. non-white females compared to white females and non-white males compared to non-white females).



Figure 6.5: Tight Coupling by Teachers' Gender and Race

Discussion and Conclusion

The results in this chapter have important implications for theory, policy, and future empirical studies. The previous empirical chapter used neo-institutionalism and a perspective of coupling to understand the relationship between the multiple tiers of the education system and coupling at the school level. I retained that theoretical foundation in this chapter, but incorporated a gender perspective in order to fully explore how couplings develop at the teacher level. Specifically, I focus on accountability standards and gender dynamics in order to investigate how teachers may have different experience with couplings, even within the same school.

Federal policy changes are often blamed for organizational changes within schools (Hallett 2010), and accountability standards are the underpinnings of federal policies in the SBR movement. At first, the relationship between federal policy eras and tight coupling seems consistent with the previous empirical chapter. Initially, I found a non-linear relationship between policy eras and tight coupling. But, accountability highlights the tested subjects of reading and math. Regardless of the federal policy era, all teachers who primarily teach in tested subjects report tighter coupling relative to the teachers who teach non-tested subjects (e.g. French, History, Physics, Physical Education, Music, Art). But while teaching in a tested subject does increase couplings for those teachers, the federal policy era still plays an important role in this relationship. In fact, the variation across policy eras shows a remarkable pattern

Previous empirical literature highlights the SBR movement, and implies that couplings have increasingly tightened over the last several decades. My findings do not support this picture, however. Across all teachers, couplings loosen after *A Nation at Risk*, tighten under authorization of IASA, and loosen in the NCLB era. Without further investigating the complex relationship between tested subjects, federal policy eras, and tight couplings, the findings initially suggest that NCLB is associated with *loose* coupling, which is exactly the opposite of previous speculations. But after looking at federal policy eras in combination with teaching in a tested subject, the picture appears much different. For those teachers in a tested subject, couplings initially loosened in the NCLB era. But by 2007 couplings had re-tightened, even slightly surpassing the tighter couplings of a Pre-NCLB era. For teachers in non-tested subjects, couplings increasingly loosened over time. From the Pre-NCLB era, through the initial impact of NCLB in 2003, and into the later years of NCLB, teachers in non-tested subjects have increasingly enjoyed greater and greater degrees of loose coupling. Compared to their tested counterparts, the non-tested subject teachers likely enjoy their relative freedom from tight linkages with school administration.

Policy-makers and future researchers may want to take note of the differences between teachers in tested subjects and those who teach non-tested subjects. The vast difference between teachers and their experience with couplings may create a divided culture within schools. Rather than create a unified school, the couplings could create hostility and division between teachers. Future research should explore the relationship between couplings and teacher-to-teacher relationships. If policy-makers want to design policies that tightly link teachers to principals across the entire school, perhaps in an effort to put all teachers on the same page, then an emphasis on accountability standards to increase this relationship may not be enough. However, if policy-makers are only concerned with improving math and reading scores, then the difference teachers experience in tight coupling may be an unavoidable consequence.

Theoretically, neo-institutionalists and scholars of coupling will be especially interested in these findings. Neo-institutionalists predict that accountability standards will tighten coupling within an organization. In direct contrast, neo-intuitionalists expect uncertain institutional environments to discourage tight coupling. NCLB introduced both increased accountability standards and a more uncertain institutional environment. The 2003 year reflects loose couplings, suggesting that an uncertain institutional environment trumped the accountability standards introduced by NCLB, even for teachers who are most subjected to accountability standards. By 2007, however, the uncertain environment of NCBL is no longer driving the couplings among all teachers. Accountability standards tighten couplings among teachers who teach in tested subjects. As a result, the central tenets of neo-institutionalism and coupling perspectives help explain how uncertain environments and accountability standards shape tight couplings over time.

In addition to accountability standards, gender played an integral role in teachers' experiences with coupling. In the last chapter, the principal's gender was an important factor in shaping the school's overall coupling. Female principals tighten couplings in schools, and this chapter further supports that finding. Rather than just concentrate on the direct relationships between principal's gender, teacher's gender and tight couplings I probed further into the relationship between principals' and teachers' genders. The four possible combinations of principal and teacher gender illustrate the complexity of gender and coupling.

All gender combinations are positively associated with tight coupling compared to the most common permutation of male principals and female teachers. The least common arrangement of female principal and male teacher is most associated with tight coupling, although all non-traditional combinations are also positively associated with tight coupling. In light of the findings on accountability standards and gender combinations, I unite these two aspects and determine if gender and accountability are interrelated. The combination of female
principal and male teacher teaching in a tested subject is the only significant interaction. Thus, male teachers, who work for female principals, and teach in a tested subject, are most likely to report tight coupling.

In hypothesis 5, I predicted that white men will report tighter coupling, relative to their non-white and female counterparts. The analyses reflected this prediction, and supplements current educational research contending that white men are resistant to tight coupling efforts. It is possible that white, male teachers desire loosely coupled structures more than any other gender and race combination, and thus report tight coupling even when most teachers do not perceive the organizational structure as tightly coupled. Recall Lee, et al's (1993) research, where male teachers reported feeling less empowered, and low levels of satisfaction with the female principal's leadership, relative to their female teacher counterparts. Under this assumption, white, male teachers feel entitled to autonomous environments, and reject a principals' attempt at creating a more tightly coupled school setting

Drawing on previous research analyses that cite the effect of a glass escalator (for white men), white male teachers may report tighter coupling as a direct result of beneficial treatment from principals. Lortie (2009) notes the crucial role that administrators play in recruiting and grooming the next generation of principals. If this occurs for the majority of principals, then principals may seek out white males in particular, because they value a tightly coupled relationship with the teachers whom they view to be future administrators. This explanation would confirm what research on the glass escalator has found in other studies (Wingfield 2009).

In order to further the explore the idea that some men are groomed to fulfill future administrative duties, I explore the relationship between gender and education. In supplemental models (not shown in this dissertation), I consider the possibility that only a selection of white males experience different couplings. In order to advance into administrator positions, teachers often must possess the proper credentials in order to be taken seriously or promoted by the school. In the case of principals, this frequently includes a masters, specialist, or doctoral degree. Having advanced degrees conveys a sense of legitimacy to the school's faculty and staff, but also to the general public. Without an advanced degree, male teachers may not receive the same kind of positive attention which will catapult them into administrative positions. Given the expectation of credentials, and previous findings on race, I run two additional models to test the idea that not all men get to ride the glass escalator. Because few principals are a racial minority (less than 14% in this sample), and most principals possess an advanced degree (more than 98% in this sample), it may be the case that being a white male will not be enough for men to receive preferential treatment in educational settings. These methodological explorations yielded no significant relationships, and suggest that education is not a key predictor in the relationship to tightly coupled structures. Males with advanced degrees (e.g. masters, doctorate) do not report tighter couplings, relative to males without advanced degrees. While this does not completely rule out the possibility that males report tighter couplings due to preferential treatment, it does suggest that additional research is warranted on the relationship between gender, race, and coupling. Understanding why white male teachers experience tighter coupling is an important component for deconstructing coupling in schools.

The findings from this chapter are useful, and interesting, but the data have several limitations which prevent me from drawing stronger conclusions. First, while some schools repeat over time in the SASS data (approximately 18%), the teachers in these data do not repeat over time. As a result, I cannot examine the same teachers over time, although I can speak to general trends and averages across teachers. Second, I consider the possibility that a tight

coupling between white teachers and principals is a "benefit" that leads to greater advantage, although the majority of educational research suggests that teachers detest tight coupling. These data do not allow me to explore the nature of the couplings between teachers and principals to determine how the coupling is directly perceived by the teacher. Third, I use the survey year as a proxy for federal policy eras, but each wave of the SASS data is at least three years apart (and six years between waves 3 and 4). Thus, it is possible that I am not fully capturing the degree to which couplings change over time, because they may shift more often than my data allows me to model. Finally, state characteristics are not strong predictors of coupling, but policy-makers, politicians, and laypeople all attribute many aspects of schools to state features, state laws, or state's rights. Therefore, future research should probe further into the relationship between state's individual laws, policies, or regulations and coupling.

CHAPTER 7

TEACHERS' SOCIAL BONDS AND STUDENT DEVIANCE

The first two empirical chapters addressed how schools' organizational structures come to exist, but do not acknowledge how the organizational structure affects those who are involved in the school. Because the organizational structure affects organizational actors, and the clients, this chapter focuses on how school's couplings play a role in shaping the teachers' experiences and student chaos or disorganization. Few studies address outcomes for both the teachers and the students, but both teachers and students have to work within the organizational structure and are affected by the structure.

This step of the dissertation has two major goals. First, I determine how coupling affects teachers' bonds to their school. Teachers identify with their jobs differently, and the internal structure of a school could play an important role in affecting how teachers create their identity. Second, I am interested in how the organizational structure affects students, but specifically the student deviance and disorganization at the school level. While most educational scholars concentrate on the academic outcomes of students (Ainsworth-Darnell and Downey 1998; Hallinan and Kubitschek 2012; Moller et al. 2013; Paino and Renzulli 2013), day-to-day student activities go beyond academic scores, and include the social elements of student behavior. In contrast, I focus on the student deviance and disorganization within the school.

The organizational structure of the school may have an impact on deviance and disorganization in the school. Simultaneously, teachers' social bonds may affect the social disorganization within the school. This chapter brings together all three of these elements in an

effort to understand how tight couplings within schools affect those who are involved. Teachers play an integral role in student's lives, and spend the most time with students on a day-to-day basis. Therefore, I seek to understand how teachers intervene in the relationship between tight couplings and student deviance within the school.

Primarily, as the rest of the dissertation does, I rely on a theoretical framework of neoinstitutionalism and coupling, but I supplement this foundation with a perspective on organizational deviance and social control theory. Neo-institutionalists and scholars who study organizational coupling address organizational disorganization and chaos in their works (Hallett 2010; Meyer and Rowan 1977), but by infusing these perspectives with more traditional theories of deviance and disorganization I can better explain the social processes within schools.

The fusion of neo-institutionalism and coupling with the theory of social control is a unique approach to the issue of deviant behavior within schools. Criminological studies on the relationship between social bonds and deviance typically focus on individuals. But my research extends this approach to the organizational level of schools. I consider the individuals who are located within the schools, but I analyze the relationship between couplings, teachers' social bonds, and student deviance, at the school level. Therefore, the synthesis of these perspectives helps me attend to processes at the organizational level.

Neo-institutionalism and Coupling

I employ a framework of neo-institutionalism in order to assess how the school's organizational structure affects the social disorganization within the school. Neo-institutionalists specifically address how organizational actors manipulate internal structures in order to make the organization function smoothly. Referred to as myth and ceremony, organizational actors create

policies for the organization that may marginally reflect actual practices within the organization (Meyer and Rowan 1977). Weick (1976) extends this theory to explain loose coupling within schools. For Weick, schools are loosely coupled out of necessity, and keep the goals and objectives of the school attainable. Educational scholars agree that teachers prefer loose coupling, and schools operate efficiently and effectively when teachers are afforded the opportunity to work in a loosely coupled environment (Hallett 2010; Weick 1976).

Loosely coupled organizational structures protect organizations, but more importantly, the organizational actors, by allowing the organizational practices to adjust as needed. Protection is desired by teachers because they want freedom in their classroom to educate students as they see fit. Teachers firmly believe in their professional training, and feel prepared to teach students, regardless of their individual needs; indeed, teachers expect each classroom to require a unique learning environment based on each student's needs (Ingersoll 2003). Given that each classroom is distinct, teachers often report that autonomy and control over their own classrooms allows them to adjust behaviors and activities in order to accommodate their students needs and learning styles (Diamond 2007).

Loosely coupled systems depart from Weber's formal, and ideal bureaucratic structure (Weber 1968), and many educational scholars stress that schools are unique from typical organizations (Bidwell 2001; Meyer and Rowan 1977; Meyer and Rowan 1978). Thus, schools should not look like Weber's ideal types of organizations because they serve a unique purpose – to education children. Children are not like widgets, placed into a machine in order to produce the same outcome over and over in a systematic manner. Nor are schools profit-seeking organizations that typically possess a top-down structure that creates a natural hierarchy. Schools do possess a hierarchical nature (refer to Figure 2.1 from Chapter 2), but the bottom

level of the pyramid is wide. Many teachers make up the bottom section of the hierarchy and pyramid, and they typically only work for one principal. Because schools are distinct in their educational form, organizational scholars often view educational organizations as different from traditional, profit-seeking, tightly coupled organizations.

Neo-institutionalists predict that tightly coupled structures will produce chaos and disorganization within the organization. Tight coupling occurs when formal relationships between organizational actors are closely linked.¹³ For schools, policies occur with regard to discipline policies or practices, academic accountability goals, and so forth. In some cases, these goals are accompanied by explicit instructions and guidelines. For instance, in the policy era of NCLB, teachers must often report exactly which standard is addressed on which day. In doing so, teachers must frequently coordinate lessons and standards due to pressure from macro structures (i.e., federal and state), local goals, and principal demands. In the previous two empirical chapters, I uncover the relationship between hierarchies and organizational coupling, and I find support for neo-institutionalists suppositions that accountability structures will produce tightly coupled environments.

The previous chapter highlighted the macro, meso, principal, and teacher factors that lead to tight coupling within schools, but this chapter will specifically address how coupling affects the organizational actors and clients (i.e., teachers and students). Neo-institutionalists predict that disorganization and chaos will result from tight coupling (Meyer and Rowan 1977), and organizational scholars who focus on the issue of coupling, generally agree that loosely coupled organizational units "buffer" the organization from disorder. Traditionally, the disorganization

¹³ Neo-institutionalists suggest that tight coupling occurs when the day-to-day practices within an organization closely align with the formal policies in place.

and chaos refers to the internal parts of the organization, where the organizational actors reside. And while this element is important for organizations, schools are unique and serve an exceptional population – students. Therefore, I extend this theoretical foundation to incorporate both the teachers and the students. Based on neo-institutionalism and a coupling perspective, I predict that both the teachers and the students will experience chaos and disorganization when the school's organizational structure becomes more tightly coupled.

Organizational Deviance

Organizational deviance refers to deviant behavior on either the part of the organization, or the organizational actors (Ermann and Lundman 1978; Ermann and Lundman 2002; Fox and Harding 2005). For the purposes of my research, I am concerned with both the organizational actors and the clients when referring to organizational deviance. Considering the organizational actors is consistent with the extensive research on organizational deviance (Clinard and Yeager 1980; Geis and Stotland 1980; Schrager and Short 1978; Wickman and Dailey 1982; Zald 1978). More recently, Punch (2000) delineated three broad categories of organizational deviance: elaborate conspiracies or intentional rule-breaking, inadequate managerial oversight resulting in negative outcomes, and deviance that occurs when individuals are acting within normal and existing organizational rules. I am most concerned with the last kind of deviance, because I am interested in teachers' occupational bonds. This type of relationship is not solely captured in deviant behavior, nor is it criminal, though it may break organizational rules, norms, and/or expectations, and is thus unique and specific to the organization to which the individual belongs. Instead, I am interested in how teachers define and describe the relationship to their occupation when faced with a tightly coupled organizational environment.

Considering the degree of coupling within an organization, scholars suggest that organizational deviance is a more likely outcome for organizations with tighter coupling systems (Perrow 1984). Loose coupling within an organization is viewed as insulation from potential disasters or mishaps. In tightly coupled systems, the pieces are highly connected and thus react quickly when problems arise in other areas of the organization (Orton and Weick 1990; Weick 1976). Using airplane crashes and nuclear reactor meltdowns as his examples, Perrow (1984) maintains that even a small problem can cause a chain reaction of other issues, which multiplies the entire crisis as additional components fail. Additionally, tightly coupled organizations are more likely than their loosely coupled counterparts to regularly produce disasters: "loosely coupled systems, whether for good or ill, can incorporate shocks and failure and pressures for change without destabilization. Tightly coupled systems will respond more quickly to these perturbations, but the response may be disastrous" (Perrow 1984: 92). Most interesting in this argument is the fact that a speedy response from dependent organizational parts or locations may be detrimental to the organization.

In contrast, recent research in schools modifies this argument to a different type of "system failure," where emphasis is on the student who can remain unnoticed and develop problems that lead to deviant behavior (Fox and Harding 2005). In this case, school shootings are attributed to a loosely coupled system because students more easily fall through the cracks. With regard to teachers, however, a tightly coupled system may be disadvantageous because it prohibits them from running their classrooms smoothly and without external interruptions. Moreover, students will experience a lack of consistency and solidarity with their teachers. Thus, a tightly coupled system within schools could still easily produce organizational deviance, and I propose the following hypothesis: H1: Tight couplings will *increase* student deviance at the school-level.

Organizational deviance occurs when circumstances produced within an organization do not correspond to the organizational goals and objectives, and yield damaging and unexpected results (Fox and Harding 2005; Vaughan 1999). The deviant outcomes are often thought to be "provoked" by the same organizational features that lead to the "bright side" of the organization, and they are frequently unanticipated because they derive from the usual organizational activities (Vaughan 1999). The classic example within sociological and organizational research is Vaughan's (1996) research on the Challenger Launch Decision. In this study, she argues that the decision to launch the shuttle was a result of organizational structure, culture, and cognitive practices. She concludes that close observation of NASA's rules and procedures stopped NASA employees from halting the launch of the shuttle (Vaughan 1996). Theoretical insights, such as structural secrecy (Fox and Harding 2005; Vaughan 1996) often inform organizational studies of deviance. But, in the case of teacher and student responses to varying systems of organizational coupling, I propose the use of Hirschi's (1969) social control theory to inform our understanding of organizational deviance. I approach and analyze organizational deviance from the perspective that deviance should not be solely attributable to the individual, but that organizations create structural systems that perpetuate deviant behavior (Ermann and Lundman 1978).

Control Theory

Control theory is an empirically supported and prominent criminological theory that attempts to explicate why people do not commit crime or engage in deviant behavior (Agnew 1993; Church Ii, Jaggers and Taylor 2012; Colvin and Pauly 1983; Hirschi 1969; Hoffman 2003; Payne 2008; Peguero et al. 2011; Popp and Peguero 2012; Reiss 1951). This theoretical frame operates with the assumptions that people will and do engage in deviant behavior, and those that do not are conforming due to structural barriers and a fear of losing their attachments to society (Agnew 1993). Control theorists seek to understand the specific factors that comprise the structural or societal barriers which then lead to conformity. Therefore, criminal or deviant behavior is a result of the weakening of the bonds that tie individuals to society. Hirschi (1969) argues that the absence of social bonds will free individuals from societal conformity, despite the fact that the majority of individuals are aware of moral and legal codes. Within social control theory are four social bonds that tie an individual to society: attachment, commitment, involvement, and belief. Control theory, in its early stages, assumed that individuals possessed bonds with society in general and these bonds were important determinants in precluding deviant or criminal behavior. More recent studies in criminology and deviance move away from this broad focus and narrow the application of control theory to individual bonds within a more concentrated portion of society, such as a specific social institution (Popp and Peguero 2012; Stewart 2003; Warr 1996). Findings indicate that social conditions change social reactions. Based on this theoretical direction, I expect that social control theory is exceptionally relevant for the study of public schools. In the section below, I outline the traditional conceptualization of each social bond, before explaining how I expand this understanding to an occupational setting. Rather than look at an individual's general social bonds to society, I will consider how teachers are bonded to their occupational environment. In doing so, I expand Hirschi's social control theory to encompass organizational deviance.

Attachment: Attachment refers to individual's interest or concern for others. Attachment is developed through healthy and normal interactions with other individuals (Hirschi 1969; Popp

and Peguero 2012; Stewart 2003). Hirschi (1969) suggests that social institutions play a prominent role in the development of attachment. These include family, friends, and schools. He further claims that the most important attachment is between an individual and a parent, because without this relationship, an individual will fail to fully respect authorities.

In the case of schools, attachments between an individual and members of the staff and faculty are important to prevent organizational deviance. Attachment for teachers can exist in the form of cooperation among faculty and staff or a reliance on fellow faculty. If teachers feel as though they can rely on other faculty within the school then this is akin to strengthening the social bond of attachment. Because I am interested in occupational bonds, I focus solely on the attachments that teachers form with their colleagues.

Commitment: Commitment refers to participation in conventional activities, such as getting an education, and finding a job. The amount of effort, or energy involved in pursuing these activities is indicative of commitment. More time spent acquiring and pursuing acceptable vocations or societal positions will likely preclude individuals from endangering those hard-earned arrangements. In contrast, very little time spent on conventional activities may signify a lack of commitment and a greater likelihood of engagement in deviance (Hirschi 1969; Popp and Peguero 2012; Stewart 2003).

The commitment bond is apparent in how teachers perceive their commitment to the school and their role as teachers within the organization. Time is an important element, but as we will see below, time is more important for a separate social bond. The conventional activities for teachers include school-related activities, but also the degree to which teachers engage in these school functions. For example, if teachers are consistently bowing out of activities and skipping events that they are expected to attend, then this would indicate a weak bond of

commitment. Therefore, commitment to the occupation of teaching is important for understanding how a teacher's social bonds look with regard to the school's expectations.

Involvement: The degree of involvement, with specific regard to time, is inversely proportional to the time left for deviant behavior. Individuals who are very "busy" in their conventional and acceptable activities have very little time left to seek out deviant behavior. Moreover, the heavy involvement in activities with friends, family, or other social institutions may increase the bond of attachment (Hirschi 1969; Popp and Peguero 2012; Stewart 2003). Hirschi (1969) contends that idleness increases the likelihood that individuals are enticed toward deviant activities.

In the case of teachers, involvement is directly related to activities associated to the school and students, which can include coaching, tutoring, or chaperoning school events, for instance. The time that teachers spend on these activities demonstrates how involved, and perhaps committed, teachers are to their schools and jobs. The social bond of involvement is often tied to the amount of time individuals devote to behaviors, and so the number of hours or days spent engaging these activities is important. This could include the time teachers take in preparation for classes, which we presume all teachers engage in, but some teachers may spend much more time than others due to their involvement in their occupations as teachers. *Belief:* Individuals who live within the same social setting are more likely to share common belief systems and moral codes. In turn, they may be more invested in others, the law, and a general goodwill towards their neighbor. If the beliefs deteriorate, then individuals are more likely to participate in deviance (Hirschi 1969; Popp and Peguero 2012; Stewart 2003).

The final social bond of belief in an occupational setting considers how strongly teachers are aligned with one another in their dedication to the school and their occupation, because this will indicate whether or not they are invested in the organization and their fellow faculty. For teachers who have a strong social bond of belief, they will feel high levels of loyalty to their position as a teacher, and to the occupation itself. For teachers, if the social bond of belief weakens, then they will likely start to regret their occupational position as a teacher.

The four bonds, between individual and society, of control theory contribute to control theorists understanding of why individuals do not engage in deviance, or why they are lured into deviant behavior. Broadly, this theory reflects how theorists consider the overall society; but, using this theory in a more micro context, I demonstrate how social bonds within an organization matter in much the same way. I use control theory to expand how we think about organizational deviance, by assuming that social bonds between an individual and the components of the organization, work in much the same way as general society. I expand upon our traditional conceptualization of social control theory and social bonds, to investigate how teachers' social bonds affect a different level of organizational deviance and behavior – student's disruptive behavior. Thus, I predict that as teacher's occupational social bonds weaken, student deviance and apathetic behavior will increase.

H2: Attachment, commitment, involvement, and belief will *decrease* student deviance at the school-level.

Combining Neo-institutionalism and Control Theory

Instead of pitting an organizational theory against one of deviance, I synthesize control theory and neo-institutional theory in order to explain how organizational deviance is a response to the organizational environment. Given neo-institutionalism's premises of conflict resulting from myths and ceremony that become tangible (Hallett 2010; Meyer and Rowan 1978), it is likely that deviant behavior is closely linked to how schools couple their organizational

activities. Control theory predicts that deviant behavior is a result of the weakening of social bonds (Agnew 1993; Hirschi 1969). Recent research using control theory assumes that bonds to immediate social settings are more important than bonds to the general society (Laub and Sampson 1993; Sampson and Laub 1993). Therefore, it is not unreasonable to expect a weakening of social bonds in more tightly coupled organizations as a result of a system that does not favor teachers' control, autonomy, goals, or decisions within the school. Indeed, neo-institutionalists would likely argue that tight coupling will loosen and weaken the bonds that teachers have to their teaching occupation. Therefore, I use both theoretical foundations to frame my hypotheses for teachers' and students' responses.

H3: Tight Couplings will *decrease* teachers' social bonds of attachment, commitment, involvement, and belief.

Analytic Strategy

Using fixed effects regression analyses, my analytic strategy proceeds in three steps, in an effort to understand how tight couplings affect teachers' social bonds and deviance within the school. My analyses also consider how teachers' social bonds affect student deviance within the school, and how teachers' bonds to their occupation of teaching intervene in the relationship between school's couplings and student behaviors. I use the loose-to-tight coupling scale from the previous two empirical chapters as the independent variable for theses analyses.

The Hausman test indicates that a fixed effects model fits the data better than a random effects model, and hence, fixed effects results, which indicate the average within-school association between the independent variables and micro-level coupling, are appropriate (Halaby 2004; Johnson 1995; Johnson 2005). The fixed effects models include a sub-sample from the

entire dataset. While very similar, the sub-sample of schools I use for the fixed effects models does significantly differ from the larger sample. Most independent variables, and key demographic features (e.g. state location), are not significantly different from the larger sample, but the micro-coupling dependent variable is significant at the .001 level. For instance, the sub-sample scores are slightly lower on both micro-level and meso-level coupling. Therefore, the fixed effects regression allows me to make claims about within school changes, although it is not generalizable to the overall random samples initially constructed by SASS. Using fixed effects regression models is preferable, however, because within school changes help ensure causal order. Cross-sectional data using all of the schools in the SASS data cannot ensure the time-order that is necessary in order to meet the requirements of causation. Therefore, the minor drawback of a limited sample size is minimal compared to the vast benefits provided by these fixed effects regression models.

In the first step, I examine the direct relationship between micro-level coupling within a school and the student deviance within the school. I conduct this analysis of the direct relationship of the organizational structure and school-wide deviance at the school level. Using the coupling variable at the school level, this analysis specifically focuses on neo-institutionalists and organizational scholars assumptions that tight coupling will engender chaos within an organization.

The second step of my analysis focuses on the relationship between organizational structure and teachers' social bonds. I run separate analyses for each of the four social bonds: attachment, commitment, involvement, and belief, in order to better understand how the organizational structure affects each individual bond. By running separate analyses, I can understand each social bond individually, and test neo-institutionalists assumptions that tightly

coupled schools will affect the teachers' bonds to their occupational position as instructors in a school. Looking at each individual bond is important, in order to glean the differences between effects and determine if the organizational setting plays an equal role in shaping all of the social bonds. It is possible that the organizational configuration of coupling will influence some bonds more than others, and not all bonds will be affected to the same degree. Thus, this analysis will examine each bond separately.

The third step of my analysis tests the relationship between teachers' social bonds and deviance within the school. Criminologists and deviance scholars generally agree that strong, and positive, social bonds decrease the likelihood of engaging in deviance. I combine this theoretical framework with one of organizational deviance, and examine how teachers' social bonds affect the organizational setting, but particularly the student deviance at the school level. In doing so, I consider how social bonds at one level (teachers) will affect reactions and behaviors at a lower level (students). Within these models, I also bring together all of the above components, in order to better understand the complex role of teachers' social bonds in the relationship between couplings and deviance within the school. This analysis demonstrates the crux of my argument, and unites neo-institutionalism, coupling, social control theory, and organizational deviance. Refer to descriptions and tables in Chapter 4 for a comprehensive explanation of all dependent variables, independent variables, and control variables.

Results and Discussion

The analyses I show here address how school's couplings affect the teachers who instruct, and the students who learn, on a day to day basis. Table 7.1 shows the direct relationship between coupling and student deviance within the school. My dependent variable is a nine item scale that includes multiple types of deviant behavior. In Model 1, I examine the direct relationship between federal policy eras and deviance within the school. The relationship between time and deviance suggests a non-linear relationship. Essentially, deviance does not increase over time. In fact, the 2007 year shows a significant and negative relationship with deviance. Because these models are fixed effects regression models that use schools from back-to-back waves, the finding here suggests that from 2003 to 2007 schools report less deviance among students within the same school. For continuity between chapters, I keep 1987 as the reference category. Model 2 of Table 7.1 steps in state level characteristics, but these are not significant.

Model 3 of Table 7.1 introduces local level factors, which include couplings between the district and the school, but none of these are significant predictors of student deviance. Model 4 introduces micro-level coupling and principal characteristics. Micro-level coupling is positively associated with deviance, lending support to my first hypothesis. The coupling scale ranges from loose-to-tight, and Model 4 shows a positive effect on deviance within the school. For every unit increase in tight coupling, I note a .120 point increase in deviance within the school. The deviance scale ranges from 0-3, with a mean of .93 and a standard deviation of .57. A .120 increase on the scale of deviance is thus a considerable change. Essentially, tight coupling is positively associated with school-wide deviance. This finding supports predictions made by neo-institutionalists, and my hypothesis that tight coupling will encourage chaos and disorganization within the organization. Weick (1976) suggests that schools need loose coupling in order to thrive, and tight coupling will create disarray for those who work and learn within the school. Outlining the benefits of loose coupling, Weick and other educational scholars (Hallett 2010; Meyer and Rowan 1978; Sauder and Espeland 2009) promote the idea that schools must loosen

	Model 1	Model 2	Model 3	Model 4			
Socio-Political Factors							
Year 1990	0.013	0.009	0.009	0.011			
Year 1993	0.091 ***	0.086 ***	0.085 ***	0.085 ***			
Year 1999 (IASA)	-0.040 *	-0.029	-0.030	-0.049 **			
Year 2003 (NCLB)	0.010	0.026	0.025	0.021			
Year 2007	-0.189 ***	-0.173 ***	-0.174 ***	-0.187 ***			
State Characteristics							
Republican State (Reference =							
Democrat)		-0.017	-0.018	-0.018			
Charter Law		-0.030	-0.029	-0.026			
Local Characteristics							
Tight Meso-Coupling (Local Govt							
to School)			0.001	0.000			
Reference is 0-3							
Bonus			0.010	0.012			
Coupling							
Loose-to-Tight Coupling (School							
Level)				0.120 ***			
Principal's Characteristics							
Female Principal				0.003			
Non-White Principal				-0.018			
Highest Degree - Docotorate							
(Reference=All Other Degrees)				-0.007			
# of Years as Principal				-0.002 *			
# of Years Teaching prior to							
Principal				0.000			
School Demographics							
Free Lunch	0.000	0.000	0.000	0.000			
Black Percentage	0.000	0.000	0.000	0.001			
Hispanic Percentage	0.003 ***	0.003 ***	0.003 ***	0.003 ***			
Asian Percentage	0.002	0.002	0.002	0.002			
American Indian Percentage	0.002 *	0.002 *	0.002 *	0.003 *			
Enrollment	0.000 ***	0.000 ***	0.000 ***	0.000 ***			
Percent of Teachers in Tested							
Subject	0.000	0.000	0.000	0.000			
Constant	0.841 ***	0.857 ***	0.857 ***	0.766 ***			
N=9910							
R-Squared	0.095	0.096	0.096	0.123			
* p<0.05 ** p<0.01 *** p<0.001							

 Table 7.1: Fixed Effects Regression of Deviance on School-Level Coupling

Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

the connections between people, subunits, and departments, in order to function well. A loosely coupled educational setting can absorb the uncertainties that lead to disorganization and disarray.

Throughout this dissertation, school principals have been, and remain, an important component in explaining how couplings come to be, and I include principal characteristics in these models in an effort to further explore that connection. Model 4 also highlights the role the principal plays in affecting the student deviance within a school. Based on these findings, the principal's experience (as measured in years) is the only predictor of deviance. As a principal gains more experience, the student deviance decreases. Fixed effects regression models depict change *within* schools. Thus, for every additional year of experience a principal gains, his or her specific school should report a decrease on the scale of deviance by .002. Controlling for a number of school-level factors, it is evident that race and enrollments continues to matter in understanding school wide deviance. As the percentage of Hispanic students increases, schools have increased levels of deviant behavior. Similarly, the positive effect of enrollment on deviant behavior suggests that larger schools have more problems with deviance within the school.

Table 7.2 provides the next step in understanding how the school's couplings directly affect those who are heavily involved in the school – the teachers. Teachers have the most contact with students throughout the day, but how the teachers relate to their job as a result of tight couplings has not been fully explored from this particular angle. Table 7.2 demonstrates the direct relationship between tight micro-level coupling and the individual social bonds of attachment, involvement, commitment, and belief that teachers form as a consequence of such an organizational structure. I present the direct effect of coupling on each social bond in separate models.

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Model 1 of Table 7.2 shows how tighter coupling configurations affect the social bond of attachment. Attachment refers to the relationships and individual possesses, and in a work setting this extends to working relationships with colleagues. For teachers, attachments to other teachers are greater when there is mutual support and backing within the school. My attachment variable comes from a question that asks teachers to what extent other teachers help with students other than their own. Ranging from 0-3, this variable indicates the degree to which teachers feel "alone" in dealing with their students – where 0 represents no assistance, and 3 indicates teachers receive a great deal of backing in their school. Tight coupling is negatively associated with attachment, and as the organizational structure tightens, teachers experience a decrease of .262 points in assistance from other teachers.

Model 2 of Table 7.2 focuses on the commitment teachers have to the occupation of teaching. Commitment is measured in the degree to which the teacher reports general absenteeism within the school. Commitment ranges from 0-3, with 0 indicating a serious problem with absenteeism, and 3 representing no problem at all. Model 2 in Table 7.2 shows a negative relationship to the variable of commitment; more simply, this means that as couplings tighten within the school there is an increase in teacher absenteeism.

In Model 3, I explore the relationship between coupling and the bond of involvement. Involvement is often discussed as the time spent engaging in particular behaviors. For teachers, I concentrate on time spent engaging in additional activities related to the school. Teachers are required to spend a minimum number of hours at the school, in order to receive full-pay and count as full-time faculty. Therefore, in order to truly measure involvement in the school, I disregard the mandatory hours for teachers, and use a variable that captures the additional time

	01/01/01/09/201				
	Model 1	Model 2	Model 3	Model 4	Model 5
	Attachment	Commitment	Involvement	Belief 1	Belief 2
Socio-Political Factors					
Year 1990	0.164 ***	0.039 *	1.813 ***	0.201 ***	0.101 ***
Year 1993	-0.049	0.033	2.500 ***	0.175 ***	-0.030
Year 1999 (IASA)	-0.025	0.070 *	2.313 ***	0.318 ***	0.206 ***
Year 2003 (NCLB)	0.111 **	0.187 ***	4.744 ***	0.327 ***	0.278 ***
Year 2007	0.113 *	0.203 ***	4.309 ***	0.388 ***	0.440 ***
State Characteristics					
Republican State (Reference =					
Democrat)	-0.001	0.018	-0.042	-0.001	-0.008
Charter Law	0.045	0.030	-0.237	-0.022	-0.030
Local Characteristics					
Tight Meso-Coupling (Local Govt to					
School)	-0.007	0.019	0.173	-0.019	0.001
Reference is 0-3					
Bonus	-0.010	0.007	0.055	0.021	0.036
Coupling					
Loose-to-Tight Coupling (School					
Level)	-0.262 ***	-0.087 ***	0.271	-0.364 ***	-0.183 ***
Principal's Characteristics					
Female Principal	-0.002	-0.027	0.193	0.038	0.021
Non-White Principal	0.007	-0.019	0.113	0.099 *	-0.002
Highest Degree - Docotorate					
(Reference=All Other Degrees)	-0.004	-0.004	-0.071	0.039	0.006
# of Years as Principal	-0.003 *	0.001	-0.020	-0.002	-0.005 *
# of Years Teaching prior to					
Principal	0.001	0.000	-0.011	-0.001	-0.001
School Demographics					
Free Lunch	0.000	0.000	-0.003	-0.001	0.001
Black Percentage	-0.002	-0.001	0.013	-0.002	-0.001
Hispanic Percentage	-0.003	-0.003 *	0.017	-0.002	0.000
Asian Percentage	0.000	0.000	-0.018	0.002	0.001
American Indian Percentage	-0.002	-0.002	-0.039 *	-0.001	0.001
Enrollment	0.000	0.000 **	0.001	0.000	0.000
Percent of Teachers in Tested					
Subject	0.000	0.000	0.003	0.001 *	0.000
Constant	2.038 ***	2.465 ***	9.651 ***	2.833 ***	2.887 ***
N=9910					
R-Squared	0.080	0.026	0.064	0.055	0.047
* 0.05 *** 0.01 ****					

Table 7.2: Fixed Effects Regression of Teachers' Social Bonds (Attachment, Commitment, Involvement, Belief) on School-Level Coupling

* p<0.05 ** p<0.01 *** p<0.001

Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

that teachers spend on any school related activities. This includes a wide variety of activities that encompass, but are not limited to, additional preparation time, coaching, tutoring, leading extended field trips, and directing clubs or activities. Interestingly, the organizational structure has no significant relationship with the bond of involvement. Unlike attachment and commitment, the bond of involvement does not appear to be negatively, or positively, related to the organizational structure.

In the final two models of Table 7.2, I examine the bond of belief. Using two conceptually similar variables, I run two separate models in order to parse out how the school's tight coupling affects teachers' feelings about their occupation. In Model 4, I use the variable that asks teachers "if you could go back in time, would you become a teacher again?" Ranging from 0-4, I code this variable with 0 indicating "definitely not," and 4 indicating "certainly would." Model 4 depicts a negative relationship between more tightly coupled schools and positive feelings about going back and becoming a teacher again. Therefore, a unit increase on the loose-to-tight coupling scale results in a reduction of .364 points in positive feelings towards becoming a teacher, given the chance to do it all over again. As coupling tightens, teachers report feeling disinclined to become teachers if given another opportunity to choose a careerpath, and this indicates a general dissatisfaction with the occupation and the school's organizational environment.

In Model 5, I use a conceptually similar variable to the one in Model 4, both of which represent the social bond of belief. Model 5 utilizes a variable that asks teachers how long they plan to remain in teaching. Not referring specifically to the number of years left before retirement, this question is designed to ask teachers how willing they are to leave the occupation of teaching prior to retirement. Ranging from "plan to leave teaching as soon as [possible]" to "as long as I am able," this variable captures the degree to which teachers are satisfied with their career choice. Similar to Model 4, I find that there is a significant and negative relationship between tight coupling and feelings of positivity toward staying within the occupation. I want to point out that this variable is not encapsulating how long teachers plan to remain in their *current* job, or at their *current* school. Instead, this model portrays teachers' general feelings toward the occupation of teaching. A negative relationship between tight coupling and staying in teaching indicates a further dissatisfaction in the occupation, and suggests that teachers do not favor tightly coupled systems, especially if they expect all schools to more or less possess similar organizational structures. This is largely unsurprising given the abundant findings suggesting teachers prefer autonomy, self-control, and generally loosely coupled environments (Coburn 2004; Diamond 2007; Hallett 2010; Ingersoll 2003; Lortie 2002).

Overall, the findings from Table 7.2, perhaps with the exception of Model 3, reveal a negative relationship between a tightly coupled school and teacher's occupational social bonds. These models largely support my expectations and confirm my second hypothesis. Given the findings above, in Table 7.2, I move forward with the next analysis that considers how both teachers' social bonds and tight couplings shape the state of school-wide deviance.

Linking Neo-Institutionalism, Coupling, and Social Control Theory

Criminologists argue that individual's social bonds are important in predicting and understanding deviant behavior (Agnew 1993; Church Ii, Jaggers and Taylor 2012; Colvin and Pauly 1983; Hirschi 1969; Hoffman 2003; Landor et al. 2008; Payne 2008; Peguero et al. 2011; Popp and Peguero 2012; Reiss 1951; Simons, Simons and Conger 2004; Simons et al. 2004; Simons, Simons and Wallace 2004). Specifically, as social bonds weaken, break down, or fail to develop strongly, criminologists find that individuals are more likely to engage in deviant behavior (Agnew 1993; Hirschi 1969). This relationship is widely accepted and well documented among students and in schools (Cairns and Cairns 1994; Eccles and Barber 1999; Erickson, Crosnoe and Dornbusch 2000; Jenkins 1995; Jenkins 1997; Langbein and Bess 2002; Mahoney 2000; Payne, Gottfredson and Gottfredson 2003; Warr 2002; Wiatrowski, Griswold and Roberts 1981), but my analyses will address a new twist on this relationship. In the analyses I present below, I extend social control theory and incorporate it into an occupational setting, in order to evaluate how teachers' social bonds to their teaching careers affect student deviance within the school. Furthermore, these analyses consider how teacher's occupationally driven social bonds affect a separate level within the school – the students. First, I analyze how each individual social bond affects deviance, before including all of the social bonds in a final, nested model.

Model 1 of Table 7.3 considers the bond of attachment, Model 2 focuses on commitment, Model 3 examines involvement, and Models 4 and 5 include belief. The sixth and final model includes all four social bonds in a comprehensive analysis. In general, findings from Models 1 through 4 present hypothesized results. As teachers' social bonds strengthen (recall that bonds are coded from negative to positive), deviant behavior in the school decreases. The exception, again, is in the bond of involvement. The relationship between involvement and school-wide deviance is positive. Therefore, as teachers spend more time engaging in additional schoolrelated activities, there is a positive relationship with deviant behavior in the school. While the finding in Model 3 seems surprising based on Hirschi's control theory, it is only one of the four social bonds. It is possible that occupational bonds formed by teachers do not have the same relative effect, or that some social bonds are more important in predicting organizational deviance. Based on Table 7.3, attachments, commitments, and beliefs, are important factors for reducing organizational deviance.

In the sixth and full model, I include all four social bonds in order to understand how social bonds may matter differently, when taken together. Even in the full model, with all of the social bonds included, the results stay the same. Using the post analysis test command in Stata, I find that the effects of each social bond are significantly different from one another (p < 0.000), suggesting that the bonds of attachment and commitment are stronger in predicting deviance. Paralleling my first analysis, I include macro, meso, and principal, and I want to note some of the more interesting findings in the full model. Principals' characteristics, such as race or class, are not significantly associated with deviant behavior in the school. When I include the social bonds of attachment and belief (and the entire set of social bonds), the number of years of experience is a significant and negative predictor. In the sixth model of Table 7.3, all of the federal policy eras are significant in predicting school-wide deviance. Yet again, the element of time has a non-linear relationship with student deviance. In other words, deviance has not steadily increased in 2003, and decreased over time. Since 1987, deviance has increased, decreased in 1999, increased in 2003, and decreased again by 2007.

Within this set of analyses, I include measures of tight micro-level coupling. Across all models in Table 7.3, I find that tighter coupling has a significant and positive effect on school deviance. In the final model, with all of teachers' social bonds included, the effect of tight coupling on deviance decreases compared to the previous five models. This model suggests that teachers' social bonds may mediate the relationship between tight micro-level coupling and student deviance. Nonetheless, tight coupling is still a strong predictor of school-level student deviance. The findings from Table 7.3 largely lend support for my final two analyses. The

Tuble 7.57 TIACULE	M. 1.1.1	M. 1.10	M. 1.12	M-1-14	Mad 17	Madda
	Model I	Model 2	Model 3	Model 4	Model 5	Model 6 All Social
	Attachment	Commitment	Involvement	Belief 1	Belief 2	Bonds
Socio-Political Factors						
Year 1990	0.032 ***	0.019 *	0.006	0.020 *	0.015	0.035 ***
Year 1993	0.079 ***	0.091 ***	0.078 ***	0.092 ***	0.084 ***	0.082 ***
Year 1999 (IASA)	-0.052 **	-0.036 *	-0.056 **	-0.036	-0.041 *	-0.036 *
Year 2003 (NCLB)	0.036	0.058 **	0.008	0.035	0.032	0.062 **
Year 2007	-0.172 ***	-0.148 ***	-0.199 ***	-0.170 ***	-0.170 ***	-0.138 ***
State Characteristics						
Republican State (Reference =						
Democrat)	-0.018	-0.015	-0.018	-0.018	-0.018	-0.015
Charter Law	-0.021	-0.021	-0.026	-0.027	-0.028	-0.017
Local Characteristics						
Tight Meso-Coupling (Local Govt						
to School)	-0.001	0.004	-0.001	-0.001	0.000	0.002
Reference is 0-3	01001	01001	0.001	0.001	0.000	0.002
Bonus	0.011	0.014	0.012	0.013	0.014	0.013
Counting	0.011	0.011	0.012	0.015	0.011	0.015
Loose-to-Tight Coupling (School						
Level)	0.086 ***	0 103 ***	0 1 10 ***	0 105 ***	0 1 1 3 ***	0.067 ***
Principal's Characteristics	0.080	0.105	0.119	0.105	0.115	0.007
Female Principal	0.003	-0.002	0.002	0.004	0.004	-0.001
Non-White Principal	-0.017	-0.022	-0.018	-0.014	-0.018	-0.019
Highest Degree - Docotorate						
(Reference=All Other Degrees)	-0.007	-0.007	-0.006	-0.005	-0.006	-0.007
# of Years as Principal	-0.002 *	-0.001	-0.002	-0.002 *	-0.002 *	-0.002 *
# of Years Teaching prior to						
Principal	0.000	0.000	0.000	0.000	0.000	0.000
Teachers' Social Bonds						
Attachment	-0.129 ***					-0.102 ***
Commitment		-0.193 ***				-0.169 ***
Involvement			0.003 ***			0.003 ***
Belief 1			0.000	-0.042 ***		-0.022 ***
Belief 2				0.012	-0.038 ***	-0.015 *
School Demographics					01000	01010
Free Lunch	0.000	0.000	0.000	0.000	0.000	0.000
Black Percentage	0.000	0.000	0.000	0.000	0.001	0.000
Hispanic Percentage	0.003 ***	0.003 ***	0.003 ***	0.003 ***	0.003 ***	0.002 **
Asian Percentage	0.002	0.002	0.002	0.002	0.002	0.002
American Indian Percentage	0.002 *	0.002 *	0.003 *	0.003 *	0.003 *	0.002 *
Enrollment	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***	0.000 ***
Percent of Teachers in Tested						
Subject	0.000	0.000	0.000	0.000	0.000	0.000
Constant	1.029 ***	1.242 ***	0.738 ***	0.885 ***	0.876 ***	1.467 ***
N=9910						
R-Squared	0.184	0.205	0.125	0.134	0.131	0.254
	0.101	0.200	00	0.10 1	0.101	0.201

 Table 7.3: Fixed Effects Regression of Deviance on Social Bonds and School Coupling

* p<0.05 ** p<0.01 *** p<0.001

Following NCES convention, I have rounded sample size numbers to the nearest ten in order to protect the identities of respondents.

social bond of involvement is unique, however, and does not negatively affect the degree of deviant behavior within a school.

Finally, I want to highlight the importance of school demographics. As the percent of Hispanic and American Indian students increase within a school, the deviance in the school also increases. As enrollments increase in a given school, the deviant behavior also increases. These results emphasize how schools with greater numbers of specific racial groups or schools with greater numbers of students are plagued with deviant learning environments.

I would also like to remind readers that these results are based on fixed effects regressions, which model the relationships between independent variables and dependent variables *within* the *same* school. Unlike traditional OLS models that model effects across different schools, these tables represent the effects on school-level student deviance and teachers' social bonds based on changes within the same school. Thus, I suggest that these models are strong in illustrating a causal relationship between tight coupling and deviance, tight coupling and teachers' social bonds, and teachers' social bonds and deviance.¹⁴

Discussion and Conclusion

The findings from this chapter have important theoretical, empirical, and policy implications. The vast majority of empirical research on coupling is based upon qualitative analyses, case studies, or relies upon a handful of states or districts (Aurini 2012; Coburn 2004; Diamond 2007; Hallett 2010; Young 2006). Further, research focuses on the teachers' preferences of loose coupling and autonomy (Ingersoll 2003), the chaos that ensues among teachers (Hallett 2010), and the tactics teachers employ in order to maintain loose couplings

¹⁴ Additional models, not shown here, use the full SASS dataset and find substantively similar results.

(Coburn 2004). The spotlight has consistently shone upon outcomes for teachers. I contribute to this ongoing discussion with this chapter of my dissertation, but I also emphasize the effects on students.

While educational scholars consistently report that teachers prefer loosely coupled environments, my focus on teacher's occupational social bonds sheds a new light on understanding the nuanced relationship that teachers have with their careers. Criminologists and deviance scholars commonly accept that weak social bonds will result in negative consequences and deviance, but how social bonds are initially formed in specific settings like the workplace (e.g. a school) remains largely unaddressed. This step in my dissertation is important for showing *how* the organizational structure can develop or hinder particular social bonds for teachers. It also lends further support for organizational theories such as neo-institutionalism and a perspective of coupling, which both predict a negative outcome for organizational actors when tight coupling ensues.

Organizational scholars predict that tightly coupled organizational environments promote chaos and disorganization for organizational actors. Social control theory facilitates a deeper understanding of neo-institutionalism and coupling by including the teachers' responses to their occupation in order to understand how specific types of student behavior develop. Based on the results shown above, the organizational setting is an important part of explaining teachers' occupational social bonds and student deviance.

Teachers' social bonds have a significant effect on student behavior. Traditional considerations of social control theory focus on individuals' social bonds, and how those bonds affect criminal and deviant behavior. Unlike my analyses shown here, most empirical

examinations that test control theory do not focus solely on one organizational setting or on social bonds that relate to one specific aspect of an individual's life.

Social bonds of attachment, commitment, and belief appear most relevant in explaining deviance. Similarly, tight coupling had a significant effect on attachment, commitment, and belief, but not involvement. Involvement is measured using self-reports of time spent on additional activities. It does not ask teachers if they *want* to spend this time on additional activities, just whether or not they do spend additional time, and how much. It is possible that my measure of involvement is not fully capturing the concept of involvement in its intended form. If teachers do not *want* to spend additional time on school-related activities, then my operationalization of involvement is limited. Conversely, it is possible that the social bond of involvement is simply not affected in the same way as the other social bonds of attachment, commitment, and belief.

These analyses test the relationship between tight coupling, social bonds, and deviance within schools. Schools are unique organizations, however, and do not operate in the same manner, or with the same goals as other organizations. Schools stray from the traditional Weberian model and understanding of formal bureaucracies (Weber 1968). For instance, schools are not profit-seeking organizations with traditional consumers; instead, they are knowledge producing institutions and the clients are children (and parents). The results from this chapter could be informative for other organizations and could help explain organizational processes in general. Future research using different types of organizations needs to address the relationship between coupling, social bonds, and deviance.

To my knowledge, this is the first study to link neo-institutionalism and coupling to social control theory. Organizational scholars and criminologists are both interested in

explaining disorganization, yet empirical studies have failed to unite these two classic theories. If tight couplings weaken social bonds and increase student deviance within public schools, then it is possible that these organizational processes occur among diverse types of organizations. Organizational scholars and criminologists should both take up these research questions and contribute to this discussion.

There are several limitations resulting from the data and methods I drew upon for this empirical chapter. The data I used for these analyses come from the SASS data. The complete SASS datasets are nationally representative samples, but the truncated data set for this empirical chapter is based upon a sub-sample of schools that appear multiple times within the SASS dataset. Moreover, it is not simply schools that appear more than once, but schools that appear in back-to-back waves of the SASS data. Hence, I am left with a non-representative sample compared to the original sample of schools, although findings in the cross-section are congruent with those shown in this chapter. Nonetheless, this sample is the best available for school-level studies that require organizational structure measures. More nationally representative data is necessary for future research.

Policy-makers should take note of the findings from this chapter. Tight coupling has a negative effect on both teachers and students, and tight coupling develops as a result of specific federal, local, and principal characteristics (refer to Chapter 5 and Chapter 6 for a detailed treatment of causes and influences of micro-level tight coupling). If tight coupling is not beneficial for teachers and students then policy-makers may need to revisit policies that promote tight coupling among teachers. After all, an unhappy workforce of teachers who are tasked with carrying out the bulk of the day-to-day instructional activities could have a negative and

widespread impact on the occupation of teaching. If teaching becomes an undesirable occupation then efforts of recruitment and retainment will become more and more difficult.

Tight coupling *could* positively influence academic achievement, although it is not addressed in this dissertation. This is a crucial step in educational research, and educational scholars need to untangle the relationship between tight coupling and academic outcomes using nationally representative data. Similarly, a weakening of teachers' social bonds may not negatively impact academic achievement, and thus not affect the outcome that policy-makers are *most* concerned with – math and reading scores. Future research should address both of these possibilities.

CHAPTER 8

CONCLUSION

Unlike Weber's ideal, formal bureaucracies (Weber 1968), schools are situated in uncertain institutional environments and educational scholars have traditionally assumed that schools are loosely coupled organizations. Although loose coupling is considered to be ideal for the school (Cohen and March 1974; March and Olsen 1976; Meyer and Rowan 1977; Rowan 1981; Sauder and Espeland 2009), and teachers prefer loose couplings (Ingersoll 2003; Lortie 2002), the recent increase in standards based federal policies spurred researchers to reinvestigate the taken-for-granted loose coupling model of schools. Recent research has suggested a movement towards tighter couplings in schools (Coburn 2004; Diamond 2007), and a chaotic, turmoil filled environment (Hallett 2010). I join this discussion with the work presented here, and my research helps shed light on the processes that contribute to couplings in school, and the subsequent effect of tight coupling.

The majority of research on school couplings uses qualitative data or case studies (Aurini 2012; Coburn 2004; Darling-Hammond and Wise 1985; Diamond 2007; Floden et al. 1988; Gamoran and Dreeben 1986; Hallett 2010; Rosenholtz 1987). When researchers do employ quantitative analyses, the data is often from non-representative samples of several districts or a handful of states. While good for in depth analyses, case studies, qualitative research, and limited district or state analyses cannot fully capture how schools, in general, develop couplings. In contrast, this dissertation relied on quantitative, nationally representative data to analyze coupling over the course of two decades.

Coupling has remained a central component of organizational research on education. But most scholars focus on the outcomes of couplings, rather than the impetus behind school couplings. While outcomes are crucially important in educational research, especially for policymakers and policy researchers, insights into the construction of couplings are fundamental to enact change. This dissertation addresses both the causes and consequences of coupling.

Tight couplings are not a result of one overarching level of the public education system exerting overwhelming control over schools. Instead, couplings come from federal policies, local/district governments, and principals. Federal policies frequently receive the blame for tightening couplings within schools, but this dissertation looks at a span of twenty years and finds that couplings ebb and flow as a result of federal policy eras. Schools are not simply loosely coupled, or tightly coupled; couplings have changed over time and not in a linear fashion. Couplings have not moved in one direction even in the most recent decade I investigated in this dissertation. Thus, federal policies are not monolithic pressures for public schools. At the school level, tight coupling is a result of federal policy eras, district-to-school level coupling, but it is also a gendered process.

Principals are school managers, and gender remains a significant factor in studies of management. Sociological research highlights gender in studies of management, and consistently finds that female managers employ distinct management styles relative to males (Lee, Smith and Cioci 1993; Price 2012). Research on principals is consistent with this literature, and suggests that female principals are more active in their leadership. This dissertation analyzed how school-level couplings fit into this dialogue, and found that female principals are associated with tight couplings. Active leadership styles suggest a tightly coupled school, and my dissertation confirms that female principals create tightly coupled environments.

Specifically, chapter 5 finds that a *change* from a male principal to a female principal results in a tighter coupling within schools. In light of my findings, tight coupling is a gendered type of management strategy in schools.

Teachers represent the task force of the public education system. As a result, coupling research traditionally assesses the role of teachers in creating and maintaining couplings. This dissertation is no exception, and chapter 6 specifically considers teacher characteristics in shaping school-level couplings. As expected accountability is an integral component in predicting coupling. The school-level analyses shown here do not fully highlight the elements of accountability that would influence coupling. Therefore, the teacher-level analyses supplement and complement findings from Chapter 5 and help paint a more complete picture. Teachers who are instructing in subjects of math and reading have a unique experience with coupling. Unlike the non-tested subjects, where teachers are not producing test scores that are sent to the district and state department of education, those who teach tested subjects must produce scores that represent their school and encounter more tight couplings.

Much like the gender of principals, the gender of teachers is central in explaining tight coupling. Men, and specifically white men, report higher levels of tight coupling. I speculate on the sources for these reports, and while my quantitative analyses cannot truly capture the processes, emotions, and thoughts of male teachers, I do conjecture that male teachers report tighter coupling because they perceive any measure of tighter coupling as an infringement on their autonomy, regardless of how slight. Additional research on men who are in female-dominated occupations, such as teaching, finds that men often "ride" the glass escalator to positions of power. Thus, the higher reports of tight coupling, especially when combined with racial characteristics, could be indicative of close personal relationships between white, male

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teachers and principals. I suspect this is not the case, however, because male teachers who are invested in riding the glass escalator will still likely desire autonomy, control, and fewer interactions regarding their actual instruction.

Gender is such an important aspect that the gender combination between principals and teachers is essential in explaining coupling. Given my findings from chapter 5, it is no surprise that the gender combination with the tightest coupling is a female principal and a male teacher. Female principals are associated with tighter coupling, male teachers are also associated with reports of tighter coupling, and this combination reflects intensification in tight couplings. Future research should further explore these gender combinations and the relationship to coupling.

After fully considering the influences and causes of coupling in both schools and classrooms, I analyzed the effects of tight coupling on teachers and students. Loose coupling is preferred among teachers, and researchers suggest that tight coupling has a negative effect on teachers and students. Qualitative research confirms this assumption, but cannot speak to widespread effects for all public school teachers. In this dissertation, I analyzed the relationship between tight coupling and teachers' social bonds to their occupation. In general, my findings support organizational scholars' assumptions that tight coupling has a negative effect on teachers. I analyze the effect of tight coupling on all four social bonds of attachment, commitment, involvement, and belief. I find that some social bonds are more strongly affected than others.

Teachers report lower levels of attachment, commitment, and belief, although their involvement is not negatively affected by tight coupling. Teachers attachments, measured through their relationships with other teachers, are negatively influenced by tighter coupling.

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Similarly, teachers' commitment as measured through absenteeism decreases as a direct result of tighter couplings. Finally, belief in the occupation, whether through the desire to continue teaching or given the opportunity to start over and re-select a career path, is negatively influenced by tight coupling. Involvement, however, is not negatively influenced by tight coupling, although it is not positively influenced by tight coupling either. Involvement is measured by time spent on non-mandatory school-related activities, and these results suggest that teachers are not increasing their hours as a result of tight coupling.

Weak social bonds are positively associated with deviance, and this dissertation addresses the relationship between social bonds and deviance on two different levels. Research typically examines how social bonds and deviance are related on the same level, or for the same individual (Jenkins 1995; Jenkins 1997; Payne, Gottfredson and Gottfredson 2003; Wiatrowski, Griswold and Roberts 1981). I extend the association between social bonds and deviance by focusing on the relationship between teachers' social bonds and student deviance. As expected, social bonds and deviance are associated, even at different levels.

Teachers' social bonds are significantly associated with student deviance at the schoollevel. An increase in teachers' attachment, commitment, or belief is negatively associated with student-level deviance. In contrast, teachers' involvement is positively associated with studentlevel deviance. Similarly, tight coupling is positively related to student deviance. These findings suggest that tight coupling produces chaos and turmoil for both teachers and students. For teachers, chaos occurs in the form of social bonds; but for students, turmoil presents itself in the form of deviance.

Empirical Limitations

My dissertation uses quantitative methods and relies on six waves of nationally representative data. Each wave of the SASS data is a national, representative sample of schools. Accordingly, these data allow me to examine trends of coupling, social bonds, and deviance over time. SASS is not a repeated panel study; thus, schools are not repeated over time. Because NCES did not repeatedly sample the same representative sample of schools over time, it is difficult for me to draw firm conclusions regarding the causal relationship when using the full sample of schools in the SASS data.

Due to the nature of sampling, there are schools that appear in multiple waves (approximately 18%). Repeated schools allowed me to utilize fixed effects regression for school-level analyses for this small sample of schools. Fixed effects regression models are valuable because they show *within* unit change. In this case it is within *school* change. Unfortunately, the schools that appear in multiple waves are not representative of the original sample, and results from the fixed effects regression models are not generalizable to the national population of schools. To my knowledge, there is not a nationally representative sample of schools that is also panel data, and has measures from the district, school, principal, and teacher which allow for organizational level analyses. Therefore, while the data and analyses presented in this dissertation are the best available, there is clearly a need for a nationally representative sample of schools (i.e. not just students, teachers, parents). Without such a dataset, educational scholars are unable to infer solid causal relationships.

Throughout this dissertation I consistently used measures that appeared in all six waves of the SASS questionnaires. Specifically, I made sure the scales I constructed for both independent variables and independent variables were comprised of the same questions/measures over time. When the NCES altered the Likert scales for questions I used a scaling method to place all responses on the exact same five point scale (see Chapter 4 for more information on variable construction). For example, my measures of micro-level coupling, meso-level coupling, deviance, and teachers' social bonds (i.e. the key dependent and independent variables) consist of questions that appear in every single wave of the SASS data. As a result, there are questions that are not included, but perhaps could be included for each of the measures in order to improve the operationalization of the concept.

The exclusion of relevant questions/measures from my operationalization of a concept could improve the analyses, although my results are strong throughout this dissertation. Further, I believe my results are simultaneously robust and conservative due to my decision to include only those questions appearing in all waves. One such example of an exclusion is in my operationalization of student deviance. I draw on 8 questions to construct my scale of school-level student deviance (drug use, alcohol use, physical conflicts, possession of weapons, cutting class, student absenteeism, tardiness, and vandalism). But, in the 2003 wave and the 2007 wave, SASS also incorporated questions about students' verbal abuse of teachers. Similarly, for the social bonds measures, there were questions in later waves that more deeply addressed teachers' relationships with other teachers. Unfortunately, in order to include all six waves of data and analyze trends over twenty years, I was unable to use additional questions that only appeared in a few waves. Future research should re-operationalize the concepts from this dissertation and broaden the scope of the measures in order to investigate the multi-faceted dimensions of the dependent and independent variables.

Despite my ability to generalize to the broader population of schools in the US, the nature of quantitative analyses limits me to measures provided by the secondary data set. For instance,

I operationalized the social bonds of attachment, commitment, involvement, and belief by using the variables available in the SASS data. It is possible that the measures in this dissertation are not fully capturing the concepts of social bonds. And while there are measures I did not use, and could for future research, researchers are still limited by the questions available in the dataset. Social bonds are multi-dimensional, and the SASS dataset does not include many measures that help researchers test teachers' social bonds. Qualitative research could enhance this research by focusing on other elements that contribute to teachers' social bonds.

I examine teachers' social bonds and student deviance as an outcome of couplings in schools, but tight coupling may influence the academic achievement of students. Unfortunately, SASS lacks academic achievement data. The vast majority of policies are rooted in academic achievement; thus, analyses using nationally representative data, that also consider academic achievement, are still necessary. Future research should pursue this question and link schools' academic achievement scores to the ids in the SASS data in order to investigate the relationship between couplings and achievement.

Finally, this study only examines US public schools. I exclude alternative schools, private schools, charter schools, and non-traditional schools. Similarly, I exclude the teachers who work in non-traditional, private, charter, or alternative schools. And while federal, state, and local policies tend to directly impact traditional public schools, processes of coupling may be important for private schools, charter schools, and non-traditional schools. For example, coupling may still be a gendered process in private schools.

Practical Significance

The results from this dissertation are important for those interested in improving educational policy at multiple levels. While federal policies receive the bulk of media attention and dialogue, all tiers of the public education system contributed to shaping couplings within school. Furthermore, tight coupling had a real and substantial impact on both teachers and students. Policy-makers should take this into consideration when designing future policies at multiple levels.

At the federal level, NCLB has received the bulk of educational scholars' attention in recent years. But, the NCLB era is ending as schools are granted waivers and focus turns to "Race to the Top." The standards based reform movement did not incrementally tighten couplings within schools, as scholars may have suspected. Instead, couplings have changed over time, and the early part of the NCLB era is associated with looser coupling for both schools and all teachers on average. The latter part of the NCLB era is linked to tighter coupling at the school level, but the effect really took place among a specific portion of teachers – those in tested subjects. Academic achievement and high stakes for math and reading are at the heart of recent federal policies. Consequently, teachers who work in these subject areas feel the tightening in couplings. The high stakes for teachers in tested subjects encourages tighter coupling. But tighter coupling is associated with negative social bonds among teachers, and higher rates of deviant behavior among students. While the academic achievement data is unavailable for this analysis, policymakers should consider the unintended consequences of policies that encourage the unwanted tight coupling. If tighter coupling is the overarching goal, then federal policies have done their job. But, if tight coupling is a latent effect of a poorly mandated and funded policy, then legislatures may need to revisit their objectives.

My findings do not indicate a relationship between state characteristics and coupling at the school level, although results in Chapter 6 suggest that higher stakes states are associated with tight coupling at the teacher level. Further, the ICC was significant in all of my analyses. In Chapter 5, where I examine the influences on coupling, the ICC is .10. This ICC indicates that 10% of the variance is due to the fact that schools are nested within states. States do matter, but I am unable to capture the variables that drive the variance in coupling. Future research should seriously consider the influential factors at the state level. The emphasis on testing in high stakes accountability states echoes policies set at the federal level. Despite this similarity, I find no significant interaction between teachers who instruct in tested subjects and those who are situated in high stakes states. Hence, the effect of high stakes policies at the state level do differ in some ways.

Many legislators, and laypeople, especially those who subscribe to more conservative political ideologies, are opposed to federal influences (DeBray-Pelot and McGuinn 2009). This opposition stems from the belief that public education is a state's issue, and a state's right. And while I did not find a significant relationship between federal election results and tight coupling, my findings strongly indicate that there are differences between states. Future research should seek to determine *why* states differ, so policy-makers can design policies at the state level that reflect goals and objectives for their individual state.

While out of the scope of this dissertation, I want to note recent federal policy changes that may significantly alter the landscape of public schools in the US. The NCLB era is effectively coming to a close, and schools, districts, and states are taking advantage of waivers that have increasingly become available. My data spans two decades of time – 1987 through 2007 – and 2007 was an important year for federal policies. In 2007, the NCLB law was eligible for renewal, but the United States Congress has ignored the landmark law. As a result, the Obama administration began granting waivers from NCLB. States can obtain waivers from NCLB by creating a policy that addresses college preparedness, aids poorer students, identifies poor performing schools and groups of students, and supports efforts to improve teachers (US Department of Education 2013). These waivers grant more freedom to states, and allow them more leeway in reaching their educational goals. To date, forty one states and DC have been granted waivers from the most stringent requirements of the NCLB law (e.g. standardized testing), and the most significant state in this list is Texas (Weissart 2013). NCLB is credited to George W. Bush, a Texan who championed the law, and drummed up plenty of bipartisan support for the federal policy. But as the NCLB era comes to a close, and a new federal policy era begins, policy-makers should consider how quickly we are willing to dramatically change federal policies, and reflect on whether or not the policies have had a chance to take effect. The results from my dissertation suggest a lag between the time a federal policy goes into effect, and the time it takes to realize a change in public education.

Theoretical Contributions

My dissertation uses a theoretical framework of neo-institutionalism and a coupling perspective in order to understand the causes and consequences of tight coupling in US public schools. Throughout the dissertation I augment neo-institutionalism and coupling with several theories. First, I draw on social psychological perspectives of legitimacy to help explain the gendered process of tight coupling. Second, I synthesize neo-institutionalism and coupling with social control theory – a major theory in criminology and deviance. Together, these theoretical frameworks allow me to fully explore the sources and outcomes of tight coupling.

In Chapter 5 and Chapter 6, I test two major tenets of neo-institutionalism. Neoinstitutionalists predict tight couplings occur when organizations are presented with accountability standards. But neo-institutionalists also predict loose couplings in uncertain or chaotic environments. The NCLB era is ideal for testing these two competing hypotheses because NCLB introduced accountability structures while simultaneously presenting an uncertain and chaotic environment for schools, principals, and teachers. The results shown here help shed light on how competing environments create couplings for schools. In the early years of the NCLB era, coupling loosens relative to previous policy eras. But by the latter part of the NCLB era, couplings have tightened at the school level. Chapter 6 illustrates the nuance in increased tight coupling for later years, however, and shows how different teachers experience couplings. Accountability structures are important, but only for those individuals who are directly responsible for meeting the requirements set forth by the accountability standards. In schools, these teachers are the ones who teach math and/or reading. The findings in this dissertation could be relevant for multiple types of organizations, especially those that are beholden to external governing bodies. Schools could be unique organizational forms, however, and future research should investigate other types of organizations

I focus on the gendered process of couplings in Chapter 5, and I borrow from the social psychological theory of legitimacy. Organizational scholars describe processes of legitimacy for organizations, and social psychologists explain how individuals acquire legitimacy within an organization. Hence, neo-institutionalism and legitimacy theories are ideal for examining how schools create tight coupling. By linking neo-institutionalism and legitimacy theory in an analysis of coupling in public schools, I extend our understanding of these two theoretical constructs for a unique type of organization.

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In the final empirical chapter of this dissertation, I assessed the relationship between tight coupling and teachers' social bonds. I also analyzed the effect tight couplings and teachers' social bonds had on student deviance. Drawing on social control theory, I found a negative relationship between tight coupling and teachers' social bonds. Similarly, my results show how teachers' positive social bonds decrease student deviance. Organizational scholars of neo-institutionalism and coupling predict disorganization as a result of tight couplings. My results confirm this prediction, and synthesizing neo-institutionalism with social control theory is ideal for incorporating teachers' social bonds into the relationship.

To my knowledge, this dissertation is the first body of work to integrate neoinstitutionalism and social control theory. Bringing these theoretical foundations together is a unique approach to our understanding of organizational processes, teachers' occupational social bonds, and student deviance. But, fusing these two perspectives could be relevant for other organizational studies. While schools are exceptional types of organizations, general processes of tight coupling, and the relationship between tight coupling and occupational bonds could look very similar across various types of organizations. Theories of neo-institutionalism and social control both encompass central tenets that predict chaos and disorganization given specific contexts or environmental pressures. The merging of these theoretical structures is optimal given their similarities. Thus, I encourage future researchers to undertake research questions that address the relationship between neo-institutionalism, coupling, and social bonds or deviance. If tight couplings weaken occupational bonds, and weak occupational bonds engender deviance or disorganization, then the outcomes for profit-seeking organizations could be detrimental and damaging to the organization. This could be especially true if deviance and disorganization results in crime against the organization. Criminologists and organizational scholars may both find the linking of these two classic theories to be ideal.

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