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TESIS DOCTORAL
DOCTORAL DISSERTATION

Born Under Punches:
Crisis Conditions and Institutional Slack
in Architecture Practice

Nacido a los golpes:
Condiciones de crisis y encaje institucional en
el ejercicio de la arquitectura

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ABSTRACT

This dissertation examines organizations in contexts of crisis and environmental flux. While institutional theory has suggested that firms run the risk of appearing to be illegitimate if they depart from established institutional logics and models, I suggest that institutional norms and pressures may slacken in during crisis conditions, and that organizations can exploit this laxity by straying from the standards of legitimate, common, and acceptable practices. Certain modes of nonconformity or insubordination may therefore be tolerated or rewarded in crisis conditions. I explore this phenomenon through a combination of qualitative and quantitative methods, including a longitudinal study of the complete population of 3,882 Chicago-area architecture firms existing between the years 1928 and 2000, with data collected from a range of archival sources. My findings suggest that certain kinds of institutional conformity pressures may recede or disappear entirely during periods of fundamental environmental transformation (Haveman, 1992), and that under certain circumstances, new firms may benefit from initial nonconformity in their strategic approach. A second study examines the relationship of professional service firms and their primary clients, finding that firms that specialize in certain clients or client types are more likely to develop structural and strategic similarities with their clients than those that adopt a generalist approach, and that this isomorphic tendency was positively associated with a reduction in hazard rates and an increased likelihood of achieving professional recognition. I also examine construction, design, and planning activity in the United States linked to the Second World War, finding that individuals within organizations can exploit the stress and chaos associated with extreme “do-or-die” deadlines by ignoring or evading

norms of legitimate organizational behavior and formal chains of command. I suggest that this mode of insubordination is not necessarily driven by resistance to an organization's goals, but rather that it can emerge when individuals believe it is both possible and necessary for them to ignore their organization's rules in order to meet important organizational objectives.

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Take a look at these hands.
Take a look at these hands.
The hand speaks. The hand of a government man.
Well, I'm a tumbler. Born under punches.
I'm so thin.

All I want is to breathe. I'm too thin.
Won't you breathe with me?
Find a little space, so we move in between.
And keep one step ahead of yourself.

Don't you miss it, don't you miss it.
Some'a you people just about missed it! Last time to make plans!
Well, I'm a tumbler.
I'm a government man.

Never seen anything like that before.
Falling bodies tumble 'cross the floor. Well I'm a tumbler!
When you get to where you wanna be. Thank you! Thank you!
When you get to where you wanna be. Don't even mention it!

Take a look at these hands. They're passing in between us.
Take a look at these hands.
Take a look at these hands. You don't have to mention it.
No, thanks. I'm a government man.

Talking Heads, “Born Under Punches”, 1980

GENERAL INTRODUCTION

This dissertation examines organizations in contexts of crisis and environmental flux. I suggest that institutional norms and pressures may slacken in such climates, and that organizations can exploit this laxity by straying from the standards of legitimate, common, and acceptable practices, without necessarily suffering the hazards associated with nonconformity. Institutional theory has suggested that organizations in a given institutional field will tend to resemble one another (DiMaggio and Powell, 1983), and that firms run the risk of appearing to be illegitimate if they depart from established institutional logics and models (Meyer and Rowan, 1977; Deephouse, 1999). Previous research suggests that these conformity pressures may be especially acute in professionalized fields such as accounting (Greenwood, Suddaby, and Hinings, 2002), management consulting (David, Sine, and Haveman, 2013) and architecture (Jones et al, 2012), where the professions themselves may establish collective norms of what is important, right, and good. In the essays contained here, I suggest that these norms may carry less weight when the environment is unsettled, and that certain modes of nonconformity or insubordination may instead be tolerated or rewarded in contexts such as these. While the population ecology framework suggests that new firms can introduce novel organizational forms into a population (Hannan and Freeman, 1977), according to the institutional perspective, such innovation is likely to sap new firms of legitimacy at founding, and may therefore contribute to firm failure. In the present work, I suggest that institutional theory can also account for the appearance of new traits within the population, and that conformity pressures for new firms may recede when the environment is in crisis.

I explore this phenomenon through a combination of qualitative and quantitative methods, including a longitudinal study of the complete population of 3,882 Chicago-area architecture firms existing between the years 1928 and 2000. I collected data from a range of archival sources, including telephone directories, historical documents, obituaries, military records, and historical architectural surveys. In total, the data base includes over 41,000 individual observations, providing a robust source of information on the relationship among environmental conditions, survival, and firm nonconformity with institutional and professional norms.

Architecture practice is a useful setting in which to test an institutional model as the design and construction of the built environment is generally contingent on broader social and economic forces in order to contract and fund work (Blau, 1984). The practice of architecture is therefore in many cases an epiphenomenon of the macro-economy (Tafuri, 1980; Jameson, 1991), yet the cultural and artistic discipline of architecture itself is based on internal principles and ideals that may not be related to the forces that ultimately build and pay for architectural work. This tension between architecture as an autonomous discipline and architectural practice as an instrument of economic development serves as a backdrop for each of the essays contained here.

My findings suggest that certain kinds of institutional conformity pressures may recede or disappear entirely during periods of fundamental environmental transformation (Haveman, 1992), and that under certain circumstances, new firms may benefit from initial nonconformity in their strategic approach. New firms that did not conform to norms of firm structure, however, continued to have a higher hazard rate than those that conformed in that

respect. I suggest that this phenomenon may be linked to a firm's relationship to its primary client or client types. A second study builds on this dynamic, examining in detail the relationship of professional service firms and their primary clients. I find that firms that specialize in certain clients or client types are more likely to develop structural and strategic similarities with their clients than those that adopt a generalist approach, and that this isomorphic tendency was positively associated with a reduction in hazard rates, and an increased likelihood of achieving professional recognition through publications and awards. In the final chapter of the dissertation, a qualitative study of construction, design, and planning activity in the United States linked to the Second World War, I find that individuals within organizations can exploit the stress and chaos associated with extreme "do-or-die" deadlines by ignoring or evading norms of legitimate organizational behavior and formal chains of command. I suggest that this mode of insubordination is not necessarily driven by resistance to an organization's goals, but rather that it can emerge when individuals believe it is both possible and necessary for them to ignore their organization's rules in order to meet important organizational goals. As a result, the extreme time pressure associated with the "do-or-die" deadline may provide room for creativity and improvisation that would not otherwise have been allowed.

These studies are born out of my interest in how organizations are affected by crisis conditions. While the hazards associated with tough times are real, it is my goal to investigate the boundaries of those risks, and to identify how and under what conditions it may, in fact, be a good thing to be living through bad times.

CHAPTER 1

Imprints of a World to Come: Institutional Slack, Anticipatory Fit, and Nonconformity in Chicago Architecture Firms, 1928-2000

Come gather 'round people where ever you roam
And admit that the waters around you have grown
And accept it that soon you'll be drenched to the bone
If your time to you is worth savin'.
Then you better start swimmin' or you'll sink like a stone
For the times they are a-changin'!

(Bob Dylan, "The Times They Are a-Changin'", 1964)

1.1: INTRODUCTION

New firms face pressure to conform with the dominant institutional logic or logics in their fields (Friedland and Alford, 1991; Thornton, 2002; Thornton, Ocasio, and Lounsbury, 2012), and to adopt organizational traits and strategies that follow from these logics (Haveman and Rao, 1997; Thornton and Ocasio, 1999; Almandoz, 2014). Institutional theory has suggested that mimetic, coercive, and normative isomorphic pressures (DiMaggio and Powell, 1983) are important sources of firm conformity and that deviance from established logics and models can deprive firms of legitimacy (Meyer and Rowan, 1977; Deephouse, 1999; Deephouse and Suchman, 2008), thus making the already risky prospect of starting a new business more harrowing still (Sine, Haveman, and Tolbert, 2005; Deephouse, et al., 2017). Although scholars have found that institutional logics are malleable (Marquis and Lounsbury, 2007; Hiatt, Sine, and Tolbert, 2009) and that multiple logics may coexist simultaneously (Dunn and Jones, 2010), previous research nevertheless suggests that the pressure to conform remains formidable and may be especially acute in professionalized fields such as accounting (Greenwood, Suddaby, and Hinings, 2002), management consulting (David, Sine, and Haveman, 2013), medicine (Dunn

and Jones, 2010), haute cuisine (Rao, Monin, and Durand, 2003), and architecture (Jones et al., 2012), where the collective norms of what is seen to be important, right, and good are constructed and enforced by the professions themselves; the professional fields may engage in both formal and tacit opposition to novelty, and institutional entrepreneurs or exemplars (David, Sine, and Haveman, 2013; Jones and Massa, 2013) may be necessary to make non-conformist organizational structures or strategies acceptable to peers, regulators, and stakeholders.

But when the economic and social environment is in turmoil, do these conformity pressures remain relevant for new firms? Does the iron cage of conformity bend and become pliant under stress? And are those firms that exit the cage penalized for having done so, once the stress is removed? The purpose of this study is to address the question of conformity at birth during crisis conditions: for firms born into profoundly turbulent environments, does conformity pay? Or, instead, when the institutional and economic context is in flux, are new firms adopting non-conformist organizational forms and strategies more likely to survive than those that follow convention? What specific modes of nonconformity at birth, if any, make survival more likely? Will firms that had adopted non-conformist practices at birth during crisis conditions continue to position themselves as nonconformists, moving forward? And if they do, will they benefit from that posture?

Prior research offers only partial answers to these questions. Hiatt and Sine (2014), for example, examined how contexts of political and civil violence affected the survival rates and planning strategies of new firms born into unstable contexts, but did not address the role of nonconformity at birth.

Deephouse (1999) suggested that adoption of an intermediate conformity position of “strategic balance” was associated with higher performance than a highly conformist or non-conformist strategy, but assumed conditions of institutional and socioeconomic stability. Indeed, much of the past research on isomorphism (e.g., Haveman, 1993; Shane and Foo, 1999; Tan, Shao, and Li, 2013) has assumed a relatively stable institutional context, in which the characteristics to be copied today are presumed also to be valid tomorrow. Thornton (2002), for example, studied how existing publishing firms adapted their strategies and structures to fit an institutional environment that had already undergone a fundamental change.

But if the socioeconomic climate is turbulent, and the institutional context is in the process of shifting from a known condition to a still-emerging and hazy future, might it be hazardous for a new firm to adopt the prevailing structures and strategies of an environment in apparent decline? Might it be more advantageous—to the degree that this is possible—to bear the imprint of the emerging condition; to conform with the world to come, rather than with the declining order? In short: can new firms become fit for the future by acting like non-conformists in the present? Will they pay a price for their initial nonconformity?

A model of institutional slack and anticipatory fit describes how firms founded in moments of fundamental environmental transformation (Haveman, 1992) may bear the imprint of an emerging, minor institutional context rather than the prevailing characteristics of the dominant but declining environment, and may under certain circumstances avoid the hazards associated with non-conformity with dominant institutional logics. I suggest that this phenomenon is

driven in part by isomorphic pressures exerted on firms by an essential part of their social context: the primary clients with whom they interact daily, and who commission their work (Miller and Chen, 1996; Jones et al., 2012). Institutional theory suggests that social and symbolic pressures tend to drive new firms to emulate the dominant forms and strategies in the population in order to achieve legitimacy within the institutional context (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). A contingency approach (Woodward, 1965; Lawrence and Lorsch, 1967; Siggelkow, 2002) argues that managers can and should adapt their firms to fit their particular organization's characteristics to the current competitive landscape. A model of anticipatory fit extends both institutional and contingency theories by suggesting that pressures may also be exerted on firms by forces nascent but not yet dominant in the environment. Time enters in. I suggest that managerial agency may also enter in, as the decision to adopt minority characteristics may be just that: a decision. By electing at birth to pursue and service client types that may, for the moment, be somewhat marginal in the environment, a firm may adopt forms and strategies similar to—or at the very least, compatible with—those client organizations. If the previously marginal client types emerge strengthened from the turbulent period, then we would expect to see a similar strengthening of the firm servicing those clients as well, and a strengthening of the formal and strategic bonds between them. In sum, by choosing its target client base, a firm may elect to be a misfit in the present in exchange for the chance to become fit for the future.

In stable conditions, however, a model of anticipatory fit is unlikely to apply. The price to pay for nonconformity in the short term would be too high for many new firms to endure. Firms would be unlikely to survive the lag between

founding nonconformity and a possible future fit because their initial nonconformist posture would deprive them of legitimacy and, in turn, make it difficult to amass resources, both initially and over time (Shane and Foo, 1999; Dobrev and Gotsopoulos, 2010). But when conditions are in flux, institutional pressures may slacken, as norms and conformity pressures are relaxed in the face of crisis and uncertainty. If there exists nascent demand and a social consensus within a field not to pursue it, then those that aim to satisfy that demand when the social pressure is relaxed may be rewarded for doing so.

I test this model through a longitudinal study of architecture practice in Chicago. Specifically, I study the complete population of 3,882 Chicago-area architecture firms existing between the years 1928 and 2000, focusing on firms founded during the period spanning the Great Depression, the New Deal, and the Second World War (1929-1945). The metropolitan Chicago area is a useful research setting as it provides both an extensive population of firms and a relevant test case of architecture practice as an epiphenomenon of broader socioeconomic developments (Tafuri, 1980; Jameson, 1991; Thornton, Jones, and Kury, 2005). Chicago was, for most of the period of study, the second-largest city in the United States, and has been recognized by architecture historians (Condit, 1964; Curtis, 1982; Kostof, 1985; Frampton, 2007) as the birthplace of steel-frame construction, the skyscraper, and of modern architecture, broadly speaking. Rowe (1977) has suggested that Chicago architecture was uniquely attuned to broad economic exigencies, and that the development of the “Chicago Frame” was largely an effort to provide “equipment” for economic development, rather than to pursue strictly disciplinary or artistic goals. While this characterization does not necessarily

apply to all architecture produced in the region over the period of study, it nonetheless suggests that Chicago may prove a relevant and robust source of information on the relationship among environmental conditions, survival, and firm nonconformity with institutional norms.

I suggest that the rapid-fire sequence of events related to the Great Depression, New Deal, and wartime mobilization amounted to a profound environmental shift on the order of political regime change, and that firms founded during that period provide a useful test case of firms founded in the midst of fundamental environmental transformation, without the overt signs and markers of a formal change in political regime. The study thus captures not only the profound turbulence of the period of initial crisis (1929-1945), but also several subsequent periods of less acute socioeconomic crisis, ending just before the events of September 11th, 2001. I trace the survival rates and nonconformity of these crisis-born firms within the changing environment of the postwar years, and within the broader population of Chicago architecture firms, including those founded before and after the period of crisis. I distinguish between two modes of nonconformity: *structural nonconformity*, which describes a firm's decision not to conform to outward-facing expectations of what a legitimate architecture firm ought to look like or call itself, and *strategic nonconformity*, which describes a firm's adoption of less-frequently observed modes of working without necessarily challenging the institutional norms of firm identity (Amburgey and Dacin, 1994; Suchman, 1995; Miller and Chen, 1996; Miller, Breton-Miller, and Lester, 2013).

1.2: RESEARCH CONTEXT

1.2.1: 'No (One) Can Live Alone Professionally"[1]: Disciplinary and Service Logics in Architecture

Architecture practice is a useful arena in which to test an institutional model, as the design and construction of the built environment is almost always contingent on broader economic phenomena to contract and fund work (Blau, 1984). The practice of architecture is in many cases an epiphenomenon of the macro-economy (Tafuri, 1980; Jameson, 1991), yet the discipline of architecture itself has certain internal guiding ideals and principles not necessarily related to the forces that ultimately enable projects to be built and paid for (Cuff, 1991; Hays, 1984; Thornton, Jones, and Kury, 2005). One can thus identify a tension between a *disciplinary logic* of architecture and a *service logic* of architecture (see Table 1.1). The disciplinary logic relies on, and distinguishes itself through, a specific field of knowledge and shared tradition, while the service logic depends fully on economic forces in order to be realized, and is often inseparable from these forces.

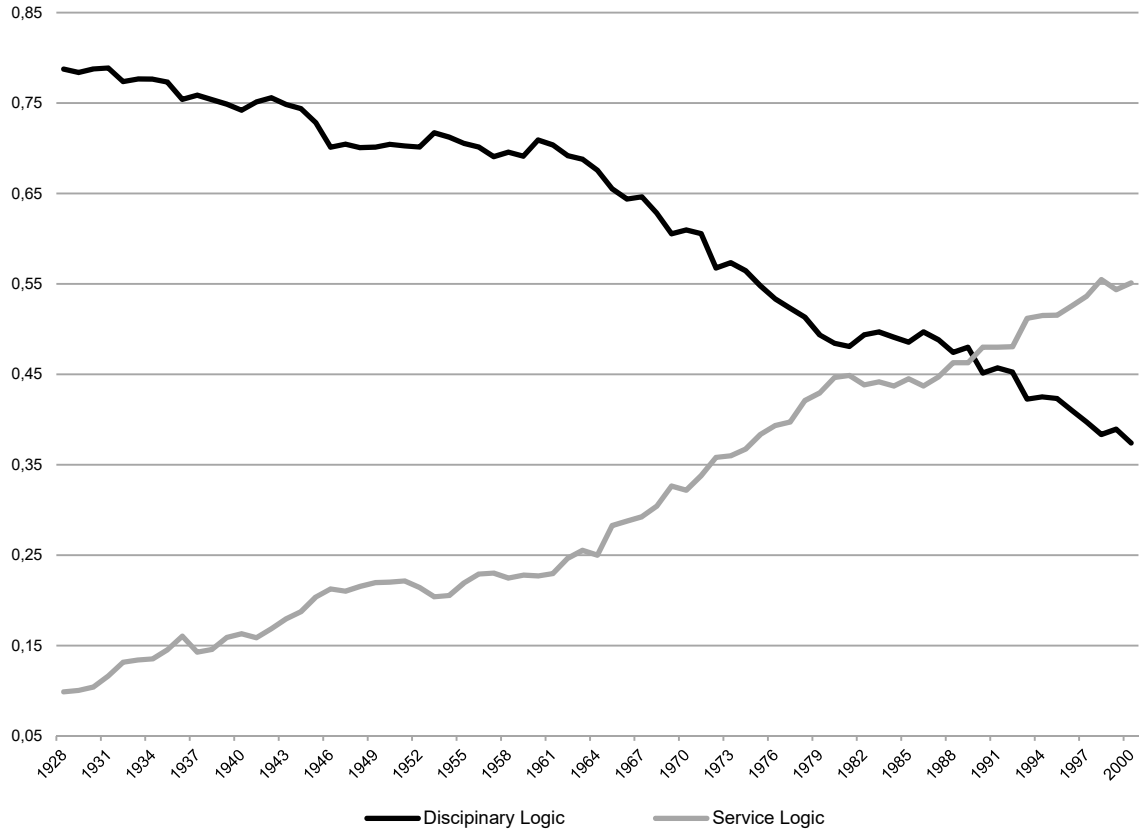
Table 1.1: Firm-Level Traits Associated with Disciplinary and Service Logics in Architecture

	Institutional Logic	
Variable	**Disciplinary**	**Service**
Specialist/Generalist	Specialist	Generalist
Professional Association Membership (AIA)	AIA Member	Not AIA Member
Authorship Mode	Individual or Group	Brand or Organization
Ownership Mode	Sole Proprietorship or Partnership	LLP, LLC, or Corporation
Extradisciplinary Services	Architectural Services Only	Architecture and Extradisciplinary Services

[1] See Illinois Society of Architects, 1929: 19

At the dawn of the period of study, in 1928, the prevailing disciplinary institutional logic of architecture practice lagged behind the practical demands gradually being placed on the profession. While the emergence of large corporations and complex building programs suggested that architecture practice could and should shift toward large, generalist, multi-disciplinary organizations, in which the individual signature of the author was unimportant, this service logic posture would remain institutionally marginalized, and somewhat rare among exemplar firms receiving professional recognition for

Figure 1.1: Percentage of exemplar firms adopting at least 4 disciplinary logic traits and at least 2 service logic traits



their achievements (Cuff, 1991). Instead, the authorial and disciplinary vision of the architect as the autonomous custodian of his or her craft would at the start of the period of study remain dominant among exemplar firms receiving professional recognition through awards and mentions in architectural journals, guidebooks, and architectural landmark designations (see Figure 1.1). For

example, in 1928, 79% of exemplar firms adopted 4 or more of the disciplinary logic traits described in Table 1.1. This figure would descend gradually until approximately 1960, at which time a more pronounced decline in the disciplinary logic can be observed, falling to 48% in 1981, and after several years of stability in the 1980s, falling further, to 39% at the end of the period of study in 2000.

The service logic would over the period of study become more prevalent, but seems to have been adopted gradually and only partially. In fact, the percentage of exemplar firms adopting four or more service logic traits would not exceed one percent until the late 1970s, and even at the end of the period of study, would only reach four percent. But exemplar firms, did, in fact, make a marked shift toward service logic traits, albeit less completely than had been the case with traits affiliated with a disciplinary logic. In 1928, for example, only 10% of exemplar firms employed two or more service logic traits. This percentage would grow consistently over time, reaching 45% in 1980, and ending the period of study at 55%, as compared to the 39% of recognized firms adopting four or more disciplinary logic traits. Over the period of study, we see that the gradual acceptance of a service logic did not entirely supplant the disciplinary logic, although organizational traits linked to the former would over time become more frequently observed among firms receiving professional recognition. Nor were firms likely to be entirely pure manifestations of one logic or another, instead combining elements of each, in varying proportions. The disciplinary/service logic split might therefore be understood as a continuum,

Table 1.2: American Institute of Architects Gold Medal Laureates, 1907-2000
(Highlighting indicates service logic traits and laureates adopting at least 2 service logic traits)

Year	Laureate	Ownership	Authorship	Size	Specialization	Extra Services
1907	SIR ASTON WEBB	Partnership	Individual	M	Specialist	No
1909	CHARLES FOLLEN MCKIM	Partnership	Group	XL	Specialist	No
1911	GEORGE BROWNE POST	Sole Proprietor	Individual	L	Specialist	No
1914	JEAN-LOUIS PASCAL	Sole Proprietor	Individual	S	Specialist	No
1920	EGERTON SWARTWOUT	Partnership	Group	M	Specialist	No
1922	VICTOR LALOUX	Sole Proprietor	Individual	S	Specialist	No
1923	HENRY BACON	Sole Proprietor	Individual	S	Specialist	No
1925	BERTRAM GROSVENOR GOODHUE	Partnership	Group	L	Specialist	No
1925	SIR EDWIN LUTYENS	Sole Proprietor	Individual	M	Specialist	No
1927	HOWARD VAN DOREN SHAW	Sole Proprietor	Individual	M	Specialist	No
1929	MILTON BENNETT MEDARY	Partnership	Group	L	Specialist	No
1933	RAGNAR ÖSTBERG	Sole Proprietor	Individual	S	Specialist	No
1938	PAUL-PHILIPPE CRET	Sole Proprietor	Individual	S	Specialist	No
1944	LOUIS HENRI SULLIVAN	Partnership	Individual	M	Specialist	No
1947	ELIEL SAARINEN	Sole Proprietor	Individual	S	Specialist	No
1948	CHARLES DONAGH MAGINNIS	Sole Proprietor	Individual	M	Specialist	No
1949	FRANK LLOYD WRIGHT	Sole Proprietor	Individual	M	Specialist	No
1950	SIR PATRICK ABERCROMBIE	Sole Proprietor	Individual	S	Specialist	No
1951	BERNARD MAYBECK	Sole Proprietor	Individual	M	Generalist	No
1952	AUGUSTE PERRET	Partnership	Individual	M	Specialist	No
1953	WILLIAM ADAMS DELANO	Partnership	Group	L	Specialist	No
1955	WILLEM DUDOK	Sole Proprietor	Individual	M	Specialist	No
1956	CLARENCE S. STEIN	Partnership	Group	S	Specialist	Yes
1957	LOUIS SKIDMORE	LLP/LLC	Group	XL	Generalist	Yes
1957	RALPH THOMAS WALKER	Partnership	Group	L	Specialist	No
1958	JOHN WELLBORN ROOT	Partnership	Group	M	Specialist	No
1959	WALTER GROPIUS	Corporation	Brand	XL	Generalist	Yes
1960	LUDWIG MIES VAN DER ROHE	Sole Proprietor	Individual	M	Specialist	No
1961	LE CORBUSIER	Sole Proprietor	Individual	M	Specialist	No
1962	EERO SAARINEN	Partnership	Individual	L	Specialist	No
1963	ALVAR AALTO	Sole Proprietor	Individual	S	Generalist	No
1964	BALTHAZAR KORAB	Sole Proprietor	Individual	S		
1964	PIER LUIGI NERVI	Partnership	Individual	M	Specialist	Yes
1966	KENZO TANGE	Partnership	Individual	L	Generalist	Yes
1967	WALLACE HARRISON	Partnership	Group	L	Specialist	No
1968	MARCEL BREUER	Partnership	Individual	L	Generalist	No
1969	WILLIAM WURSTER	Partnership	Group	M	Specialist	No
1970	BUCKMINSTER FULLER	Sole Proprietor	Individual	S	Specialist	No
1971	LOUIS I. KAHN	Sole Proprietor	Individual	M	Specialist	No
1972	PIETRO BELLUSCHI	Sole Proprietor	Individual	M	Generalist	No
1977	RICHARD NEUTRA	Sole Proprietor	Individual	M	Specialist	No
1978	PHILLIP JOHNSON	Partnership	Individual	L	Generalist	No
1979	I.M. PEI	Partnership	Individual	XL	Generalist	No
1981	JOSEP LLUIS SERT	Partnership	Group	L	Specialist	No
1982	ROMALDO GIURGOLA	Partnership	Group	L	Specialist	No
1983	NATHANIEL OWINGS	LLP/LLC	Group	XL	Generalist	Yes
1985	WILLIAM WAYNE CAUDILL	Corporation	Group	XL	Specialist	Yes
1986	ARTHUR ERICKSON	Partnership	Individual	L	Specialist	No
1989	JOSEPH ESHERICK	Partnership	Group	L	Specialist	No
1990	E. FAY JONES	Sole Proprietor	Individual	S	Specialist	No
1991	CHARLES MOORE	Partnership	Group	M	Specialist	No
1992	BENJAMIN THOMPSON	Partnership	Individual	M	Specialist	Yes
1993	KEVIN ROCHE	Partnership	Group	XL	Specialist	Yes
1993	THOMAS JEFFERSON	Sole Proprietor	Individual	S	Specialist	No
1994	NORMAN FOSTER	Partnership	Individual	XL	Generalist	Yes
1995	CESAR PELLI	Partnership	Individual	XL	Generalist	No
1997	RICHARD MEIER	LLP/LLC	Individual	XL	Specialist	No
1999	FRANK GEHRY	Partnership	Individual	XL	Specialist	No
2000	RICARDO LEGORETTA	Sole Proprietor	Individual	M	Generalist	No

moving from a highly disciplinary logic at the start of this study, to a more heavily service logic at the end (Figure 1.1).

The dominance of the disciplinary mode at the start of this study is also evident in the list of laureates of the American Institute of Architects (AIA) Gold Medal (Table 1.2). The AIA is the leading professional organization for architects in the United States, and its highest honor, the Gold Medal, was first awarded in 1907, intended to recognize an architect whose body of work has exerted "lasting influence on the theory and practice of architecture." (AIA, 2017) This prize was not awarded to an architect engaged in extremely large, multi-disciplinary group practice until 1957, when it was given to Louis Skidmore, founding partner of the Chicago-based firm Skidmore, Owings, and Merrill, LLP. It could therefore be argued that the service logic received official sanction from the leading professional association in that year, though the disciplinary logic would remain in place as well: of the 35 Gold Medals awarded between Skidmore's 1957 prize and the end of this study in 2000, only 9 were granted to architects that could be labelled as embodying the service logic, one of which was Skidmore's partner, Nathaniel Owings, who received the honor in 1983.[2] Perhaps in recognition of the growing importance of the service logic, a second honor, the AIA Architecture Firm Award, was created in 1962, suggesting that the work of organizations, as well as that of individual authors, was worthy of commendation, although 8 of the first 15 firms to receive the prize were led by past or future AIA Gold Medal laureates.

[2] Because some of the architects receiving AIA Gold Medals were not based in the United States, and therefore ineligible for AIA membership, I have substituted the AIA membership variable for firm size. I have therefore classified as embodying the service logic those architects at adopting at least 4 of the following traits: firms offering extradisciplinary services, working in firms of over 100 employees, applying individual or group authorship, and employing a corporate or LLC/LLP ownership structure.

The AIA and the Illinois Society of Architects (ISA), a local AIA affiliate until 1939, would use their codes and canons of ethics to set clear limits as to what constituted acceptable professional behavior. In its 1929 *Handbook for Architects and Builders*, the ISA warned that “one traitor in any profession can ruin the reputation of a hundred in that profession who are models of honesty and faithfulness” (ISA, 1929: 19). The notion of what “honesty and faithfulness” meant in architectural practice was constructed and enforced by codes and canons such as these, and they would very gradually reflect a shift from a highly disciplinary logic to a more service oriented logic. The right to advertise one’s services, for example, was a contentious issue, as was the right to engage in extradisciplinary activities such as general contracting. A disciplinary logic might construe advertising as unnecessarily sullying the art and craft of architecture with market logics, and the pursuit of construction services and contracting alongside architecture as a betrayal of the architect’s disciplinary purity, responsibilities to the client, or to the profession as a whole.

When seen through a service logic lens, however, both advertising and extradisciplinary services might be effective tools to find and render useful services to new clients. The AIA’s 1909 *Circular of Advice Relative to Principles of Professional Practice* discouraged architects from engaging in building contracting or from advertising their services, noting that advertising tends to “lower the dignity of the profession, and is to be deplored.” (AIA, 1909) The ISA was more specific in its condemnation of advertising activity, observing in the 1938 edition of its *Canons of Professional Ethics* that “the solicitation of work by circulars or advertisements and the inspiring or inserting of self-laudatory notice in the press are unprofessional.” (ISA, 1938) A prohibition on advertising activity

would remain in place until the 1979 edition of the AIA Code of Ethics and Professional Conduct, which permitted “dignified advertisements and listings,” and also allowed members to offer general contracting and construction management services under certain conditions (AIA, 1979). The 1997 edition of the Code contained no restrictions on extradisciplinary services or on advertising, dignified or otherwise (AIA, 1997).

Scholars have researched how institutional logics such as these operate, how they emerge and change, and how they affect firms operating within and outside them. For example, Jones et al. (2012) studied the establishment of the new category “modern architecture,” finding that as the architectural profession shifted its primary client focus, institutional logics and aesthetic decisions shifted accordingly. Thornton, Jones, and Kury (2005) found that the architectural profession underwent a shift in institutional logics from an “aesthetic” logic to one based on “efficiency”. This change led to a shift in firm organization, moving from the “artist-entrepreneur” approach to an “engineer-manager” understanding of the firm. Thornton’s (2002) study of the publishing industry describes a similar move from an institutional logic based on vocation and strict disciplinary boundaries, to one based on engagement with the market, while Greenwood, Suddaby, and Hinings’ (2002) study of changing institutional logics in the field of accounting suggested that professional associations themselves can play an important role in legitimating—to the members of the profession itself—a shift from strict disciplinarity to a multidisciplinary approach.

The change that I describe, from a disciplinary logic to a service logic in architecture, builds on Thornton, Jones, and Kury’s (2005) description of “aesthetic” and “efficiency” logics in architecture, but differs from that

categorization in that it considers both aesthetics and efficiency to be core disciplinary values in architecture. Indeed, “aesthetics” and “efficiency” would be acceptable English translations of the Latin *“venustas”* and “*utilitas*”, two of the three core values of architecture as described by the ancient Roman architect Vitruvius in his text *De Architectura*, the oldest known treatise on architecture. A disciplinary logic of architecture places the Vitruvian triad of “*firmitas, venustas, utilitas*”[3] at the center of what is important and legitimate in architecture, and it is a dedication to those values, according to the disciplinary logic, that separates architecture from mere building. In the disciplinary logic, then, architecture is defined by ancient, shared, core values, and it is (and should be) distinct from forces and actors that do not share those values and the disciplinary tools used to apply them. This description shares much with Thornton’s (2002) description of the “editorial” logic in publishing, Adorno’s (1970) description of artistic autonomy or Greenberg’s (1940) notion of discipline specificity in painting.

The *disciplinary logic* of architecture, which I argue was dominant until well after the Second World War, can be illustrated through the work and writings of Chicago-based architect Louis H. Sullivan. Active in the late 19th-century and early years of the 20th century, Sullivan combined novel ornamentation with a rejection of historical styles and a willingness to experiment with new engineering advances such as the continuous concrete raft foundation and the skeletal steel frame (Tafuri and Dal Co, 1976; Frampton, 1992; Colquhoun, 2002). For these advances, and for his talent as a polemicist, he is frequently considered a prophet of what would later come to be known as “modern

[3] The first English version of Vitruvius, completed in the 17th century, used the translation “firmness, commodity, and delight,” and this is how most English-speaking architects and scholars refer to the Vitruvian triad. A contemporary English translation, however, might instead read, “solidity, usefulness, and beauty.”

architecture" (Roth, 1979) and a key figure in the emergence of an "engineering" or "commercial" logic in the architectural field (Condit, 1964; Thornton, Jones, and Kury, 2005; Jones et al., 2012). Yet Sullivan himself was critical of any attempt to constrain the individual autonomy of the architect or of the architectural discipline, and as we will see, was deeply suspicious of the turn to a more market-based practice. In his 1924 *Autobiography of an Idea*, Sullivan (writing in the third person) described how his vision of the architect as autonomous actor became clear to him while attending a concert featuring works by Richard Wagner:

> "[B]efore his open mind, he saw arise a Mighty Personality—a great Free Spirit, a Poet, a Master Craftsman, striding in power through a vast domain that was his own, that imagination and will had bodied out of himself…Here indeed had been lifted a great veil, revealing anew, refreshing as dawn, the enormous power of man to build as a mirage, the fabric of his dreams, and with his wand of toil to make them real." (Sullivan, 1924: 208)

Sullivan's vision of the architect as "a great Free Spirit" straining to realize "the fabric of his dreams" might seem to contradict the attitude expressed in his well-known maxim that "form must ever follow function," (Sullivan, 1979) a statement that could be interpreted as a call for functionalism and for an acquiescence to the demands of the market (Thornton, Jones, and Kury, 2005). Yet Sullivan's writings call for "expression" (Sullivan, 1979: 207-208) of a building's essence in built form, reserving for the architect the freedom to decide how best to express that essence, once freed from outdated historical architectural styles. Sullivan's built work, such as the Wainwright Building in St. Louis, The Guarantee Building in Buffalo, or the Auditorium Theatre in Chicago, often features extensive ornamentation and false structural elements on the façade intended to express the essence of "loftiness" in a tall building, rather than merely to make visible

the actual structure. For Sullivan, then, the new demands of the market did not challenge the logic of architecture as disciplinarily pure and the figure of the architect as an autonomous form giver. Rather, these new external demands could be taken advantage of in order to arrive at a true, personal, and pure artistic statement, one based on expressing the inner essence of a building's purpose or of the materials used. These principles, and the disciplinary logic itself, would persist, even after the increased institutional acceptance of the service logic in the 1950's. It can be seen, for example, in the assertion of 1971 AIA Gold Medal recipient Louis I. Kahn that, when building with brick, one must first "ask the brick what it wants to be" (Leupen, Grafe, and Körnig, 1997), or in 1991 Pritzker Prize winner Aldo Rossi's tautological motto "architecture is architecture" (Leatherbarrow, 2004). In their 2001 Pritzker Prize acceptance speech, the architects Jacques Herzog and Pierre de Meuron suggested that the disciplinary logic was indeed alive and well, but had been confined to a high-status minority position within architecture practice: "A narrow elite of author-architects stands opposite an overpowering ninety percent majority of simulation architecture," they argued, "an architecture essentially without an *appellation controlée*…There is hardly anything left in between" (Herzog and de Meuron, 2001).

This architecture "without an *appellation controlée"* describes the service logic. Unlike the disciplinary logic, a service logic considers unimportant the division between what is architecture and what is not, and has as its core values usefulness and relevance to society. An early example of this attitude can be found in the writings of the Swiss architect Hannes Meyer, director of the Bauhaus school of art and design in Dessau, Germany from 1928 to 1930.

Meyer avoided using the word “architecture” altogether, preferring instead the German “*bauen*”, or “building”. Meyer’s reorganization of the Bauhaus school was meant to promote an integration of architecture and everyday life: “Do we wish to take our direction from the needs of the outer world,” he asked his students in 1928, “or do we want to be an island which admittedly leads to a broadening of the personality, but whose positive productivity is questionable?” (Conrads, 1971) His 1928 manifesto, entitled “Building,” rejected the notion of architecture as distinct from the forces it serves:

> All things in this world are a product of the formula: (function times economy). All these things are, therefore, not works of art: all art is composition and, hence, is unsuited to achieve goals. All life is function and is therefore unartistic …Building is nothing but organization: social, technical, economic, psychological organization. (Conrads, 1971: 117-120)

Like Meyer, some American architects would, even at the end of the 19th century, begin to adopt a position of greater engagement with the needs of the day, and to emulate the large organizations emerging in other sectors (Boyle, 1977). In fact, we can observe elements of the service logic of architecture in the work of Louis Sullivan’s Chicago rival, Daniel H. Burnham. According to historical accounts, Burnham himself possessed little architectural talent (Miller, 1996) but he was nonetheless successful in establishing a large organization able to service large clients with complex building requirements. Burnham’s firm, initially a partnership with gifted architect John Root, and after Root’s death, operating under the name D. H. Burnham and Company, was engaged in large-scale architecture and urban planning projects from Chicago and Washington D.C. to Manila. One of the most renowned projects undertaken by Burnham was the master planning of the 1893 World’s Columbian Exhibition in Chicago, a temporary, plaster-clad “White City” built through the collaboration

of architects from around the US, all working in a uniform, white, neo-classical architectural style imposed by Burnham. All, that is, except Sullivan, who refused to comply with Burnham's scheme, and whose work at the fair combined garish brightly-colored ornament with elements abstracted from both South Asian and Romanesque architecture. Sullivan recounted having met Burnham on the streets of Chicago in 1874. Even at that early date, when Burnham was 28 years old and his firm was limited to small residential commissions, his strategy was evident: "I'm not going to stay satisfied with houses," Burnham said, "my idea is to work up a big business, to handle big things, deal with big business men and to build up a big organization, for you can't handle big things unless you have an organization" (Sullivan, 1924: 285-6). Burnham would indeed establish a very large "organization" (rather than an "*atelier*" or "studio," as architects often did and do describe their offices) able to meet the needs of new client types. Sullivan contrasted the "elephantine, tactless, and blurting" Burnham with his more artistically-inclined partner, the "effervescent, witty, small-nosed, alert, debonair" John Root. The contrast between the two men, as described by Sullivan, describes the essence of the *disciplinary* and *service* logics, and the entrenched prejudice against the latter within the architectural profession:

> One day Louis dropped in to see John Root in his office…John was in his private room at work designing an interesting detail of some building. He drew with a rather heavy, rapid stroke, and chatted as he worked. Burnham came in. "John," he said, "you ought to delegate that sort of thing. The only way to handle a big business is to *delegate, delegate, delegate."* John sneered. Dan went out, in something of a huff. Louis saw the friction of ideas between the artist and the merchant; a significant mismating which made him ponder…Root, however...knew at least the value of social prestige. To be the recognized great artist, the center of acclaim and *réclame* was his goal. (Sullivan, 1924: 291)

Sullivan thus drew a stark division between the “artist” and the “merchant,” arguing that the “artist” could aspire to “social prestige,” while implying that the “merchant” never could. Despite Sullivan’s clear disdain for the mercantile approach to architecture, and for Burnham, personally, he nevertheless admitted that Burnham’s mode of organization was an effective parallel to the changing economic environment outside the discipline:

> During this period there was well under way the formation of mergers, combinations and trusts in the industrial world. The only architect in Chicago to catch the significance of the moment was Daniel Burnham, for in its tendency toward bigness, organization, delegation, and intense commercialism, he sensed the reciprocal workings of his own mind.” (Sullivan, 1924: 314)

Burnham’s firm was successful, but the ethic it embodied and the work it produced was in large measure seen to be vulgar, and excessively market-driven (Condit, 1964): while Root, Sullivan, and Sullivan’s *protégé*, Frank Lloyd Wright, were all awarded AIA Gold Medals, Burnham was conspicuously ignored. And while Burnham may have adopted a service logic in the organization of his firm, he nevertheless relied on the talent and reputation of disciplinary architects like Root or Charles Atwood to provide the firm with a veneer of professional respectability and artistry.

Sullivan’s practice went into decline before his death, in part due to his intransigence and abrasive personality, but the model of the architect as “Free Spirit” and form giver would remain a key component in the institutional logic of architecture. Sullivan’s autobiography, for example, was published directly through the American Institute of Architects Press in 1924. Sullivan would, like Wright, form the basis for a key character in Ayn Rand’s 1943 novel *The Fountainhead*, in which the architect protagonist, Howard Roark, dynamites a completed public housing project because his original artistic vision had been

compromised during construction. The film version of Rand's novel, released in 1949, would receive official "approval of the American Institute of Architects" following a special screening organized for the Southern California AIA Chapter (AIA Journal, 1949). By the end of the period of study, however, the adjective "Roarkian" would often be used pejoratively to describe an architect whose ego and will to self-expression had blinded him or her to the social function of architecture and to the service character of the profession (Kelbaugh, 2004).

In the midst of the period of crisis, some architects would adopt the traits and attitudes of the service logic, despite the continued dominance of the disciplinary logic. For example, the firm General Houses, Inc., founded in 1932 by Chicago architect Howard T. Fisher, sold prefabricated steel-frame houses, using a firm name that resonated more with large industrial corporations of the era than with architecture firms, and a corporate ownership structure highly uncommon in 1932.[4] Fisher's firm, innovative in both strategy and structure, failed to find sufficient clients in either the residential or commercial sector, and it ceased operations in 1947. Others, like Louis Skidmore and Nathaniel Owings, founders of Skidmore, Owings and Merrill, would maintain the outward veneer of individual or shared authorship, but would adopt organizational structures and strategies more aligned with a service model: they proposed a very large, multidisciplinary organization, interested less in individual buildings and more in the general problem of shelter in the modern age. Owings later recounted the official formation of the partnership in 1936, sealed with a solemn handshake vow, an understanding that environmental conditions had shifted,

[4] In 1932, for example, more than 99% of the population of Chicago architecture firms included the name of the principals in the firm name, rather than a "brand name" approach like General Houses'. Similarly, only 4.3% of firms employed a corporation ownership structure in 1932, rather than a partnership or sole proprietor model.

and a vision for future architecture practice – an open and evolving partnership in which new partners would be added over time, and older partners forced to retire:

> Skid and I pledged our lives to share and share alike – to offer a multidisciplined service competent to design and build the multiplicity of shelters needed for man's habitat…We felt we knew how to build a modern "Gothic Builders Guild" practice and to apply the synergism of the power this created. We had witnessed the death of a century-long era in the 1929 crash and shared in the birth of a new one in 1930 of undetermined length. We felt we knew some of the pitfalls of the old and we planned a partnership refreshed by new talent to circumvent this. (Owings, 1973: 66)

With his suggestion that that the new firm might emulate the logic of the "Gothic Builders Guild," in which an entire community of artisans and builders would work together to reach a common goal, with no individual authorship, Owings proposed two radical departures from the disciplinary model: a blurring of architecture with the related disciplines, and a dissolution of the individual authorship role of the architect. Owings sensed opportunity in this new posture, but suggested that dangers were apparent as well:

> We were not after jobs as such. We were after leverage to influence social and environmental conditions. To work, we must have volume. An efficient set of master builders can eat up a lot of work. Volume meant power. We would try to change men's minds. But the test would be: could we gain greater volume without supine order-taking *sans* ideas, ideals, innovation? We feared that idealism and order-taking didn't match. (Owings, 1973: 66)

Owings thus suggests his firm's mission is to resolve the tension between the service logic ("supine order-taking") and disciplinary logic ("ideas, ideals, innovation"), admitting that even they, pioneers in embracing new organizational forms and a new role for the architect, feared that these logics were incompatible. Several years later, after the partnership had expanded and had proven its abilities, in part through its work with the United States Army Corps of

Engineers at the secret city of Oak Ridge, Tennessee, where the first atomic bomb was developed, Owings admitted he was saddened by how far he and his firm had strayed from the traditional image of the disciplinary architect:

> We had prospered while our contemporaries had lost out in the service. And what had we become? Certainly not designers in the classic sense. We were entrepreneurs, promoters, expediters, financiers, diplomats; we were men of too many trades and masters of none. Depressed, at wit's end, I heard of a new volcano starting…in old Mexico, and immediately went down to see it. (Owings, 1973: 99)

Owings' firm had thus succeeded, on precisely the grounds laid out by the partners at founding. And while the market may have rewarded the architect for straying from the dominant disciplinary mythologies of the architectural profession, internal pressures seemed to remain. Even for those whose life's work it had been to undermine it, the disciplinary logic remained potent.

1.2.2: Fundamental Environmental Transformation: A Country in Crisis

I treat as a distinct group those firms born between 1929[5] and 1945 because the Great Depression and World War II profoundly changed the architectural profession in the United States (Cohen, 2011). In 1929, total construction expenditures in the United States totaled $13.7 billion. Of this total, roughly one-tenth of one percent was dedicated to military construction, and 46% of total construction spending originated in the public sector. The total construction expenditures would decline steadily over the following years, as the Great Depression would take hold, and construction work planned or funded before the crisis was completed or erased from the books, reaching a low of $4.5 billion in 1933, of which 0.8% was related to military work, with 76% of the total

[5] Although the stock market crash occurred in late October of 1929, I include the entire year in the period of crisis because nearly 20% of the 1928 population of firms exited during the following year.

originating in the public sector. The total spent on construction would rise again gradually, reaching $15.1 billion in 1941, at which time public works accounted for 66% of total construction expenditures. Although the US would not formally join World War II until the end of 1941, it is nevertheless clear that the architectural profession was even then increasingly tied to work for the armed forces: total military-related construction for that year accounted for a full 12% of the total of construction expenditures, an increase of over 9000% in real dollars spent with respect to 1929. By the following year, with the US fully engaged in the conflict, the percentage of military-related construction would rise to a 28.8% share of a total construction expenditure of $17.7 billion, with 84% of total construction expenditures originating in the public sector. In real dollars, nearly 40,000% more was spent on military-related construction in 1942 than in 1929, while total non-military public construction expenditures in real dollars would increase by 33% over the same period. I propose that this radical transformation of what was being asked of architects would trigger a similarly radical transformation in how architects responded to these demands and to the clients making them.

1.2.3: Construct Definitions

Nonconformity

I use the term “nonconformity” to describe the degree to which a new firm does not employ the organizational structures and strategies most prevalent among those exemplar firms receiving awards and mentions in architectural journals, guidebooks, and architectural landmark designations in a given year. Organizations that do not share traits with exemplar firms at a given moment can be said not to satisfy external expectations of what an architecture firm

should do, and what form it should adopt to pursue its goals (Pfeffer and Salancik, 1978; DiMaggio and Powell, 1983). My use of the term nonconformity draws on Thornton (2002) and Bascle (2016), who use the term "conformity" to describe a firm's responsiveness to the demands placed upon it through external social pressures, and on Miller, Breton-Miller, and Lester (2013: 191), who defined conformity as "doing what the majority are doing". This definition also builds on Jennings, Jennings, and Greenwood (2009), who used the term "novelty" to describe the relative distinctiveness of a firm's human-resources practices, and on Tan, Shao, and Li (2013), who studied the competing pressures of competitive "differentiation" and "conformity" within the population of like organizations.[6] Non-conformist traits and practices, therefore, are those relatively infrequently observed in the population of exemplar firms at a given moment, while conformist traits and practices are those more frequently observed among exemplars at the same moment.

Meyer and Rowan (1977) described the potential for a firm to "decouple" its actions from its organizational form in order to maintain legitimacy without compromising efficiency. I suggest that some firms in this study may have engaged in a decoupling in order to innovate in firm strategy while also maintaining institutional legitimacy. I therefore distinguish between *structural nonconformity*, which describes the degree to which a firm's outward-facing traits differ from the institutional norms of how a legitimate architecture should appear, and *strategic nonconformity*, which describes the degree to which a firm's mode of searching for and executing work differs from those of contemporary exemplar firms, without necessarily challenging the institutional

[6] I have opted to use the term "conformity" rather than "novelty" because non-conformist strategies and organizational structures are not necessarily innovative or novel – they may, in fact, not be new at all.

norms of firm identity or structure. As the disciplinary logic was strongest at the start of the period of observation, I would consider a firm founded at that time to be institutionally nonconforming if its outward-facing traits contradicted the dominant ideas of individual authorship and shared norms of professional decorum, while a strategically nonconforming firm would engage in unorthodox ways of working, for example, by offering extradisciplinary services such as engineering, expediting, or construction management.

Environmental Turbulence

The construct “environmental turbulence” describes conditions in which macroeconomic conditions are negative, market conditions are challenging, and social structures are unstable. This definition draws on Swaminathan (1996), who described “adverse” founding conditions, including in this description high population density, competitive intensity, and political instability.

Fundamental Environmental Transformation and Periodization

I distinguish between periods of ordinary environmental turbulence and episodes of “fundamental environmental transformation”. I borrow the term “fundamental environmental transformation” from Haveman (1992: 49), who described contexts of “technological, economic, and regulatory shifts”, in which firms are pressured to “change or die” in the face of the profoundly altered environment. In this study, I posit that the economic, political and social context of the United States was fundamentally altered through the rapid succession of crises and responses over the period 1929-1945. The Great Depression, New Deal, and Second World War would, cumulatively, cause a profound shift in the

environment, one which can be used to create a triple periodization: pre-crisis (before 1929), crisis (1929-1945); and post-crisis (after 1945).

Previous research dealing with regime change or profound environmental transformation has employed a similar technique of periodization. Nuñez-Nickel, Gutiérrez, and Carmona (2006) differentiated between the institutional context under the Franco dictatorship in Spain and the subsequent democratic period. Oertel, Thommes and Walgenbach (2016) distinguished among firms founded in three distinct periods of the German Democratic Republic, in which central economic planning principles were implemented, relaxed, and implemented once again. Thornton's (2002) study of the publishing industry identified two distinct periods of institutional logics in the industry, an "editorial" phase and a "market" phase. In this study, I employ a similar technique of periodization to distinguish among those firms founded before, during, and after the period of crisis (1929-1945) as well as to contrast this period of profound environmental transformation with other, less traumatic, episodes of turbulence in the environment.

1.3: CONFORMITY PRESSURE, INSTITUTIONAL SLACK, AND ANTICIPATORY FIT

1.3.1: Conformity Pressure

Institutional theory suggests that organizations face significant symbolic and social pressures to fit in with their peers and with the institutional environment (Selznick, 1948). One of the most significant contributions of this perspective is to counter arguments of economic rationality by suggesting that social rituals, myths, symbols, and routines can lead organizations to behave in ways that may be independent of (or even contradictory with) achieving its primary goals

(Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Dacin, 1997; Suddaby et al., 2010; Pahnke, Katila, and Eisenhardt, 2015). Institutional theory broadly assumes that these conformity pressures will emanate from dominant actors or societal forces, and not from those actors and forces still marginal in the environment. Greenwood, et al. (2010) argued that the societal forces capable of exerting conformity pressures include non-market actors, such as the family and the state.

The pressure to conform may be especially acute for new firms, which may struggle to establish legitimacy in their early years (Stinchcombe, 1965; Hannan and Freeman, 1984; Zimmerman and Zeitz, 2002; Sine, David, and Mitsuhashi, 2007). In the case of the current study, we might therefore expect the architectural profession itself, through its shared traditions and its professional codes, to reward new firms that adopt the organizational structures and strategies most common among exemplar firms, and to penalize new firms that do not do so. I propose the following baseline hypothesis which tests the presumption that, all things being equal, new firms benefit from conformity at founding, and suffer from nonconformity at founding. Therefore:

> ***Hypothesis 1a (H1a):*** *New firms that adopt nonconformist structures and strategies will have higher hazard rates than those that adopt conformist structures and strategies.*

1.3.2: Institutional Slack and Anticipatory Fit

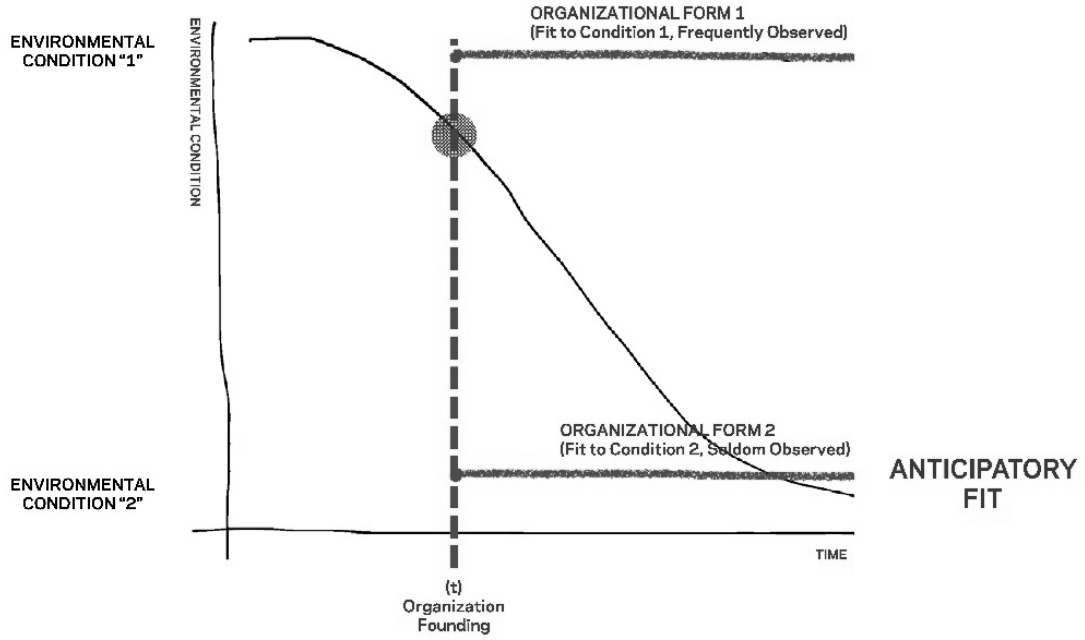
Meyer and Rowan (1977: 343-344) argued that the structural characteristics of organizations "are deeply ingrained in, and reflect, widespread understandings of social reality." These understandings, or "myths," provide a system of rules that are understood to be both legitimate and legitimating. According to Meyer

and Rowan, these rules are not shaped by individuals, but are instead rendered institutional, and therefore must be “taken for granted as legitimate,” whether or not they contribute to the efficient pursuit of a firm’s goals. Barthes (1957) used the term “myth” to describe a mode of speech that makes the contingent and constructed seem to be eternal and inevitable. Mythic speech, according to Barthes, provides “a natural and eternal justification” for the present (1957: 143). When the current order of things is rattled by crisis, however, we might expect the power of myths to be diminished. Routines are disrupted, previously abundant resources become scarce, and that which had seemed unthinkable may suddenly be imminent, or have already happened (Newman, 2000). Crisis conditions may therefore expose the contingent and constructed nature of institutional norms. And if the eternal, inevitable, and taken for granted begins to appear fragile, transitory, and contingent, then managers may be unable to make sense of the shifting context (Weick, 1993; Weick, Sutcliffe, and Obstfeld, 2005). The power of existing institutional logics may therefore slacken, and may no longer dissuade firms from violating the field-level norms about what had previously been understood to be important, good, and right. Just as individuals or organizations may learn from rare events or exogenous shocks (Lampel, Shamsie, and Shapira, 2009) and be led to question notions of institutional identity (Christianson et al., 2009), populations of organizations in a highly consolidated field may collectively be led to question institutional norms in moments of crisis.

With the slackening of institutional norms, firms founded in the midst of fundamental environmental transformation may be imprinted by marginal but ascendant elements of the landscape (Stinchcombe, 1965; Marquis and Tilcsik,

2013; Simsek, Fox and Heavey, 2014). By choosing to pursue clients or client types soon to play an important part in the environment, firms may deviate from

Figure 1.2. Anticipatory Fit: Hypothesized relationship of time, founding condition, and initial organizational form and strategy



the institutional norms of the present, adopting structures and strategies compatible with those new clients and client types (Jones et al., 2012). In doing so, these firms make strategic and structural decisions that could ultimately lead them to conform to future conditions, while they nevertheless be perceived as non-conformists in the present. That is, firms may act as non-conformists at birth, but over time, they may come to be seen as pioneers or innovators in what may eventually emerge as a dominant or more prevalent paradigm of organizational form and strategy (Figure 1.2). It is also possible that new nonconformist firms may come to be seen as short-lived fashion victims, rather than pioneers. Firms have little way of knowing for certain if the clients and client types they choose to pursue at birth will later become dominant forces in the emerging institutional environment, or if their birth environment is, in fact, in

the midst of fundamental transformation, or if it is merely suffering a bout of routine turbulence. Both managerial insight and good fortune are therefore involved. Firms may overcommit to what could ultimately amount to nothing more than an environmental head- fake (Figure 1.2), and not a fundamental transformation.

Alternately, a firm may indeed be born into a moment of profound transformation, but the innovations a firm adopts in response may be inappropriate or irrelevant to the new environment. But in those cases in which the environment *is* in the midst of fundamental transformation and in which firms *do* choose to adopt characteristics relevant to the emerging institutional context, nonconformity in the present may, in fact, be a symptom of conformity with the emerging dominant. These firms may then be imprinted by the world to come, and not by the world into which they were born. Therefore:

> ***Hypothesis 1b (H1b):*** *During the period of crisis (1929-1945), new firms that adopt nonconformist structures and strategies will have lower hazard rates than those that adopt conformist structures and strategies.*

1.3.3: Strategic Nonconformity and Crisis Conditions

Hypotheses 1a and 1b treat firm structure and strategy as coincident. This may not always be the case, as firms can attempt to decouple their outward-facing formal attributes from their internal operating methods (Meyer and Rowan, 1977; Oliver, 1991; Westphal and Zajac, 2010). That is, firms may detach what they *actually* do from what they *appear* to be doing (Fiss and Zajac, 2006). Firms that pursue a strategy of decoupling run the risk of being caught in their deception, but they nevertheless choose to do so because they hope to benefit from nonconformist strategies but are unwilling or unable to assume the risk of

appearing not to conform to field-level norms of legitimate behavior (Boxenbaum and Jonsson, 2008). Deephouse (1999) argued that firm strategy itself is embedded in the institutional environment, suggesting that within a given field, managers “develop a cognitive consensus about what strategies are proper and reasonable, in other words, legitimate” (1999: 149). Deephouse found that a “strategic balance” approach allowed banks to navigate between two opposing poles: competitive logics impel firms toward greater differentiation in strategy, while institutional logics tend to lead firms toward strategic similarity. If firm structure and strategy are both embedded in institutional logics, then there may in fact be risk associated with both sides of the decoupling proposition. That is, it may be of little use to try look like a conformist while acting otherwise, because the acting itself can constitute a significant breach of institutional norms.

In a professional field such as architecture, with its shared traditions, ethics codes, and social logics (Greenwood, Suddaby, and Hinings, 2002), the middle-ground strategic position that Deephouse describes between conformity and differentiation may be untenable; arguably, decisions about how, where, and with whom to do business are embedded in the field’s institutional logic. This logic may generate a field-level taboo against certain market strategies, for example, the offering of extradisciplinary services among architecture firms, such as structural and mechanical engineering or general contracting services. A nonconformist strategy might therefore provide competitive advantage for a firm willing to adopt a posture that others may find illegitimate, but it may also cause a firm to appear to be illegitimate among its peers, regulators, and potential clients. When conditions are stable, therefore, I suggest that dominant

institutional logics will penalize firms that deviate from norms of firm strategy (Deephouse, 1999). But in moments of environmental crisis and "institutional slack", firms are unlikely to pay a penalty for strategic nonconformity as the assumptions about decorous strategic behavior may be undermined or erased by the shifting landscape. Under those circumstances, firms may benefit from strategic differentiation, without incurring excessive risk due to perceived illegitimacy at founding (Dobrev and Gotsopoulos, 2010). Therefore:

> ***Hypothesis 2a (H2a):*** *New firms that adopt a strategic nonconformist posture will have higher hazard rates than those that adopt a strategic conformist posture.*
>
> ***Hypothesis 2b (H2b):*** *During the period of crisis (1929-1945), new firms that adopt a strategic nonconformist posture will have lower hazard rates than those that adopt a strategic conformist posture.*

1.3.4: Structural Nonconformity and Crisis Conditions

The same dynamic that penalizes firms for adopting strategies that do not conform to the dominant institutional logic may also apply to firms adopting nonconformist structures (Meyer and Rowan, 1977). That is, firms whose outward appearance challenges expectations of what a legitimate architecture firm should look like are likely to be penalized for adopting that posture. The concept of decoupling (Boxenbaum and Jonsson, 2008) generally assumes that in certain circumstances firms stand to gain from strategic innovation, but face pressure to hide that innovation behind a veneer of structural conformity. Less consideration, however, has been given to the inverse possibility: the idea that firms might adopt nonconformist organizational structures while pursuing conformist strategies. Such firms might outwardly appear to be nonconformists, given their unconventional structure, but could nevertheless employ

conventional strategies. Weber, Heinze and DeSoucey's (2008) study of the social movement for grass-fed beef, for example, suggested that in certain contexts, organizations might wish to appear as nonconformists in order to bolster their counter-cultural status. But in a professional field such as architecture, with its large and active professional organization and strong sense of professional history and decorum, little advantage is likely to be found in such an approach, as it would merely sap legitimacy, without necessarily contributing to the firm's prestige or efficiency. To the degree that innovation is associated with a position of high social prestige within architecture (Cuff, 1991), it is generally in the architectural work itself, rather than the structural organization of the firm (Blau, 1984). We might therefore expect to observe that structural nonconformity is hazardous both in stability and in moments of fundamental environmental transformation; while there may be competitive advantage associated with strategic differentiation, little such advantage is likely to be associated with structural differentiation. Even in a climate of "institutional slack," when conformity pressures are reduced or removed, and firms might, in theory, have greater freedom to innovate in their customer and peer-facing structures, we would expect to see firms penalized for structural nonconformity because the strong disciplinary logic in architecture might continue to exert some residual conformity pressure, with little positive trade-off possible. Therefore:

> ***Hypothesis 3a (H3a):*** *New firms that adopt a structural nonconformist approach will have higher hazard rates than those that adopt a structural conformist approach.*
>
> ***Hypothesis 3b (H3b):*** *During the period of crisis (1929-1945), new firms that adopt a structural nonconformist approach will continue to*

have higher hazard rates than those that adopt a structural conformist approach.

1.3.5: Imprinting Nonconformity

The above hypotheses suggest that very turbulent conditions at founding may allow firms to profit from certain types of nonconformity, and that firms may, over time, continue to benefit from their initial nonconformist position. An extensive body of work has examined the immediate and long-term effects that founding conditions may have on an organization´s form and strategy. Scholars have examined the identity and composition of firms' initial managerial groups (Eisenhardt and Schoonhoven, 1990; Johnson, 2007; Fauchart and Gruber, 2011; Almandoz, 2014) initial funding partners (Pahnke, Katila, and Eisenhardt, 2015) initial strategy (Boeker, 1989; Henderson, 1999), sociopolitical climate at founding (Dacin, 1997), resource availability at founding (Katila and Shane, 2005), and institutional environment at founding (Marquis and Huang, 2010). This "imprinting" (Stinchcombe, 1965; Marquis and Tilcsik, 2013; Simsek, Fox, and Heavey, 2014) of founding conditions on firms has in large part been found to be significant and lasting. The notion of anticipatory fit, however, suggests that firms may indeed be shaped by their birth environments, but that what may be imprinted upon new firms born into moments of profound environmental turbulence is less a specific facet of the birth environment than an increased inclination to adopt nonconformist positions, and an increased immunity to nonconformity over time.

Amburgey, Kelly, and Barnett (1993) tested a model of "organizational momentum" (see also Kelly and Amburgey, 1991), finding that firms that firms that had successfully changed their operating routines were more likely than

other firms to do so successfully in the future. I would similarly suggest that firms founded as nonconformists during crisis conditions may have received a childhood vaccination against the otherwise pernicious effects of nonconformity, and will be able to survive nonconformity in the future, as well. Firms that had not been subject to the initial nonconformity in crisis (either because they had been born as conformists or because their initial nonconformity had occurred during stable times) are unlikely to benefit from this increased immunity and may as a result be exposed to the risks of nonconformity as I have outlined them above. Therefore:

> ***Hypothesis 4a (H4a):*** *Firms that over time become more nonconformist than they had been at founding will have increased hazard rates.*
>
> ***Hypothesis 4b (H4b):*** *Among firms founded during the period of crisis (1929-1945), those that over time become more nonconformist than they had been at founding will have reduced failure rates.*

1.4: METHODS

This study takes as its organizational population all Chicago-area architecture firms engaged in practice from 1928 to 2000, a total of 3,882 firms and 41,099 observations. I focus on architecture practice because the profession is riven by an internal tension between disciplinary and service logics. That is, architecture is a profession and discipline with its own traditions, tools, language, and ethical codes (Blau, 1984; Cuff, 1991; Jones, et al., 2012), and it is simultaneously a tool for development, frequently inseparable from the economic forces that fund the design and construction of buildings (Tafuri, 1980; Jameson, 1991). I argue that at the start of the period of study, the disciplinary logic was dominant, and that the service logic would, over time, come to be increasingly legitimate

among exemplar firms. The position of architecture practice at the intersection of these competing, and in part, contradictory logics, makes the setting a useful one in order to examine the effects of initial nonconformity on firm survival.

As I am also interested in how initial nonconformity interacts with birth during a period of fundamental environmental transformation, I conduct a longitudinal study beginning in 1928, just before the onset of the Great Depression. The period of study ends in 2000, during a moment of relative economic stability and peace, which would be disrupted by the attacks of September 11th, 2001. Within this study, I consider the period 1929-1945 to constitute a period of extreme flux, as it captures a profound economic crisis, followed by the birth of both the contemporary welfare state (though the policies and agencies of President Roosevelt's New Deal) and the military-industrial complex (through the mobilization for entry into the Second World War). The period was also a time of major social disruption, due to mass unemployment, labor unrest, and comprehensive wartime mobilization. In sum, by the end of 1945 the United States in was profoundly changed from only 17 years earlier. Including this period of fundamental environmental transformation within a longitudinal study allows me to compare the long-term survival of new nonconformist firms born in crisis conditions, with those born in subsequent, less acute crises, and periods of relative stability.

I use the population of firms in the metropolitan Chicago area not only because of the pivotal role that city would play in the development of modern architecture, especially as related to work in the commercial sector (Condit, 1964; Rowe, 1977), but also because it provides a large and heterogeneous

population of architecture firms (3,882 firms in total), providing a robust source of data for this study.

1.4.1: Data

As no single, comprehensive source of data on architecture firms exists over this period, I assembled the sample through a range of archival sources, including Chicago commercial telephone directories for each year of the study; membership applications, dues bookkeeping logs and Architects' Record Questionnaires from the Chicago chapter of the American Institute of Architects (AIA); the *American Architects Directory*, published by the AIA in 1956, 1962, and 1970; the *ArchiPages* directory, published annually by the Chicago AIA chapter from 1990 to the present; the 1956 reference book *Biographical Dictionary of American Architects (Deceased);* the obituary archives of the *Chicago Tribune* and *New York Times;* Columbia University's *Avery Index to Architectural Periodicals*; the *AIA Guide to Chicago Architecture*; the City of Chicago Historic Resources Survey; and military records from the US Department of Defense and Department of Veterans' Affairs. I gathered data on the sociopolitical and economic climate over the period of study from the Economic Research Division of the Federal Reserve Bank of St. Louis; the *Statistical Abstract of the United States*, published annually by the US Department of Commerce, and the book *Historical Statistics of the United States: Colonial Times to 1970*, published by the US Department of Commerce in 1976.

The current study also addresses the influence that exemplar firms can have on the broader population. For that reason, I classified firms as having been recognized as significant by the profession as a whole, or as having

received no such recognition. I based this classification on four sources: the list of those architects and firms having received either the AIA Gold Medal award or the AIA Architecture Firm award; the *AIA Guide to Chicago Architecture*; the Avery Index to Architectural Periodicals; and the City of Chicago Historic Resources Survey.

1.4.2: Data Collection

The length and breadth of the study made it necessary to rely on a mix of sources and extensive triangulation in order to ensure coverage of the entire period of study for the entire population of firms. The annual listing of architects in the Chicago commercial telephone directory provided a yearly baseline snapshot of architecture firms commercially engaged in practice. As it was at times common practice for partners in an architecture firm to appear in the telephone directory both individually and as part of their partnerships, I cross-checked the list of telephone numbers, street addresses and partner names, and used other archival sources to detect and eliminate redundant entries that referred to individual firm members where a collective firm entry also appeared at the same address and phone number.

As it is possible that an existing firm may not have appeared in a given year's telephone directory due to error, oversight, or other circumstances, I considered a firm to have ceased operations when it disappeared from the telephone directories, never to reappear, or when it did not appear for a period longer than two consecutive years. I considered as continuously operating those firms that were omitted from at most two consecutive directories, but that reappeared in the second or third year with the same firm name as before. In all

other cases, I considered the reappearing firms to be new entities, and the year of reappearance a new birth.

I triangulated the telephone directory information with other sources, both to confirm the survival information derived from these annual publications, and to complement this data with more detailed firm-level information. For several of the below sources, data was unavailable for the entire period of study, and in those cases I relied on an extensive survey of other available information in order to account for all 72 years of the period of study. Many of these resources were obtained from the historical archives of the local and national chapters of the American Institute of Architects (AIA), the leading professional organization in the field. From the historical archives of the Chicago AIA chapter, I collected dues-payment bookkeeping logs, which provided a clear measure of firm survival, as well as all new applications for membership received from 1944 to 1977. Although in most cases, AIA membership applied to individuals, and not to firms, these membership applications nevertheless provided useful information about the professional activities and firm affiliations of the individual members seeking admission to the Institute.

Beginning in 1946, local chapters of the AIA issued a series of questionnaires to all registered architects in order to help them secure contracts with the federal government. These surveys, known as Architects´ Record Questionnaires (ARQs), were conducted in 1946, 1947, and 1953, and they contain extensive information about partner identities, ownership structure, military service, education, past employment history, total firm size, and the value of built work completed and in progress. I collected all available Chicago-area ARQs from the national archives of the AIA. I gathered further firm-level

data from the *American Architects Directory*, published by the AIA in 1956, 1962, and 1970; and the *ArchiPages* directories, published annually by the Chicago AIA chapter from 1990 to the present. These directories provide periodic checkpoints to measure survival, and extensive information about each reporting firm. The *American Architects Directory* provided an especially comprehensive portrait of the profession. The directory was assembled by including all AIA members, with detailed biographical information included for those responding to a questionnaire sent to AIA members. This information included type, size, and location of projects undertaken, firm ownership structure, and individual biographical information about architects' military service and education. Since AIA membership is not required of all practicing architects, the editors also included non-AIA architects "of established practice" to provide "as complete as possible" (Koyl, 1956) a record of active architects in the United States. The *ArchiPages* directories provided a complete list of Chicago area AIA member firms from 1990 to the end of the study, with a detailed profile of each, including firm size, ownership structure, project types, and examples of completed work. Another useful source for biographic information was the book *Biographical Dictionary of American Architects (Deceased)*, published in 1956, and the obituary archives of the *Chicago Tribune* and *New York Times* newspapers, which I searched for every architect and firm included in this study. For firms still in existence, or those having existed since the advent of the internet, I was in some cases able to find information on firm size, structure, clients, and projects completed from firm websites currently available online, or those searchable through the Internet Archive.

As part of this study deals with Chicago architects' relationship with the US armed forces, I used the *American Architects' Directories*, *ArchiPages* directories, AIA Membership Applications and ARQs, as well as publically available records from the US Department of Defense, to determine which firms had engaged in military work. I used these sources, along with records from the US Department of Veterans' Affairs, to determine which firms' principals had served in the US military. These military records were accessed through the Fold3 military records database.

I used four sources to create a classification of exemplar firms. First, architects having received either the AIA Gold Medal award or the AIA Architecture Firm award were considered to have received professional recognition. Second, the *AIA Guide to Chicago Architecture*, published in 2000, and prepared by the Chicago AIA chapter in collaboration with the Chicago Architecture *Foundation* and the Landmarks Preservation Council of Illinois, contains a listing of approximately 6500 significant buildings in the Chicago area, representing the work of approximately 1500 architects in practice from the 1850s to 2000. I used the content of this guide to distinguish between those firms with work featured in the guidebook, and those not included. I also searched Columbia University's Avery Index to Architectural Periodicals, a comprehensive online index of architecture journal articles from 1891 to the present, and I distinguished between those architects and firms not included in the index, and those appearing, either as author or subject of a journal article. Another useful source to measure firm recognition was the City of Chicago Historic Resources Survey, an online database prepared by the Chicago municipal government's Commission on Chicago Landmarks. This searchable

database lists over 17,000 architecturally significant buildings and their authors. I distinguished between firms with work represented in the Historic Resources Survey, and those not included. I considered a firm included in any one of these four sources to have achieved professional recognition.

This study also deals with environmental conditions over time, and I collected data about the sociopolitical and economic climate from several sources. These sources included Archival Federal Reserve Economic Data from the Economic Research Division of the Federal Reserve Bank of St. Louis; the *Historical Statistical Abstract of the United States*, published annually by the US Department of Commerce, and the volume *Historical Statistics of the United States: Colonial Times to 1970*, published by the US Department of Commerce in 1976.

1.4.3: Variables

1.4.3.1: *Dependent Variable*

Firm failure, which I defined as the cessation of business activity by an organization, is the dependent variable of this study. I will, for the purposes of this study, consider a firm to have failed in cases of exit, as well as merger with another, larger, firm that comes to absorb the smaller partner. I will also consider failure to include the disbanding of a firm by its partners to continue practice individually or in new groups (Freeman, Carroll, and Hannan, 1983). In each year of a firm's existence, I assigned a dummy variable of 1 if the firm failed during the year of observation, and 0 to those that survived the observation period.

1.4.3.2: *Independent Variables*

The independent variables of this study are firm nonconformity with the strategies and structures of the population of exemplar firms at the time of observation (Thornton, 2002), and the socioeconomic context at the time of observation. I considered firms to be exemplars if they received professional recognition if they received either the AIA Gold Medal award or the AIA Architecture Firm award; or if their work appeared in either the *AIA Guide to Chicago Architecture*; the Avery Index to Architectural Periodicals, or the City of Chicago Historic Resources Survey. I further distinguished between modes of *structural nonconformity*, which describes the degree to which a firm's "visible structures and procedures" do not resemble those of exemplar firms (Elsbach and Sutton, 1992: 709), and *strategic nonconformity* (Miller et al., 2013), which measures a firm's difference from the most prevalent strategic approaches of exemplars. I operationalized these variables by creating composite indices for each. In the following section, I detail these indices, and the individual variables that compose them.

In order to measure structural and strategic nonconformity, I first created a composite *"conformity index"* to measure firm conformity with the organizational structures and strategies of exemplars. In order to do so, I first used seven salient firm characteristics to measure the degree of overall conformity in the population of exemplar firms in a given year. A conformity index value of 1 would describe perfect conformity in the population (For example, 100 firms of identical structure and strategy), while a value of 0 would describe perfect non-conformity in the population (For example, 100 firms each with a unique structure and strategy). As firms are highly unlikely to position

themselves as either pure conformists or pure nonconformists, and because we may observe a gradual shift in what the dominant institutional logic and firm-level traits of exemplars, this is a continuous variable. The elements of the conformity index are as follows:

AIA Membership: Membership in the leading architectural professional association provides a measure of a firm's conformity with exemplars in the field (Greenwood et al., 2002). Firms with at least one principal belonging to the American Institute of Architects were assigned a value of 1. Those not belonging to the organization were assigned a value of 0.

Authorship Mode: Following Glynn and Abzug (2002), I considered a firm's name to be an important element of its identity and useful measure of conformity with institutional norms. Firms named after the individual principal (for example, "Jane Doe, Architect") were assigned a value of 1. Firms named after several individual partners (for example, "Doe/Smith Architects") were assigned a value of 2. Firms using a brand name (for example, "Design Solutions, Inc.") were assigned a value of 3.

Extradisciplinary Services: Firms may elect to diversify into areas of professional service beyond their core discipline. This decision carries with it the promise of additional potential income from these new service sectors, as well as the danger of reduced legitimacy in the eyes of those practicing within the core discipline (Greenwood et al., 2002; Greenwood, Li, Prakash, and Deephouse, 2005). Firms offering architectural services and at least one other professional service, such as structural or mechanical engineering, were assigned a value of 1. Firms offering only architectural services were assigned the value of 0.

Geographic Breadth: Firms for which I found evidence of projects undertaken outside the metropolitan Chicago area were assigned the value of 1. Those for which no such evidence was available were assigned the value of 0 (Castrogiovanni, Bennett, and Combs, 1995; Julian and Castrogiovanni, 1995). I defined the metropolitan Chicago area according to the definition of the "Chicago Metropolitan Statistical Area" as designated by the US Census Bureau in 1950 (Marquis, 2003; Pahnke et al., 2015; Salomon & Wu, 2012).

HQ Location: Over the period of study, the highest concentration of exemplar firms' headquarters can be found in the Chicago Central Business District. New firms that elect to establish their headquarters in this area may benefit from increased perceived legitimacy, while also facilitating improved linkages to other firms and stakeholders (Hutton and Ley, 1987). Firms that located their headquarters in the Chicago Central Business District, as currently defined by the City of Chicago were assigned the value of 1. Those with headquarters elsewhere in the City were assigned a value of 2. Those with their headquarters elsewhere in the Chicago area were assigned the value of 3.

Ownership Mode: The ownership structure of a professional service firm may affect both its perceived legitimacy as trustee of the discipline in which it is engaged (Von Nordenflycht, 2010) and its organizational performance (Greenwood, Deephouse, and Li, 2006). Miller et al. (2013) argued that firm ownership and governance structures can influence the degree to which a firm elects to pursue strategic conformity. Firms organized as a sole proprietorship were assigned a value of 1; those organized as a partnership were assigned the value of 2; those organized as a limited liability partnership (LLP) or limited

liability company (LLC) were assigned the value of 3; and corporations were assigned the value of 4.

Specialist/Generalist: A firm's decision to adopt a specialist or generalist approach may be central to its prospects for survival (Hannan and Freeman, 1977; Romanelli, 1989; Carroll and Swaminathan, 2000), and may also affect strategic decision made by firms (David and Strang, 2006). I developed a measure of specialization by using the *American Architects Directory* publications of 1956, 1962 and 1970, in which the AIA defined a series of 14 "building types". I condensed these 14 building types into 5 broad categories: military, institutional/public (non-military); corporate/industrial, commercial, and residential. I labelled as "specialists" those firms undertaking work in 2 or fewer of these categories, or with 50 percent or more of their workload deriving from only category. These "specialist" firms were assigned a value of 1. Firms working in 3 or more of these categories, with no single category accounting for 50% or more of its total workload, were labelled "generalists" and were assigned a value of 0.

Combined Conformity Index: For each firm included in the study, and for each of the above variables, I calculated the percentage of firms in the population in the year of observation with the same status. For example, in the year 1937, 66% of the population adopted a sole proprietorship mode of ownership. A sole proprietorship firm in 1936 would therefore be assigned an *ownership conformity value* of .66. The same technique was applied for each of the six variables outlined above. A firm's *combined conformity index* value in a given year of observation was then calculated as a mean of the six individual conformity variable percentages in that year.

Structural Conformity Index: Like the combined conformity index, this measure is calculated as a mean of individual conformity variable values in a given year. Here, I limit these variables to those that measure aspects of a firm's formal organization and outward appearance: *AIA Membership*, *Authorship Mode*, *HQ Location*, and *Ownership Mod*e.

Strategic Conformity Index: This measure is calculated for each year as a mean of the following individual conformity variables: *Extradisciplinary Services, Geographic Breadth, Specialist/Generalist*.

Extreme Non-Conformity at Birth: Firms whose combined conformity index score at birth placed them in the top tercile for non-conformity in the year of initial observation were assigned the value of 1. All others were assigned a value of 0.

Extreme Conformity at Birth: Firms whose combined conformity index score at birth placed them in the top tercile for conformity in the year of initial observation were assigned the value of 1. All others were assigned a value of 0.

1.4.3.3 *Control Variables*

I used several variables to control for environmental and firm-level factors. A second composite index described the environmental conditions in the year of observation. This technique was useful because it allowed me to contrast the period of fundamental environmental transformation (1929-1945) with subsequent periods of relatively high environmental turbulence, and with periods of relative stability. I used four variables to create the *combined climate index* for each year of this study: the change in US *construction spending* with respect to the previous year; the change in US *gross domestic product* with respect to the previous year the annual seasonally adjusted civilian

unemployment rate for each year, and the percentage of total annual US labor hours lost due to strikes and other work stoppages, as a measure of *social stability*.

Combined Climate Index: For each year in this study, I used the mean of the four individual climate variables described above to determine a composite variable describing the general climate. The possible values of this variable range from 1 (extremely positive environment) to 10 (extremely negative environment).

While the combined climate index variable provides a useful description of the economic and social climate for each year of the study, I have hypothesized that the rapid-fire sequence of crises and responses over the period from 1929 to 1945 constituted a period of fundamental environmental transformation unique in this study. I therefore created the variable *Born 1929-45* to record those firms whose first appearance in this study occurred between 1929 and 1945. Firms born in this period were assigned a value of 1, while all others were assigned a value of 0. In order to test my assumption that the period 1929-1945 was unlike other periods of environmental turbulence, I created the variable *Born in Lowest Decile of Climate*, to record those firms born into environments with a combined climate index score in the lowest decile.

I described competition in the environment through two different measures of population density (Carroll and Hannan, 1989; Haveman, 1993; Swaminathan, 1996; Nunez-Nickel and Moyano Fuentes, 2004; Bradley, Aldrich, Shepherd, and Wiklund, 2011). I used the variable *population* to record the number of architecture firms present in the population during each

observation period. Since the population of the metropolitan Chicago area grew from approximately 4.6 million to approximately 9.1 million over the course of the study, growth in the population of firms may not necessarily translate directly into increased competition. For that reason, I also used the variable *population density_inhabitant* to record the number of architecture firms per inhabitant of the region. Carroll and Hannan's (1989) theory of density delay (Hannan and Carroll, 1992; Haveman, 1993) suggests that population density at founding may affect firm survival, and I have therefore used the variable *population density at birth* to record the *population density_inhabitant* variable in the year of each firm's first appearance in this study.

I used the variable *recognition* as an indicator of the perceived quality, relevance or notoriety of a given firm. Firms receiving a mention in at least one of the archival resources described in the previous section were considered to have received professional recognition as exemplars, and were assigned a value of 1, and all others were assigned a value of 0. One could perhaps consider this variable as a way to control for being good at one's job. To some degree this may be so, as landmarks registries and professional journals are ostensibly meant to record architectural work of high quality (Von Nordenflycht, 2007). This information, however, may also be useful when we consider the ability of individual firms to contribute to institutional logics, and to influence others within the population. Firms receiving recognition and diffusion in professional journals would presumably be in a position to influence other firms in the population, while this influence may be less pronounced or absent entirely in firms without recognition.

The variable *firm size* records the number of architects employed by a given firm in the year of observation (Haveman, 1992; Deephouse, 1999; Pahnke et al., 2015). I used the criteria used in the AIA 2011 Compensation Report and 2012 Survey Report on Firm Characteristics to develop a four-tier classification system of firm size. Firms with less than ten architect employees were considered to be small, and were assigned a value of 1. Firms with 10 to 50 architects were considered to be mid-sized, and were assigned a value of 10, to coincide with the lower limit of that category. Firms with 51 to 100 architects were considered to be large, and were assigned a value of 51, again to correspond with the lower category limit. Firms with more than 100 architects were considered to be extra-large, and were assigned a value of 101, again, at the lower limit of that size category. Quantitative data on number of employees was, however, only available for a limited number of firms in this study. In order to record the size variable for a greater proportion of the firms included in this study, I used size and complexity of projects undertaken as a proxy for firm size, where no employee count was available. Small firms were those engaged only in residential or small institutional work. Medium firms were those engaged in the above project types, plus large institutional. Large firms were those engaged in the above project types, plus corporate and industrial projects. Extra-large firms were those engaged in the above project types plus military, infrastructural or territorial projects. In some cases, a firm's street address corresponded to a residential building, or to a single-family house. I consulted with an architectural historian to verify from contemporary photographs of these buildings that these addresses were indeed residential in nature, and that they dated from the year of the observation. In these cases, firms occupying a

residential property were categorized as “small” as these home-office firms were unlikely to have more than 10 employees.

The variable *age* records the number of years since a firm’s initial observation in the study (Freeman, Carroll, and Hannan, 1983; Geroski, Mata, and Portugal, 2009). Firms already present in the study in 1928 were considered to be left-censored.

I used the variable *military service* to distinguish between those firms for which a principal served in the US armed forces and those without a record of military service. I assigned the value of 1 to those firms in which a principal served in the US military, and 0 to all others.

1.5 RESULTS

1.5.1: Trends over the Period of Study

In 1928, the population of firms was 597 (see Figure 1.3). In observations made in summer of 1929, shortly before the stock market crash of October 1929, the population had already dropped to 479. By 1934, this figure would fall to 279, a decrease of 46.7% from its pre-crash peak. Beginning in 1935, the number of firms would grow quite rapidly, reaching 375 in 1937, before declining once again beginning in 1938, and falling quite abruptly during the Second World War. The population would increase quite rapidly in the years immediately following the war, before leveling off in 1948. If we compare the number of firms with the per capita count of firms we see that while the population of firms would grow quite consistently in the post-war years, the per capita figure would plateau in 1948, and would remain approximately at the level of .08 firms per 10,000 inhabitants, until the early 1980s, when the per capita population would

grow consistently until approximately 1992, at which time both the population count and per capita population would drop rapidly, with the per capita population returning to the .08/10,000 inhabitant datum.

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Figure 1.3: Population of Firms in Chicago MSA /Population per 1000 Inhabitants in Chicago MSA

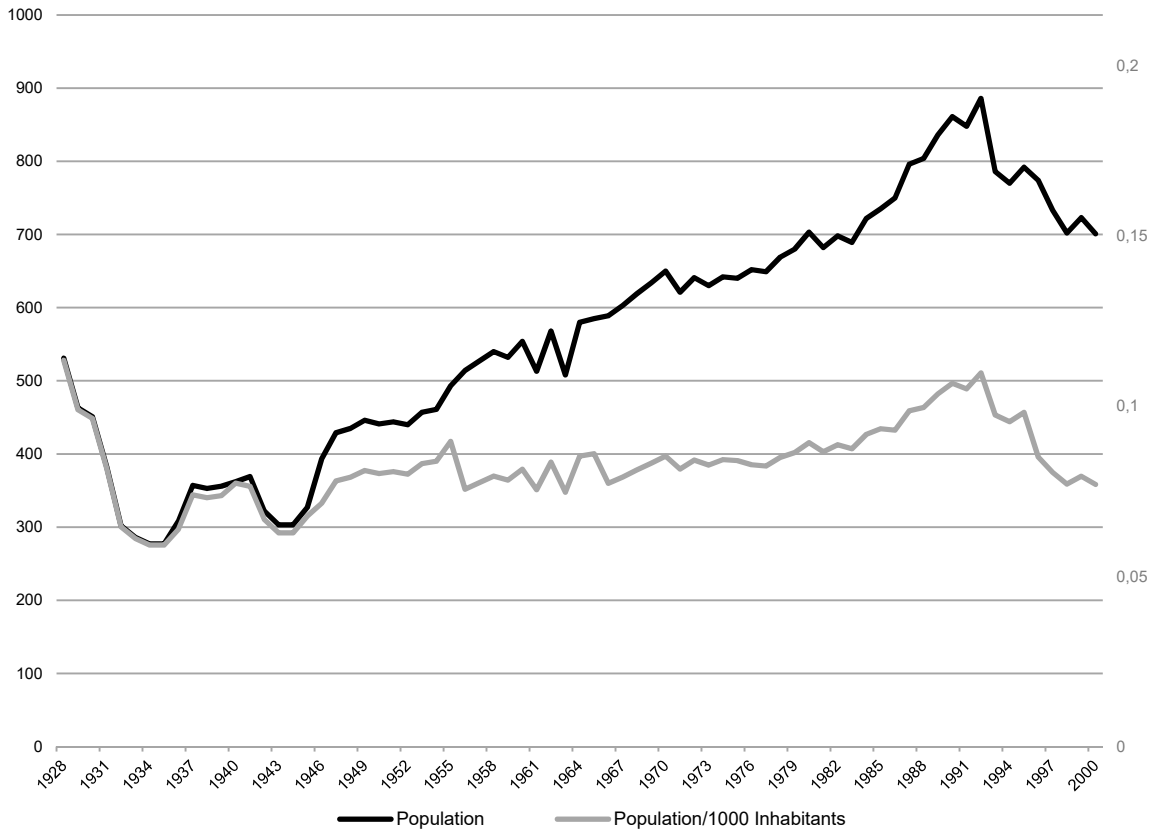
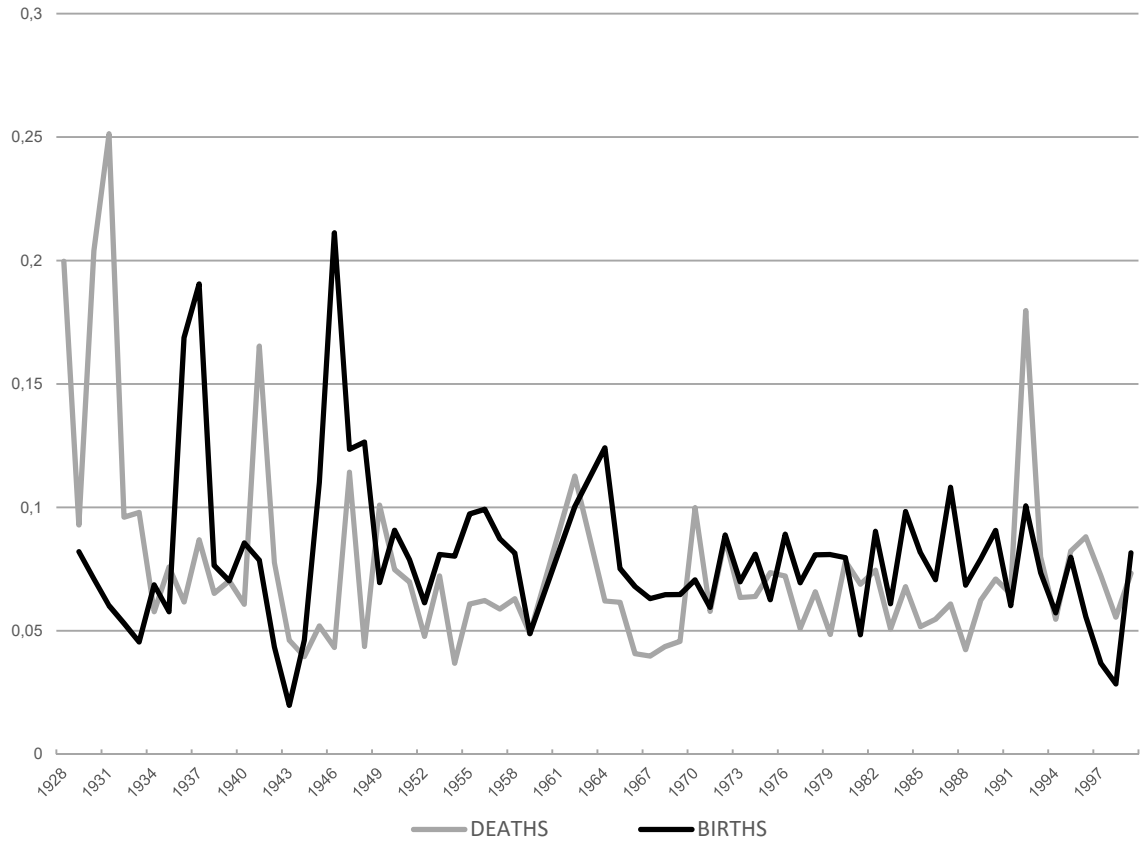


Figure 1.4 illustrates the extreme volatility of the period of crisis (1929-1945), as compared to the relative stability of the postwar period. We see alternating spikes of firm failures and new firm births in quite rapid succession. These cycles of failures and new births suggest a case of selection, rather than adaptation in the population: the data describe peaks of failures in 1928 (approximately 20% of the existing population did not survive the year), 1930 (approximately 26% of the population exited), and 1942 (approximately 17% of the population exited in that year) and peaks of new firm creation in 1937 (approximately 17% of the population in that year consisted of newborn firms), 1938 (approximately 19% of the population was newborn), and 1946 (approximately 21% of the population was newborn). Similar volatility can only

Figure 1.4: Deaths/Births as Percentage of Population, Annually

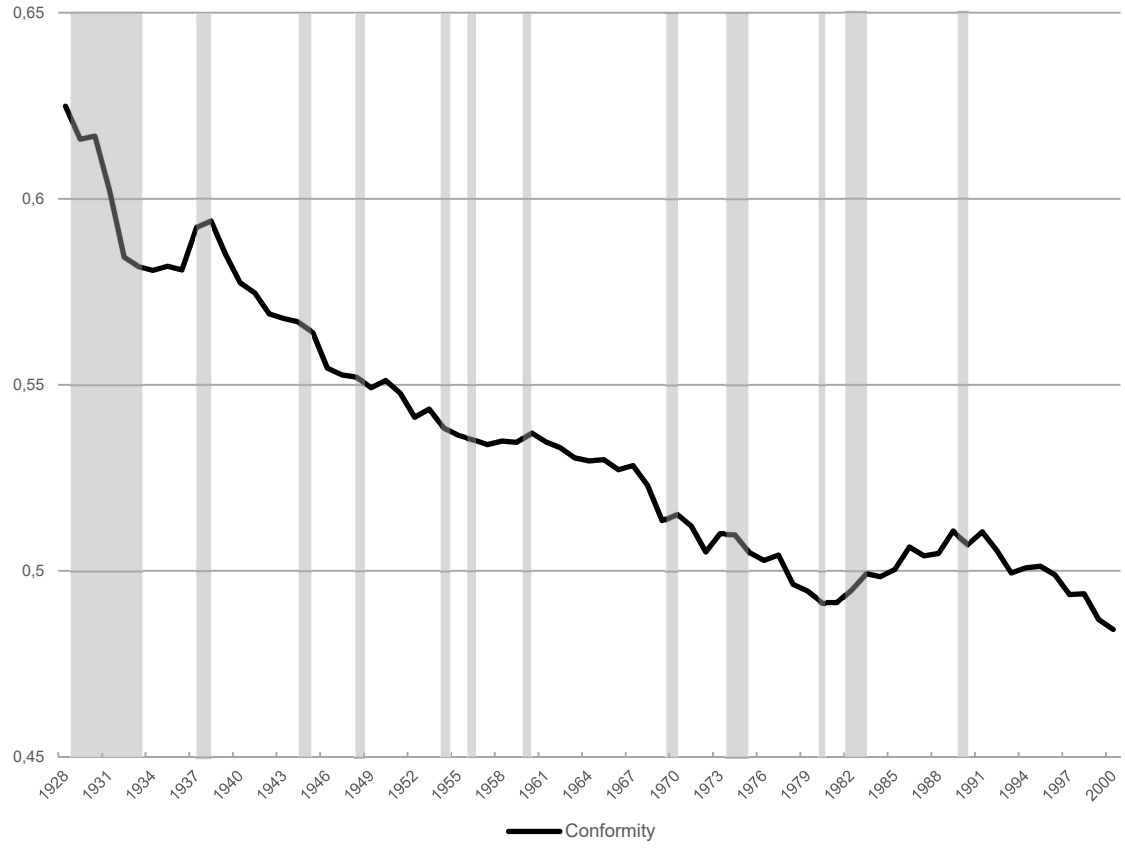


be observed in the early 1990s, as approximately 18% of the population exited in 1992. Unlike the earlier episodes of mass firm exit, in which waves of exit and

entry alternated, the 1992 shock was followed by a sharp drop in new firm creation, as the overall population would decline notably after 1992, never to recover during the period of study.

Over the period of study the general trend in the population was toward greater nonconformity (Figure 1.5). That is, in 1928 the data describe a condition of relative homogeneity in firm structure and strategy (combined conformity index = 0.62), while for the last year of the study, in 2000, we see a somewhat more heterogeneous population of organizations (combined conformity index = .48). One can detect an initial, pronounced drop in conformity, ending in 1937, followed by a brief increase in conformity in 1938. From 1940 to the early 1980s, the data describe a continuous and pronounced

Figure. 1.5: Firm Conformity among Exemplar Firms (Recessionary Periods Shaded)



decrease in conformity with a modest increase in conformity between 1980 and

1989. Conformity would once again decrease from 1989 to the end of the study in 2000. If we overlay this data with bands indicating the twelve recessionary periods contained in the period of study (Figure 1.5), we see that of these 12 periods, firm conformity dropped during 9 of these periods, was stagnant in 1, and increased in 2. In the most severe recessionary period in this study (1929-1933), we see the most precipitous drop in conformity.

In 1928, roughly half the population of firms had received professional recognition for their work, through publications, awards, and other honors (Figure 1.6). This figure would climb to approximately 54% in 1934, but would thereafter decline rapidly, falling to 26% in 1960. From 1960 to the end of the observation period, the percentage of firms receiving recognition for their

Figure 1.6: Exemplar Firms, as a Percentage of Population

work would gradually fall to approximately 20%. This trend suggests that over the course of this study, fewer and larger firms would come to dominate the profession's self-image, lending support to Herzog and De Meuron's (2001) description of a profession split between an elite minority, and a majority producing architecture "without *appellation controlée."*

1.5.2: Tests of Hypotheses

Table 1.3 reports the descriptive statistics and correlations. The mean age of firms in the study is approximately 12 years, and the mean exit rate is .07 per year. The correlations do not suggest problems of multi-collinearity in the study, though a high correlation is detected between the overall conformity index at birth and the sub-categories of structural and strategic conformity. This is a logical result, as all three measures describe firm conformity, and the overall conformity index variable is not included in the same regression model as the sub-variables. A relatively high degree of correlation is also detected between the continuous variable measuring the climate index at birth and the dummy

Table 1.3: Descriptive Statistics and Correlations of Variables

Variable	Mean	S.D.	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11	12
1. Conformity at Birth	.503	.106	.143	.753												
2. Strategic Conformity at Birth	.529	.137	.183	.817	.723											
3. Structural Conformity at Birth	.484	.131	.064	.707	.840	.232										
4. Climate Index at Birth	4.151	1.033	2.500	8.250	.095	.041	.102									
5. Firm Recognition	.240	.427	.000	1.000	.151	.052	.172	.088								
6. Size at Birth	1.377	.595	.000	4.000	.021	.005	.026	.046	.027							
7. Log Population Density at Birth	9.330	.141	8.966	9.795	.108	.057	.110	.144	.078	.099						
8. Military Service	.210	.407	.000	1.000	-.066	-.047	.130	-.014	.155	.021	.026					
9. Born 1929-45	.172	.377	.000	1.000	.251	.142	.242	.307	.166	.078	-.048	.024				
10. Increased Nonconf. since Birth	.013	.038	-.210	.277	.315	.267	.235	.023	-.072	.008	-.036	-.050	.083			
11. Born in Lowest Decile of Climate	.160	.3662	.000	1.000	.106	.051	.110	.801	.065	.055	.131	-.030	.241	.037		
12. Age	12.366	11.25	1.000	73.000	.144	.038	.173	.092	.171	.025	.092	.182	.183	.271	.070	
13.Death	.069	.25	0	1.000	-.057	-.022	-.067	.008	-.066	-.006	-.003	-.046	.010	.008	.009	.059

variable measuring whether a firm was born into the lowest decile of climate conditions in the study. Again, this is an expected result, as these variables both describe birth climate.

Table 1.4: Cox Proportional Hazards Model of Firm Nonconformity and Failure

Variable	M1	M2	M3	M4
Nonconformity at Birth		2.19*** (0.22)		
Strategic Nonconformity at Birth			0.70*** (0.18)	0.75*** (0.18)
Structural Nonconformity at Birth			1.46*** (0.17)	1.52*** (0.17)
Nonconformity at Birth x Born 1929-45		-1.63** (0.57)		
Structural Nonconformity at Birth x Born 1929-45			-0.15 (0.43)	-0.41 (0.44)
Strategic Nonconformity at Birth x Born 1929-45			-0.98* (0.40)	-1.29** (0.41)
Increased Nonconformity since Birth	2.77*** (0.64)	5.25*** (0.76)	3.93*** (0.66)	5.26*** (0.77)
Increased Nonconformity since Birth x Born 1929-45		-3.71** (1.29)		-4.02** (1.28)
Born 1929-45	0.26*** (0.06)	-0.42 (0.31)	-0.22 (0.30)	-0.46 (0.31)
Climate Index at Birth	0.01 (0.03)	0.007 (0.03)	0.006 (0.03)	0.006 (0.03)
Firm Recognition	-0.60*** (0.06)	-0.53*** (0.06)	-0.53*** (0.06)	-0.53*** (0.06)
Size at Birth	-0.002 (0.002)	-0.002 (0.001)	-0.002 (0.001)	-0.002 (0.001)
Log Population Density at Birth	-0.24 (0.16)	-0.25 (0.16)	-0.25 (0.16)	-0.26 (0.16)
Military Service	-0.30*** (0.06)	-0.24*** (0.06)	-0.23*** (0.06)	-0.22*** (0.06)
Born in Lowest Decile of Climate	0.06 (0.09)	0.09 (0.09)	0.10 (0.09)	0.10 (0.09)
N	36000	36000	36000	36000
Log-Likelihood	-17866	-17816	-17810	-17805
Chi-square	208.47	310.05	322.06	332.04
Prob > Chi2	0.0000	0.0000	0.0000	0.0000

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

standard error in parentheses

To estimate the hazard of firm failure, I used a Cox Proportional Hazards Model (Katila and Shane, 2005; Li, et al., 2008; Xu, Lu, and Gu, 2014; Pe'er, Vertinsky, and Keil, 2016). A Cox model does not describe the actual form of the distribution, but instead provides estimates of how much each covariate contributes to hazard rates. Table 1.4 records the results of the regression

models. In order to be able to compare coefficients between those firms born in the period of crisis (1929-1945) and all other firms, I used the variable *Born 1929-45* as an interaction term.

Table 1.5 provides a summary of the hypotheses and results that follow. I first entered the control variables (Model 1). Firms born in the period of crisis have a significant increase in hazard rate. This contrasts with those firms born in the lowest decile of the combined climate index, whose hazard rates do not seem to be significantly affected by being born in negative circumstances. In later models, however, birth during the period 1929-1945 shows a negative, though not statistically significant result. Firm recognition produces a highly significant negative effect on hazard rates in all models. If firm recognition is a reasonable measure of being good at one's job, then these results suggest that producing good work (or at least work recognized as such) contributes significantly to firm survival. Model 1 also suggests that firms that had grown more nonconformist than they had been at founding faced a significant increase in hazard rates. The effect of military service also appears significant, as having a firm principal with experience in the armed forces has a persistently significant and negative effect on hazard rates in all models. Architects' relationships with the emerging military-industrial complex may have allowed firms founded during the build-up to the Second World War, or those founded during the war, to prepare themselves for a professional landscape in which military commissions would be of increasing importance. The results provide some initial support for this idea.

I next entered the variables for nonconformity at birth, and the interaction variable of initial non-conformity and birth during the 1929-1945

period (Model 2). Baseline H1a, which focuses on the entire period of study (1928-2000) predicted a positive effect on hazard rates for nonconformity at birth. H1b predicted a negative effect on hazard rates for nonconformity at birth, among those firms born during the period of crisis (1929-1945). Model 2 shows support for H1a, with a significant positive result for nonconformity over the entire period. Although the results show a significant negative result for nonconformity among firms born during the period of crisis (-1.63), as H1b had predicted, the magnitude of this interaction effect is less than that of the proportional hazard associated with nonconformity at birth (2.19). The results therefore do not support H1b, but do provide evidence that birth during the period of crisis may be associated with a significantly reduced hazard rate for nonconformity at birth.

Model 3 distinguishes between structural and strategic nonconformity, and also includes the interaction of the two modes of nonconformity with the variable *Born 1929-45*. H2a and H2b predict an increase in hazard rates for strategically nonconforming firms, in general, and a decrease in hazard rates for those born during the period of crisis. Results are as hypothesized, with a positive and statistically significant effect for strategic nonconformity (0.70), and a larger, and negative effect when the interaction term *Born 1929-45* is added (-0.98). H3a and H3b predicted an increase in hazard rates for structurally nonconforming firms in general, and for those born between 1929 and 1945, respectively. I find support for H3a, with a statistically significant increase in hazard rates for structurally nonconformist firms. Model 3 also provides support H3b, as it shows a negative, but not statistically significant relationship between hazard rates and structural non-conformity. While this value is not statistically

significant, the results are nevertheless support the hypothesis, as it suggests that crisis conditions at birth do not meaningfully moderate the increased hazard associated with structural nonconformity at birth.

Table 1.5: Summary of Hypotheses and Results

HYP	PREDICTION	RESULTS	COEF.
1A	*AMONG ALL FIRMS* Nonconformity at Birth: GREATER RELATIVE HAZARD RATE	SUPPORT *Sign as predicted*	2.19*** (0.22)
1B	*AMONG FIRMS BORN 1929-45* Nonconformity at Birth: LOWER RELATIVE HAZARD RATE	DO NOT SUPPORT *Sign as predicted* *Relative magnitude not as predicted*	-1.63** (0.57)
2A	*AMONG ALL FIRMS* Strategic Nonconformity at Birth: GREATER RELATIVE HAZARD RATE	SUPPORT *Sign as predicted*	0.70*** (0.18)
2B	*AMONG FIRMS BORN 1929-45* Strategic Nonconformity at Birth: LOWER RELATIVE HAZARD RATE	SUPPORT *Sign as predicted* *Relative magnitude as predicted*	-0.98* (0.40)
3A	*AMONG ALL FIRMS* Structural Nonconformity at Birth: GREATER RELATIVE HAZARD RATE	SUPPORT *Sign as predicted*	1.46*** (0.17)
3B	*AMONG FIRMS BORN 1929-45* Structural Nonconformity at Birth: CONTINUED GREATER RELATIVE HAZARD RATE	SUPPORT *No significant result for interaction*	-0.15 (0.43)
4A	*AMONG ALL FIRMS* Increased Nonconformity since Birth: GREATER RELATIVE HAZARD RATE	SUPPORT *Sign as predicted*	5.26*** (0.77)
4B	*AMONG FIRMS BORN 1929-45* Increased Nonconformity since Birth: LOWER RELATIVE HAZARD RATE	DO NOT SUPPORT *Sign as predicted* *Relative magnitude not as predicted*	-4.02** (1.28)

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

To test H4b, Model 4 adds the interaction term *Born 1929-45* to the variable measuring increased non-conformity with respect to a firm's birth condition. All models provide support for H4a, which predicted an increase in hazard rates as a firm became more nonconformist than it had had been at birth. H4b predicted that an increase in a firm's relative nonconformity since birth would be associated with a reduced hazard rate among firms born during the period of crisis. Model 4, however, does not support H4b. Despite a statistically significant and negative result, the magnitude of the reduction in hazard rate for firms founded during the period of crisis (-4.02) is not sufficient

to offset the general hazard associated with increased nonconformity over time (5.26). The results do, however, suggest that birth in crisis may be associated with a moderating effect on hazard rates for firms that become increasingly nonconformist over time. Table 1.5 provides a summary of the hypotheses and related results. In sum, 6 of the 8 hypotheses received statistically significant support, while two hypotheses returned results for which the sign was as hypothesized, though the magnitude of the effect was less than predicted.

1.5.3: Robustness Check

To test the validity of the above results, which treat nonconformity as a continuous variable, I ran a second series of tests which treated extreme conformity and extreme nonconformity as indicator variables. While the previous models assessed the effect of nonconformity on hazard rates, these tests contrast positions of extreme conformity (upper tertile of conformity) and extreme nonconformity (lower tertile of conformity), as well as the upper and lower tertiles for the associated modes of structural and strategic nonconformity. Table 1.6 presents the results of these tests. Model 9, which includes variables for positions of extreme conformity as well as extreme nonconformity, yields results that are consistent with findings described above, as they relate to nonconformity. In tests of H4a and H4, results in this model differ slightly from those obtained previously. While the previous models returned a negative and statistically significant result for the interaction of the variable measuring change

Table 1.6: Cox Model of Extreme Conformity, Nonconformity and Failure

Variable	M5	M6	M7	M8	M9
Extreme Nonconformity at Birth (lower tertile)		0.15** (0.05)			
Extreme Conformity at Birth (upper tertile)		-0.34*** (0.06)			
Extreme Structural Nonconformity at Birth				0.27*** (0.04)	0.20*** (0.05)
Extreme Structural Nonconformity at Birth x Born 1929-45					0.04 (0.11)
Extreme Strategic Nonconformity at Birth				0.54*** (0.05)	0.76*** (0.10)
Extreme Strategic Nonconformity at Birth x Born 1929-45					-0.46* (0.19)
Extreme Structural Conformity at Birth			-0.32*** (0.05)		-0.15* (0.07)
Extreme Structural Conformity at Birth x Born 1929-45					-0.03 (0.15)
Extreme Strategic Conformity at Birth			-0.46*** (0.05)		-0.45* (0.19)
Extreme Strategic Conformity at Birth x Born 1929-45					-0.23 (0.22)
Born 1929-45	0.26*** (0.06)	0.26*** (0.06)	0.25*** (0.06)	0.25*** (0.06)	0.65** (0.20)
Climate Index at Birth	0.01 (0.03)	0.004 (0.03)	0.005 (0.03)	-0.01 (0.03)	-0.01 (0.03)
Firm Recognition	-0.60*** (0.06)	-0.56*** (0.06)	-0.50*** (0.06)	-0.50*** (0.06)	-0.46*** (0.06)
Size at Birth	-0.03 (0.03)	-0.03 (0.03)	-0.03 (0.03)	-0.03 (0.03)	-0.04 (0.03)
Log Population Density at Birth	-0.24 (0.16)	-0.24 (0.16)	-0.25 (0.16)	-0.25 (0.16)	-0.26 (0.16)
Military Service	-0.30*** (0.06)	-0.29*** (0.06)	-0.30*** (0.06)	-0.26*** (0.06)	-0.25*** (0.06)
Increased Nonconformity since Birth	2.78*** (0.64)	3.60*** (0.64)	3.72*** (0.64)	3.43*** (0.64)	3.82*** (0.77)
Increased Nonconformity since Birth x Born 1929-45					-1.75 (1.26)
Born in Lowest Decile of Birth Climate	0.06 (0.09)	0.09 (0.09)	0.07 (0.09)	0.06 (0.09)	0.08 (0.09)
N	36000	36000	36000	36000	36000
Log-Likelihood	-17866	-17823	-17800	-17759	-17750
Chi-square	208.03	295.15	342.20	422.93	440.88
Prob > Chi2	0.0000	0.0000	0.0000	0.0000	0.0000

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

standard error in parentheses

in relative nonconformity since birth with the interaction term *Born 1929-45*, the model also yields a negative result, but a p-value of 0.166 puts this result somewhat outside the range of statistical significance. In all other aspects, the Model 9 supports the results of the previous models. The model used in the robustness check also adds to our understanding of firm nonconformity because it allows us to test the effects of extreme firm conformity as a mirror

image of extreme nonconformity. Though these findings are not directly related to the hypotheses developed in this study, which focus solely on nonconformity, they nevertheless provide additional detail about the dynamic of extreme nonconformity and extreme conformity at birth and in general tend to support the findings summarized in Table 1.5. For example, Model 9 provides additional support for H1a, with a statistically significant reduction in hazard rate for firms adopting positions of extreme conformity at birth. The model also shows a significant and negative effect for extreme strategic conformity at birth, which lends additional support to H2a. Hypothesis 2b predicted that firms adopting strategically nonconformist practices at founding during the period of crisis would benefit from their nonconformity. While I did not find direct support for this hypothesis in model 9, my results did suggest that birth in the period of crisis may moderate the hazard associated with strategic nonconformity at birth. Model 9, however, does not provide evidence to support the inverse proposition. That is, the variable measuring the interaction of extreme strategic conformity and birth during the period of crisis returns a negative result without statistical significance. The model provides additional support for H3a, as it shows a significant positive result for structural nonconformity at birth, but adds no further support for H3b, with a negative and non-significant value for extreme structural conformity at birth during crisis.

1.6: DISCUSSION

The goal of this study was to test whether firms born in moments of fundamental environmental transformation may benefit from adopting nonconformist strategies and structures. I hypothesized that climates of fundamental environmental transformation may cause “institutional slack” as

common assumptions about what constitutes legitimate organizational structure and strategy may be eroded during crises, suggesting that firms founded in such climates may benefit from certain kinds of nonconformity at birth, and that they may pursue a strategy of "anticipatory fit" without incurring the risks of perceived illegitimacy that they might face were they to adopt nonconformist approaches in more stable climates.

My results provide strong support for the baseline hypothesis that firms in general will face an increased hazard rate for nonconformity at birth (H1a). This finding, which is primarily intended to provide a backdrop for the hypotheses that follow, supports one of the central assumptions of the institutional perspective: the idea that organizations face pressure to conform with the dominant practices and procedures in their fields, and may pay a price for not doing so (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Dacin, 1997). Hypothesis 1b, however, predicted that these assumptions may not apply if birth conditions are sufficiently turbulent. That is, I suggested that conditions of fundamental environmental transformation (Haveman, 1992) may tend to cause a slackening of conformity pressures, and that new firms may instead benefit by adopting nonconformist approaches in climates of crisis (H1b). Although my results do not support this hypotheses, the findings nevertheless suggest that birth in crisis may significantly moderate the hazard associated with nonconformity. This finding suggests that further refinement might be possible in Swaminathan's (1996) "trial-by-fire" model, in which those firms able to survive a challenging birth environment may, over time, benefit from a reduced hazard rate. The results suggest that birth climate alone may only account for a part of this phenomenon, and that firms' relative nonconformity with structural

and strategic norms may also play an important role. While I do find evidence that institutional pressures may indeed slacken under the stress of crisis conditions, and that firms that are born into crisis conditions may face a reduced penalty for nonconformity, they do not seem able to avoid entirely the consequences of being different. Institutional pressures appear to be somewhat more resilient than I had anticipated, even in the face of environmental turbulence.

With hypotheses 2 and 3 I distinguished between modes of strategic and structural nonconformity (Miller and Chen, 1996; Miller et al., 2013; Wowak, Mannor, Arrfelt, and McNamara, 2016). I found support for H2a and H3a, which predicted that new firms would, in general, face an increased hazard rate if they had adopted either strategic or structural nonconformist approaches at birth. In climates of crisis, however, I expected to observe a different dynamic, hypothesizing that new firms born into crisis conditions might benefit from strategic nonconformity (H2b), but would continue to suffer an increased hazard rate when engaging in structural nonconformity (H3b). That is, I expected firms born in moments of turbulence to be relatively free to experiment with how the architecture firm *works*, but less free to challenge how the firm *appears*. Tests of H2b and H3b were as predicted: I found support for the idea that new firms may benefit from strategic nonconformity in contexts of fundamental environmental transformation, and that structural nonconformity would prove hazardous regardless of instability in the birth climate.

The results therefore suggest that commonly held notions of legitimate firm structure might be quite intensely tied to architects' self-image as autonomous authors (Blau, 1984; Cuff, 1991), and that conformity pressures

might prove to be stickier when it came to firm structure, rather than strategy. I had predicted that new firms adopting structurally nonconformist approaches would face increased hazard rates, whether or not they were born into conditions of crisis. My results supported this perspective: even for firms born in crisis, there may continue be an incentive to conform with the norms of what an architecture firm looks like, no matter the strategic approach taken. More specifically, the results suggest that there were opportunities to be had for firms that adopted service logic *strategies* (offering a range of extra-architectural services, for example) while nevertheless maintaining the structural appearance associated with the disciplinary logic (by identifying themselves with the names of individual partners, and joining the AIA, for example).

Hypotheses 4a and 4b suggested a possible extension of the literature dealing with the imprinting of founding conditions on firms (Stinchcombe, 1965; Marquis and Tilcsik, 2013; Simsek et al., 2014). The notion of anticipatory fit suggests that founding conditions may indeed shape firms over time, but that in some cases, what may be imprinted is less a specific trait of the birth environment than an increased willingness to adopt nonconformist positions over time, as well as a continued immunity to doing so. My results provide mixed support for this idea, with an increased hazard for those firms that grow more nonconformist over time, and a positive but significantly reduced hazard among those firms born in the period of crisis. As occurred in tests of H1b, the reduction in hazard rate among those firms born 1929-1945 was significant but not enough to offset the overall hazard associated with increased nonconformity over time. That is, birth in the period of crisis moderates but does not offset entirely the increased hazard associated with becoming more nonconformist

than at birth. These results therefore suggest that birth in crisis may not provide immunity to the penalties of increased nonconformity over time, but that it may indeed be linked to a significant palliative effect.

This study contributes to our understanding of organizations by proposing and testing a two-stage theoretical model of institutional slack anticipatory fit, in which conformity pressures are relaxed as crisis conditions take hold, and firms are imprinted by an emerging, but still marginal, environmental condition. I suggest that this imprinting occurs through firms' relationships to clients as part of the project team, and that it may be associated with a reduced hazard rate, both initially and over time. The results of the study suggest that firms may indeed be shaped by their birth environments, but that what may be imprinted upon new firms—especially those born into moments of profound environmental turbulence—is less a specific facet of the birth environment than an increased permeability to the structures and strategies of dominant clients or client groups. In challenging contexts, this sensitivity may be heightened as the search for operating capital, and the clients that provide it, is especially desperate. We could thus conclude that if sensitivity to the environment—as mediated through the client—is, in fact, what is imprinted at birth, and if, over time, primary clients or client types can shift, then organizational structure and strategy might productively shift in response, in order to fit the new clients and conditions. This study therefore extends the institutional frameworks; while an institutional approach tends to understand isomorphism as a driver of conformity and stasis, my emphasis on the power of clients and client types suggests that isomorphic pressures might also be source of dynamism over time. I also suggest that the phenomenon of

imprinting might not solely be understood as the lasting registry of specific traits of the birth environment, but that it might also describe the transmission of a lasting organizational permeability to clients' structures and strategies, both at founding and subsequently.

A further contribution of this study is to test the effects of conformity and nonconformity to dominant institutional logics in organizations, and thereby to provide empirical evidence to support the idea that in certain contexts, some modes of non-conformity may be beneficial both initially and over time. This is not to suggest, however, that mere nonconformity in crisis is necessarily beneficial. The specific mode of non-conformity adopted by a firm must be one that proves favorable in the post-crisis landscape. And it also follows that not all moments of environmental flux make this approach appropriate: the turbulence must be profound and lasting, such that the *status quo ante* never returns. This model suggests that innovations pioneered by clients may be transferred to the firms that service them, and that those servicing firms can in turn pass along these innovations to the population of like organizations.

The role of the client or dominant client type may prove fertile ground for further research, especially in the case of professional service firms and project based organizations where those who contract and pay for services often pay a determinant role in defining project aims, deliverables, and schedules. It seems reasonable to expect that the isomorphic pressures generated by clients and dominant client groups may extend beyond the formal and strategic factors described in this study, and may, in fact, extend to issues of organizational culture. This, too, seems a promising area for future research.

There are several limitations of this study. Although the large sample size and longitudinal nature of the study provided robust data on survival, conformity, and specific firm-level traits, practical considerations made it impossible to gather similarly detailed data for the clients of all 3,882 firms studied here. As a result, further research is needed to explore the firm-client dynamic at the level of the individual case study, where one might be able to observe the model of anticipatory fit in action. This work is currently underway.

Another possible limitation of the current work is that I have understood the period of crisis to be a single, transformative period, although it might also possible to divide it into three distinct sub-periods: 1929-1932, a period of great social and economic distress, beginning before the stock market crash of 1929 and ending just before the inauguration of Franklin D. Roosevelt; 1933-1941, during which the Keynesian policies of the New Deal were implemented and the military was mobilized in anticipation of American entry into the Second World War; and 1942-1945, when the United States was officially engaged in the war effort. While such a division of the period might allow us to measure the effect of certain types of turbulence in the environment, it was my intention here to examine the net effect of a generally transformative and turbulent period. More work could be done to test the model of anticipatory fit in specific types of turbulent contexts.

I began this study with the question of whether new firms founded in crisis benefit from conforming to the dominant structures and strategies of among their peers. The succinct answer to that query is: it depends on the crisis, and on the specific mode of non-conformism. My results suggest that when the environmental crisis is actually a transition to a new state, then certain

modes of non-conformity in the present may lead to future survival and fit. A somewhat more complex answer to that question, however, would add an important caveat: deciding *how* to work may ultimately be less determinant that deciding *for whom* to work. That is, my research suggests that during moments of environmental transformation the formal and strategic choices firms make to attract, service, and retain clients may lead firms to thrive and survive if their clients do as well once the crisis has subsided. This research may therefore be of use to managers of new organizations during moments of environmental transformation, as it offers evidence to describe how and when conformity is a virtue, and when fitting in may, in fact, be a hazard.

ARCHIVAL AND PRIMARY SOURCES:

American Institute of Architects, 1909. *Circular of Advice Relative to Principles of Professional Practice.* Washington, D.C.

American Institute of Architects. 1949. AIA Journal, 27.

American Institute of Architects, 1979. *Document J330: Code of Ethics and Professional Conduct.* Washington, D.C.

American Institute of Architects, 1997. *Code of Ethics and Professional Conduct.* Washington, D.C.

American Institute of Architects, Illinois Chapter, 1990-2000. *ArchiPages: AIA Illinois Firm Profiles.* Chicago: AIA Chicago.

American Institute of Architects, 2011. *AIA Compensation Report: A Survey of U.S. Architecture Firms*. Washington, D.C.

American Institute of Architects, 2012. *The Business of Architecture: 2012 Survey Report on Firm Characteristics*. Washington, D.C.

Art Institute of Chicago, Ryerson-Burnham Library, Chicago Architects Oral History Collection. Accessed online.

Avery Index to Architectural Periodicals, Columbia University. Accessed online.

Chicago Commercial Telephone Directories, 1928-2000. Chicago: R.H. Donnelley.

Chicago History Museum Research Center, Archives of the Chicago Chapter of the American Institute of Architects; Dues-Payment Bookkeeping Logs.

-----, AIA Chicago Applications for Membership.

-----, AIA Chicago Membership Notecards.

Chicago Tribune, Obituary/Death Notice Archive. Accessed Online.

City of Chicago Historic Resources Survey, City of Chicago Commission on Chicago Landmarks. Accessed online.

Federal Reserve Bank of St. Louis, Archival Federal Reserve Economic Data, Economic Research Division.

Historical Archives of the American Institute of Architects, Architects' Record Questionnaires, 1946, 1947, 1953. Accessed online.

Herzog, J., & De Meuron, P. 2001. Jacques Herzog & Pierre de Meuron 2001 Pritzker Prize Laureates Acceptance Speech. The Hyatt Foundation / The Pritzker Architecture Prize.

Illinois Society of Architects, 1929. *Handbook for Architects and Builders*, Vol. 32.

Illinois Society of Architects, 1938. *Handbook for Architects and Builders*, Vol. 35.

Koyl, G. 1955. *American Architects Directory*. New York: American Institute of Architects/Bowker.

-----, 1962. *American Architects Directory*. New York: American Institute of Architects/Bowker.

-----, 1970. *American Architects Directory*. New York: American Institute of Architects/Bowker.

New York Times. Obituary/Death Notice Archive. Accessed online.

National Archives and Records Administration; World War II War Diaries, Accessed through Fold3 platform.

-----, United States Selective Service Registration Cards, "Old Man's Draft" Registration Cards, (SSS Form 1), Accessed online.

-----, Muster Rolls and Personnel Diaries of US Navy Ships, Stations, and Other Naval Activities, Accessed online.

-----, United States Department of Veterans' Affairs, BIRLS Death Files, 1850-2010. Accessed online.

-----, United States World War II Navy Muster Rolls, 1938-1949. Accessed online.

-----, United States Navy Cruise Books, 1918-2009. Accessed online.

Sinkevitch, A. 2000. *AIA Guide to Chicago Architecture.* Orlando: Harvest.

United States Census Bureau, 1928-2000. *Statistical Abstract of the United States.* Washington, D.C.

United States Department of Commerce, 1976. *Historical Statistics of the United States: Colonial Times to 1970*. Washington, D.C.

Withey, Henry F. and Withey, Elsie Rathburn. 1956. *Biographical Dictionary of American Architects (Deceased).* Los Angeles: New Age Publishing.

REFERENCES:

Adorno, T. W. 1970. *Aesthetic Theory*. London: Continuum.

Almandoz, J. 2014. Founding teams as carriers of competing logics: When institutional forces predict banks' risk exposure. *Administrative Science Quarterly*, 59(3): 442–473.

Amburgey, T. L., & Dacin, M. T. 1994. As the left foot follows the right? The dynamics of strategic and structural change. *Academy of Management Journal*, 37(6): 1427–1452.

Amburgey, T. L., Kelly, D., & Barnett, W. P. 1993. Resetting the clock: The dynamics of organizational change and failure. *Administrative Science Quarterly*, 38(1): 51.

Barthes, R. 1957. *Mythologies*. Hill and Wang.

Bascle, G. 2016. Toward a dynamic theory of intermediate conformity. *Journal of Management Studies*, 53(2): 131–160.

Blau, J. 1984. *Architects and Firms*. Cambridge: MIT Press.

Boeker, W. 1989. Strategic change: The effects of founding and history. *Academy of Management Journal*, 32(3): 489–515.

Boxenbaum, E., & Jonsson, S. 2008. Isomorphism, diffusion and decoupling. *The SAGE Handbook of Organizational Institutionalism* (pp. 78–98).

Boyle, B. M. 1977. Architectural practice in America, 1865-1965: Ideal and reality. In S. Kostof (Ed.), *The Architect: Chapters in the History of the Profession*. Berkeley: University of California Press.

Bradley, S., Aldrich, H., Shepherd, D., & Wiklund, J. 2011. Resources, environmental change, and survival: asymmetric paths of young independent and subsidiary organizations. *Strateic Management Journal*, 32(2): 315–334.

Carroll, G., & Hannan, M. 1989. Density delay in the evolution of organizational populations: A model and five empirical tests. *Administrative Science Quarterly*, 34: 411–430.

Carroll, G. R., & Swaminathan, A. 2000. Why the microbrewery movement? organizational dynamics of resource partitioning in the U.S. brewing industry. *American Journal of Sociology*, 106(3): 715–762.

Castrogiovanni, G. J., Bennett, N., & Combs, J. G. 1995. Franchisor types: Reexamination and clarification. *Journal of Small Business Management*, 33(1): 45–55.

Christianson, M. K., Farkas, M. T., Sutcliffe, K. M., & Weick, K. E. 2009. Learning through rare events: Significant interruptions at the Baltimore & Ohio Railroad Museum. *Organization Science*, 20(5): 846–860.

Cohen, J.-L. 2011. *Architecture in Uniform: Designing and Building for the Second World War*. Paris: Hazan.

Colquhoun, A. 2002. *Modern Architecture*. Oxford: Oxford University Press.

Condit, C. W. 1964. *The Chicago School of Architecture: A History of*

Commercial and Public Building in the Chicago Area, 1875-1925. Chicago: University of Chicago Press.

Conrads, U. (Ed.). 1971. *Programs and Manifestoes in 20th Century Architecture*. Cambridge: MIT Press.

Cuff, D. 1991. *Architecture: The Story of Practice*. Cambridge: MIT Press.

Curtis, W. J. R. 1982. *Modern Architecture Since 1900*. London: Phaidon Press.

Dacin, M. T. 1997. Isomorphism in context: The power and prescription of institutional norms. *Academy of Management Journal*, 40(1): 46–81.

David, R. J., Sine, W. D., & Haveman, H. A. 2013. Seizing opportunity in emerging fields: How institutional entrepreneurs legitimated the professional form of management consulting. *Organization Science*, 24(2): 356–377.

David, R. J., & Strang, D. 2006. When fashion is fleeting: Transitory collective beliefs and the dynamics of TQM consulting. *Academy of Management Journal*, 49(2): 215–233.

Deephouse, D. L. 1999. To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal*, 166(September 1999): 147–166.

Deephouse, D. L., Bundy, J. W., Tost, L. P., & Suchman, M. C. 2017. Organizational legitimacy : Six key questions. In R. Greenwood, C. Oliver, T. Lawrence, & R. Meyer (Eds.), *The SAGE Handbook of Organizational Institutionalism (2nd Ed.)*. Thousand Oaks, CA: Sage.

Deephouse, D., & Suchman, M. 2008. Legitimacy in organizational institutionalism. *The SAGE Handbook of Organizational Institutionalism*, 49–77.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *Amercican Sociological Review*, 48(2): 147–160.

Dobrev, S. D., & Gotsopoulos, A. 2010. Legitimacy vacuum, structural imprinting, and the first mover disadvantage. *Academy of Management Journal*, 53(5): 1153–1174.

Dunn, M. B., & Jones, C. 2010. Institutional logics and institutional pluralism: The contestation of care and science logics in medical education, 1967-2005. *Administrative Science Quarterly*, (55): 114–149.

Eisenhardt, K., & Schoonhoven, C. 1990. Organizational growth: Linking founding team, strategy, environment, and growth among US semiconductor ventures, 1978-1988. *Administrative Science Quarterly*, 35(3): 504–529.

Elsbach, K. D., & Sutton, R. I. 1992. Acquiring organizational legitimacy through illegitimate actions: A marriage of institutional and impression management theories. *Academy of Management Journal*, 35(4): 699–738.

Fauchart, E., & Gruber, M. 2011. Darwinians, communitarians, and missionaries: The role of founder identity in entrepreneurship. *Academy of Management Journal*, 54(5): 935–957.

Fiss, P. C., & Zajac, E. J. 2006. The symbolic management of strategic change: Sensegiving via framing and decoupling. *Academy of Management Journal*, 49(6): 1173–1193.

Frampton, K. 1992. *Modern Architecture: A Critical History*. London: Thames & Hudson.

Frampton, K. 2007. *Modern Architecture: A Critical History (Fourth Edition)*. London: Thames & Hudson.

Freeman, J., Carroll, G. R., & Hannan, M. T. 1983. The liability of newness : Age dependence in organizational death rates. *American Sociological Review*, 48(5): 692–710.

Friedland, R., & Alford, R. R. 1991. Bringing society back in: Symbols, practices and institutional contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis* (pp. 232–263).

Geroski, P., Mata, J., & Portugal, P. 2009. Founding conditions and the survival of new firms. *Strategic Management Journal*, 529(October 2009): 510–529.

Glynn, M. A., & Abzug, R. 2002. Institutionalizing identity: Symbolic isomorphism and organizational names. *Academy of Management Journal*, 45(1): 267–280.

Greenberg, C. 1940. Towards a newer laocoon. *Partisan Review*, 7(Fall): 296–310.

Greenwood, R., Deephouse, D. L., & Li, S. X. 2006. Ownership and performance of professional service firms. *Organization Studies*, 28(2): 219–238.

Greenwood, R., Díaz, A. M., Li, S. X., & Lorente, J. C. 2010. The multiplicity of institutional logics and the heterogeneity of organizational responses. *Organization Science*, 21(2): 521–539.

Greenwood, R., Li, S. X., Prakash, R., & Deephouse, D. L. 2005. Reputation, diversification, and organizational explanations of performance in professional service firms. *Organizational Science*, 16(6): 661–673.

Greenwood, R., Suddaby, R., & Hinings, C. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1): 58–80.

Hannan, M. T., & Freeman, J. 1977. The population ecology of organizations. *American Journal of Sociology*, 82(5): 929.

Hannan, M. T., & Freeman, J. 1984. Structural inertia and organizational change. *American Sociological Review*, 49(2): 149–164.

Haveman, H. A. 1992. Between a rock and a hard place: organizational change and performance under conditions of fundamental environmental transformation. *Administrative Science Quarterly*, 37(1): 48–75.

Haveman, H. A. 1993. Follow the leader: Mimetic isomorphism and entry into new markets. *Administrative Science Quarterly*, 38(4): 593–627.

Haveman, H. A., & Rao, H. 1997. Structuring a theory of moral sentiments: Institutional and organizational coevolution in the early thrift industry.

American Journal of Sociology, 102(6): 1606–1651.

Hays, K. M. 1984. Critical architecture: Between culture and form. *Perspecta*, 21: 14–29.

Henderson, A. D. 1999. Firm strategy and age dependence: A contingent view of the liabilities of newness, adolescence, and obsolescence. *Administrative Science Quarterly*, 44(2): 281.

Hiatt, S. R., & Sine, W. D. 2014. Clear and present danger: Planning and new venture survival amid political and civil violence. *Strategic Management Journal*, 35: 773–785.

Hiatt, S. R., Sine, W. D., & Tolbert, P. S. 2009. From Pabst to Pepsi: The deinstitutionalization of social practices and the creation of entrepreneurial opportunities. *Administrative Science Quarterly*, 54(4): 635–667.

Hutton, T., & Ley, D. 1987. Location, linkages, and labor: The downtown complex of corporate activities in a medium size city, Vancouver, British Columbia. *Economic Geography*, 63(2): 126–141.

Jameson, F. 1991. *Postmodernism, or, The Cultural Logic of Late Capitalism*. Durham: Duke University Press.

Jennings, J. E., Jennings, P. D., & Greenwood, R. 2009. Novelty and new firm performance: The case of employment systems in knowledge-intensive service organizations. *Journal of Business Venturing*, 24(4): 338–359.

Johnson, V. 2007. What is organizational imprinting? Cultural entrepreneurship in the founding of the Paris opera. *American Journal of Sociology*, 113(1): 97–127.

Jones, C., Maoret, M., Massa, F. G., & Svejenova, S. 2012. Rebels with a cause: Formation, contestation, and expansion of the de nnovo category “Modern Architecture,” 1870-1975. *Organization Science*, 23(6): 1523–1545.

Jones, C., & Massa, F. G. 2013. From novel practice to consecrated exemplar: Unity Temple as a case of institutional evangelizing. *Organization Studies*, 34(8): 1099–1136.

Julian, S. D., & Castrogiovanni, G. J. 1995. Franchisor geographic expansion. *Journal of Small Business Management*, 33(2): 1–11.

Katila, R., & Shane, S. 2005. When does lack of resources make new firms innovative? *Academy of Management Journal*, 48(5): 814–829.

Kelbaugh, D. 2004. Seven fallacies in architectural culture. *Journal of Architectural Education*, 58(1): 66–68.

Kelly, D., & Amburgey, T. L. 1991. Organizational inertia and momentum: A dynamic model of strategic change. *Academy of Management Journal*, 34(3): 591–612.

Kostof, S. 1985. *A History of Architecture: Settings and Rituals*. Oxford: Oxford University Press.

Lampel, J., Shamsie, J., & Shapira, Z. 2009. Experiencing the improbable: Rare events and organizational learning. *Organization Science*, 20(5): 835–845.

Lawrence, P. R., & Lorsch, J. W. 1967. Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12(1): 1–47.

Leatherbarrow, D. 2004. *Topographical Stories: Studies in Landscape and Architecture*. Philadelphia: University of Pennsylvania Press.

Leupen, B., Grafe, C., & Körnig, N. 1997. *Design and Analysis*. Rotterdam: 010 Publishers.

Li, D., Eden, L., Hitt, M. A., & Ireland, R. D. 2008. Friends, acquaintances, or strangers? Partner selection in R&D alliances. *Academy of Management Journal*, 51(2): 315–334.

Marquis, C. 2003. The pressure of the past: Network imprinting in intercorporate communities. *Administrative Science Quarterly*, 48(4): 655–689.

Marquis, C., & Huang, Z. 2010. Acquisitions as exaptation: The legacy of founding institutions in the U.S. commercial banking industry. *Academy of Management Journal*, 53(6): 1441–1473.

Marquis, C., & Lounsbury, M. 2007. Vive la resistance: Competing logics and the consolidation of U.S. community banking. *Academy of Management Journal*, 50(4): 799–820.

Marquis, C., & Tilcsik, A. 2013. Imprinting: Toward a multilevel theory. *The Academy of Management Annals*, 7(1): 195–245.

Meyer, J., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340–363.

Miller, D., Breton-Miller, I. Le, & Lester, R. H. 2013. Family firm governance, strategic conformity, and performance: Institutional vs. strategic perspectives. *Organization Science*, 24(1): 189–209.

Miller, D., & Chen, M.-J. 1996. Nonconformity in competitive repertoires: A sociological view of markets. *Social Forces*, 74(4): 1209–1234.

Miller, D. L. 1996. *City of the Century: The Epic of Chicago and the Making of America*. New York: Simon & Schuster.

Newman, K. 2000. Organizational transformation during institutional upheval. *The Academy of Management Review*, 25(3): 602–619.

Nunez-Nickel, M., Gutierrez, I., & Carmona, S. 2006. Governmental context determines institutional value: Independently certified performance and failure in the Spanish newspaper industry. *Organization Studies*, 27(10): 1513–1531.

Nunez-Nickel, M., & Moyano Fuentes, J. 2004. Relationship between competition and organizational death : current state of the art, 5(1): 43–62.

Oertel, S., Thommes, K., & Walgenbach, P. 2016. Organizational failure in the aftermath of radical institutional change. *Organization Studies*, 37(8): 1067–1087.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16(1): 145–179.

Owings, N. A. 1973. *The Spaces in Between: An Architect's Journey*. Boston: Houghton Mifflin.

Pahnke, E. C., Katila, R., & Eisenhardt, K. M. 2015. Who takes you to the dance? How partners' institutional logics influence innovation in young firms. *Administrative Science Quarterly*, 60(4): 596–633.

Pe'er, A., Vertinsky, I., & Keil, T. 2016. Growth and survival: The moderating effects of local agglomeration and local market structure. *Strateic Management Journal*, 37: 541–564.

Pfeffer, J., & Salancik, G. R. 1978. *The External Control of Organizations*.

Rao, H., Monin, P., & Durand, R. 2003. Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in French gastronomy. *American Journal of Sociology*, 108(4): 795–843.

Romanelli, E. 1989. Environments and strategies of organization start-up: Effects on early survival. *Administrative Science Quarterly*, 34(3): 369–387.

Roth, L. M. 1979. *A Concise History of American Architecture*. New York: Harper and Row.

Rowe, C. 1977. Chicago frame. *The Mathematics of the Ideal Villa and Other Essays* (pp. 89–119). Cambridge: MIT Press.

Salomon, R., & Wu, Z. 2012. Institutional distance and local isomorphism strategy. *Journal of International Business Studies*, 43(4): 343–367.

Selznick, P. 1948. Foundations of the theory of organization. *American Sociological Review Review*, 13(1): 25–35.

Shane, S., & Foo, M.-D. 1999. New firm survival: Institutional explanations for new franchisor mortality. *Management Science*, 45(2): 142–159.

Siggelkow, N. 2002. Evolution toward fit. *Administrative Science Quarterly*, (47): 125–129.

Simsek, Z., Fox, B. C., & Heavey, C. 2014. "What's past is prologue": A framework, review, and future directions for organizational research on imprinting. *Journal of Management*, 41(1): 288–371.

Sine, W. D., David, R. J., & Mitsuhashi, H. 2007. From plan to plant: Effects of certification on operational start-up in the emergent independent power sector. *Organization Science*, 18(4): 578–594.

Sine, W. D., Haveman, H. A., & Tolbert, P. S. 2005. Risky business? Entrepreneurship in the new independent-power sector. *Administrative Science Quarterly*, 50: 200–232.

Stinchcombe, A. L. 1965. Social structure and organizations. *Advances in Strategic Management*, 17(1): 229–259.

Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3): 571–610.

Suddaby, R., Elsbach, K. D., Greenwood, R., Meyer, J. W., & Zilber, T. B. 2010. Organizations and their institutional environments - Bringing meaning, values, and culture back in: Introduction to the special research forum. *Academy of Management Journal*, 53(6): 1234–1240.

Sullivan, L. 1924. *Autobiography of an Idea*. New York: American Institute of Architects Press.

Sullivan, L. 1979. The tall building artistically considered. *Kindergarten Chats and Other Writings*. New York: Dover.

Swaminathan, A. 1996. Environmental conditions at founding: A trial-by-fire model. *Academy of Management Journal*, 39(5): 1350–1377.

Tafuri, M. 1980. *Architecture and Utopia: Design and Capitalist Development*. Cambridge: MIT Press.

Tafuri, M., & Dal Co, F. 1976. *Modern Architecture/1*. Milan: Electa.

Tan, J., Shao, Y., & Li, W. 2012. To be different, or to be the same? An exploratory study of isomorphism in the cluster. *Journal of Business Venturing*, 28(1): 83–97.

Thornton, P. H. 2002. The rise of the corporation in a craft industry: Conflict and conformity in institutional logics. *Academy of Management Journal*, 45(1): 81–101.

Thornton, P. H., Jones, C., & Kury, K. 2005. Institutional logics and institutional change in organizations: Transformation in accounting, architecture, and publishing. *Transformation in Cultural Industries*, 125–170.

Thornton, P., & Ocasio, W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1999. *The American Journal of Sociology*.

Thornton, P., Ocasio, W., & Lounsbury, M. 2012. *The Institutional Logics Perspective: A New Approach to Culture, Structure, and Process*. Oxford: Oxford University Press.

Von Nordenflycht, A. 2007. Is public ownership bad for professional service firms? Ad agency ownership, performance, and creativity. *Academy of Management Journal*, 50(2): 429–445.

Von Nordenflycht, A. 2010. What is a professional service firm? Toward a theory and taxonomy of knowledge-intensive firms. *Academy of Management Review*, 35(1): 155–174.

Weber, K., Heinze, K. L., & DeSoucey, M. 2008. Forage for thought: Mobilizing codes in the movement for grass-fed meat and dairy products. *Administrative Science Quarterly*, 53(3): 529–567.

Weick, K. E. 1993. The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38(4): 628.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 2005. Organizing and the process of sensemaking. *Organization Science*, 16(4): 409–421.

Westphal, J. D., & Zajac, E. J. 2010. Decoupling policy from practice: The case of stock repurchase programs. *Administrative Science Quarterly*, 46(2): 202–228.

Wowak, A. J., Mannor, M. J., Arrfelt, M., & McNamara, G. 2016. Earthquake or glacier? How CEO charisma manifests in firm strategy over time. *Strategic Management Journal*, 37: 586–603.

Xu, D., Lu, J. W., & Gu, Q. 2014. Organizational forms and multi-population

dynamics: Economic transition in China. *Administrative Science Quarterly*, 59(3): 517–547.

Zimmerman, M. A., & Zeitz, G. J. 2002. Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27(3): 414–431.

CHAPTER 2

"Do as We Say, *and* as We Do": Client-Firm Isomorphism and the Expanded Organizational Field

STERLING: I just got off the phone with Lee Garner, Jr. He's going to stop by. We're gonna have to have a Christmas party, a real one.

PRYCE: How did that happen?

STERLING: It happened. In fact, he was offended that we hadn't invited him already.

PRYCE: I know that you've lived your life from a bottomless pocket, but there's a very real system of money coming in versus money going out. Overtime, supplies being used carelessly, leaving the lights on, parties, it adds up.

STERLING: Listen, Olivier, aren't you the one who's always talking about how Lucky Strike is 99 percent of our business or something?

PRYCE: We have Pond's…What about our other clients?

STERLING: We have no other clients. If Lee Garner, Jr. wants three wise men flown in from Jerusalem, he gets it.

--McMillan, T., Weiner, M., and Uppendahl, M. (2010, Aug. 1). "Christmas Comes But Once a Year." In *Mad Men*: AMC.

2.1: INTRODUCTION

Scholars of professional service firms (PSFs) are increasingly interested in the interaction of clients and the organizations they hire (Anderson-Gough, Grey, and Robson, 2000; Malhotra and Morris, 2009; Lawrence, Malhotra, and Morris, 2012). Previous research has examined how clients can contribute to knowledge within the firm (Fosstenløkken, Løwendahl, and Revang, 2003), how departures of managers in both client and focal firms may trigger a dissolution of the firm-client relationship (Broschak, 2004), and how a geographically distant client's preference for face-to-face meetings may lead a firm to establish branch offices (Malhotra and Morris, 2009). One strand of this research has built on the notion of "client capture," which suggests that when PSFs are dependent on a given client, they may, in fact, be "captured" and controlled by those that hire them (Johnson, 1972; Leicht and Fennell, 2008), and may as a

result transgress ethical boundaries (Gunz and Gunz, 2008; Dinovitzer, Gunz, and Gunz, 2014), or accept working arrangements that are not necessarily in the long-term interests of the firm (Malhotra and Morris, 2009). Much of the extant research on client capture therefore approaches the phenomenon of client capture as something to be resisted or evaded, a condition that leads a firm to enter into unfavorable contracts (Malhotra and Morris, 2009) or to abandon professional responsibility by succumbing to the pressure to tell clients "what they *want* to hear rather than what they *ought* to hear" (Dinovitzer et al., 2014: 99).

As a result, we know relatively little about the ways in which the influence of clients may contribute to the *success* of PSFs, and how that influence may shape firms' organizational structures and strategies; few empirical studies deal with either of these issues. I address this gap in the literature through a longitudinal study of architecture practice in Chicago, from 1928 to 2000, a period that begins just before the onset of the Great Depression, and concludes before the attacks of September 11th, 2001. The period includes periods of great turbulence and economic hardship, as well as other periods of prosperity and stability, and it therefore provides a varied and robust source of data on architecture practice in a major metropolitan area. Over the course of the period of study, new dominant client groups would emerge (Jones et al., 2012), and architecture firms would be forced to adjust both to new patrons and to demands for new and different kinds of architectural services. I suggest that this transformation of what was being asked of architects would trigger a similar change in how architects responded to these demands and to the clients making them, and that we might expect to find isomorphic pressure (DiMaggio

and Powell, 1983; Haveman, 1993) exerted by clients onto the firms they contract, especially in cases in which a firm has grown dependent on a single client or client type for operating capital. That is, the logic of institutional theory might lead us to expect specialist firms to work *like* those they work *for.* There is some preliminary evidence to support this notion. For example, the journal of the American Bar Association noted that corporate law firms are increasingly adjusting management-level job titles within their own firms to match those used by their clients (Filisko, 2014). In such shifts, the title of "managing partner," for example, is recast as "CEO", a title that presumably resonates more effectively with corporate clients, signaling both the importance of that figure within the law firm´s organizational structure, and the institutional legitimacy of the organization itself as a mirror image of the corporate firm. Lawrence, Malhotra, and Morris's (2012) study of British law firms also suggested that corporate clients' management logics and terminology can be transferred to the firms they hire. Similar pressures may also be observed in the public and nonprofit sectors; Bennett and Savani (2011) showed that British charity organizations often grew dependent on government contracts, and therefore adapted their organizational missions, structures, and internal performance metrics to fit those of their end "clients": agencies of the state.

Although the importance of the client-firm dynamic is implicit in both the neo-institutional and the emerging body of strategy-as-practice literature (Jarzabkowski, 2008; Jarzabkowski and Spee, 2009; Feldman and Orlikowski, 2011; Vaara and Whittington, 2012), we nevertheless find relatively little discussion of this relationship, and less still on isomorphic pressures between client and contracted firms. Within the strategic management literature,

Christensen and Bower (1996) found that customers' demands for improvements to existing technologies systematically discouraged leading firms from developing new technologies that did not yet have a customer base. Although Christensen and Bower deal with the failure of leading firms, their notion of "customer power" would seem at least to hold out the possibility that this power might in certain circumstances impel firms toward greater innovation and change rather than merely shackling them to established technologies and routines. This would, in turn, suggest that over time, firms can succeed not only by responding to the needs of clients but also—and perhaps unintentionally—by adopting their organizational forms, strategies, and cultures.

This study represents a longitudinal, empirical test of client-firm isomorphism among PSFs. It contributes to our understanding of PSFs not only by examining the relationship of architecture firms and the patrons that commission them, but also by expanding the organizational field to include the client or client group as a possible source of isomorphic pressure, and by examining the client-firm relationship within field-level dynamics, as well as those at the level of the individual firm.

2.2: THEORY AND HYPOTHESES

Institutional theory constitutes a central framework for understanding the relationship of organizations to their environments (Mizruchi and Fein, 1999; Dacin, 2002; Heugens and Lander, 2009). Yet one of the pillars of institutional theory—the concept of isomorphism—is seen to have somewhat limited applicability for the study of strategic management. Isomorphism refers to the tendency for organizations within a given field to resemble one another

(Hawley, 1968; Hannan and Freeman, 1977; DiMaggio and Powell, 1983), and the discussion surrounding this phenomenon tends to stress the significance of environmental and social factors in the evolution of organizations, deemphasizing the importance of managerial agency, and highlighting the tendency of firms to come to resemble one another and to become resistant to change (Chizema and Buck, 2006). Indeed, isomorphism is often examined as something to be resisted or subverted (Oliver, 1991; Alvarez, Mazza, Pedersen, and Svejenova, 2005; Tan, Shao, and Li, 2013), or as a phenomenon essentially antagonistic to innovation and change (Dacin et al., 2002). It is my goal in this paper to propose a model of isomorphism that may also explain dynamism and the diversity of organizations within a given population. This model is based on three assumptions: first, that the organizational field as defined by DiMaggio and Powell (1983) may logically be expanded to include a firm´s primary clients; second, that firms may develop isomorphically with respect to these clients, and third, that managers may play an important role in this process of isomorphism by making strategic decisions about which types of clients to service, and whether or not to become specialists in a given client type. Further, I argue that isomorphic pressures can at times be resisted, misinterpreted, or ignored altogether, creating a diversity of firms and a diversity of modes and degrees of isomorphism. With isomorphism defined in this way, it may be possible to achieve a somewhat richer integration of this central element of institutional theory within the field of strategic management.

2.2.1: Isomorphism

Mizruchi and Fein (1999) have suggested that interpretations of DiMaggio and Powell's (1983) study of institutional isomorphism have consistently focused on a narrow portion of the broader argument. Indeed, it is perhaps misleading to discuss isomorphism as a single concept, given the multifaceted description provided by the authors. DiMaggio and Powell first distinguish between competitive and institutional isomorphism, arguing that the former refers to the tendency of firms to adopt similar structures in the face of competition in the market, while the latter deals with pressures for conformity that derive from firms´ need for legitimacy. It is this latter form of isomorphism—itself broken down into coercive, mimetic, and normative modes—that concerns me here. We encounter evidence of *coercive* isomorphism in Dacin's (1997) study of Finnish and Swedish language newspapers in Finland, which supported Stinchcombe's (1965) assertion that the circumstances of founding left lasting imprints on organizations.

Haveman (1993) developed a model of *mimetic* isomorphism, finding that new firms tend to imitate successful exemplars in their sectors, arguing that a density of like organizational forms tends to confer legitimacy. Brouthers et al. (2005) also found evidence to support a model of mimetic isomorphism in their study of emerging market exports, finding that emerging exporters imitating the strategies of firms in their host countries were likely to achieve better results than those that pursued strategies unlike those habitually found in host markets. Tan et al. (2012) showed that within geographic clusters of like firms in China, newcomers were likely to adopt both institutional and strategic similarities with the bulk of firms within the cluster, while more established firms could

successfully experiment with strategic innovations. Greenwood et al.'s (2002) study of changing norms in Canadian accounting practices not only provides a compelling case of *normative* isomorphism, but it also presents a case in which the power of professional associations was directed not toward generating stasis but instead toward creating gradual but significant change in the institutional field. DiMaggio and Powell develop hypotheses based on each of these modes of isomorphism, but it is the two hypotheses based on coercive isomorphism that concern me in the present study: first, the authors suggest that the more an organization depends on another organization, the more it will come to resemble that organization in "structure, climate and behavioral focus" (405). They use the example of organizations that become dependent upon given suppliers or distributers to illustrate this hypothesis, arguing that these organizations invest in transaction-specific investments in order to facilitate their relationships with these crucial suppliers, thus transforming themselves in their image. This idea is further developed their second hypothesis: the more centralized a given firm´s resource supply is, the more that firm will change isomorphically to resemble the organizations that provide the bulk of those resources. I will explore and extend the implications of this hypothesis below.

2.2.2: Client-Firm Isomorphism and the Expanded Organizational Field

DiMaggio and Powell (1983) defined the organizational field as being constituted by "those organizations that, in the aggregate, constitute a recognized area of institutional life" (1983: 148). Such a field includes the network of suppliers, regulators, competitors, and consumers within which the individual firm operates, as well as the broader population of firms engaged in similar activities; the organizational field therefore includes "the totality of

relevant actors" (1983: 148) surrounding a given firm. The organizational field thus comprises the web of relations in which a firm exists, and within which standards of legitimate or expected practices are established and enforced (Greenwood and Hinings, 1996; Greenwood et al., 2002; Smets, Morris, and Greenwood, 2012).

From a PSF standpoint, the organizational field describes a complex web of institutional forces emanating from professional organizations and licensing bodies and regulators. PSFs may also be coerced to behave in a certain manner either out of a shared, disciplinary sense of professional propriety, or through the example of other PSFs in the same field (Sherer and Lee, 2002; Greenwood et al., 2002; Scott, 2008; Suddaby and Viale, 2011; David, Sine, and Haveman, 2013). Despite the rich body of research on PSFs and their institutional context, and notwithstanding DiMaggio and Powell's mention of consumers in their description of the institutional field, few studies of PSFs (eg., Jones et al., 2012) have included the client as part of the institutional field. Given that PSFs are quite clearly dependent on their primary clients and customers for resources, and because an architecture firm's clients often determine the budget, programmatic requirements, deliverables, and schedule of the work to be completed, it seems logical to include the client-firm relationship within the architect's organizational field. The client is indeed a "relevant" actor in this context. According to DiMaggio and Powell (1983), the more an organization depends on another in the organizational field for resources, the more it will come to resemble that second organization. If we broaden the organizational field to include primary clients and customers, then we would expect to find that specialist firms that depend on a given client or

client type for a majority of its operating capital may develop isomorphically with respect to these clients.

Leicht and Fennell (2008) have suggested that the professions of accounting, healthcare, and law have undergone radical transformations, in part because of a shift in professionals' relationships with clients. Instead of attracting and luting individual clients, Leicht and Fennell argue, the professions must now compete for pools of clients in a competitive price-based market. As a result, the status and the ethical authority of the professions are eroded. The case described by Leicht and Fennell involves a shift at the level of the entire profession, one based in large part on the kinds of clients being pursued (from individual to class), and the strategies needed to lure these clients (from competition based on expertise, to competition based on price). In a similar light, we may expect to observe individual firms undergo structural and strategic shifts in response to new dominant clients or client groups. Therefore:

> ***Hypothesis 1 (H1):*** *PSFs that specialize in a given client type will develop greater structural and strategic similarities with their clients than will their non-specialized counterparts.*

2.2.3: Isomorphism and Diversity within Fields

Hypothesis 1 suggests that clients or client types should be considered part of the organizational field (Jones et al. 2012), and that this may be especially relevant in the context of PSFs, where clients often come to play an important role in defining the content and pacing of professional work (Mills and Morris, 1986). Malhotra and Morris (2009), however, suggested that scholars should not treat PSFs monolithically, but should instead distinguish among PSFs in different fields. These fields, the authors argue, may differ in three dimensions:

the nature of knowledge in a given professional field, the nature of jurisdictional control over work in that field, and the nature of the relationship with clients. In the case of architecture, all firms in a given geographical area—such as those examined here—can be said to share the first two of these three dimensions; the nature of disciplinary knowledge and the jurisdictional boundaries surrounding professional practice are unlikely to change from firm to firm within a population. Clients and dominant client bases, however, *do* vary within the population, as does the degree to which a firm may rely on a given client or client type. I therefore suggest that we may, in fact, find additional heterogeneity among PSFs within the same field, beyond the field-level heterogeneity identified by Malhotra and Morris: architecture firms that specialize in a single client type are likely to differ in structure and strategy from those with a broader client base; and among specialist firms, those focusing solely on a given client type are likely to differ from those specializing in another.

Preliminary support for this idea can be found in Pinnington and Morris's (2002) study of changing management archetypes and ownership forms in architecture firms. According to the Pinnington and Morris, the shift from partnerships to private corporations can be linked to a similar move from the "P^2" archetype of firm management (Greenwood, Hinings, and Brown, 1990), to a "Managed Professional Business" (MPB) archetype (Cooper, Hinings, Greenwood, and Brown, 1996). The MPB management archetype, in turn, is associated with the effort by firms to emulate or relate to their clients. By "stressing the idea of being a business, just as the client is, rather than being a professional firm distinctive from the client," MPBs establish "a new form of identification with the client" (Pinnington and Morris, 2002: 207). The MPB thus

allows firms to establish a “business-like” approach, suggesting both competence and a world-view shared by their clients: “They are aware of what clients want,” Pinnington and Morris write, “and the fact that the professional firm is organized in a similar way to other companies is promoted as being further evidence of their compatibility” (2002: 207). There are two direct implications of Pinnington and Morris’s study, and a third, which can be inferred: first, the study suggests that ownership mode may be linked to firm strategy and structure; and second, that firm strategy and structure can at times be devised in order to demonstrate or to enact compatibility with clients. And though the authors consider only the case in which the client is itself a business, one might also expect architecture firms with other client types (individuals, governments, NGOs, etc.) to act similarly, and to adopt structures and strategies that both facilitate and embody compatibility. Therefore:

> ***Hypothesis 2 (H2):*** *Specialist firms servicing a given client type will differ in structure and strategy from specialist firms that service other client types.*

2.2.4: Legitimacy and Efficiency

Weber (1968) argued that bureaucratic organization had triumphed because it was technically superior to other organizational forms; bureaucracy could, according to Weber, allow organizations to work more efficiently, precisely, predictably, and cheaply than other modes of organization. “The fully developed bureaucratic apparatus,” Weber wrote, “compares with other organizations exactly as does the machine with the non-mechanical modes of production.” (Weber, 1978: 973) One of the key contributions of neo-institutional theory was to suggest that the tendency to employ the bureaucratic structures described by

Weber—or, indeed, to adopt any organizational form—may have little or nothing to do with efficiency (DiMaggio and Powell, 1983) and may, in fact, contradict the aims and efficient operation of the firm (Meyer and Rowan, 1977). Instead, organizations may face pressure to conform to accepted organizational forms and practices in order to be seen as legitimate. Meyer and Rowan suggest that conformity pressures may contradict efficiency and as a result, firms may elect to "decouple" their formal, outwardly visible structure from the actual functional reality within. That is, firms may elect to act in ways that do not conform to institutional norms, but may also elect to hide that nonconformity behind a façade of perfect decorum.

I suggest that the mode of client-firm isomorphism described in this study may simultaneously respond to both of these competing pressures, providing both efficiency and legitimacy. Firms that adopt structural, strategic, and cultural traits of their clients may therefore respond to "myth and ceremony" (Meyer and Rowan, 1977) while also pursuing "precision, steadiness, and speed" (Weber, 1978: 974). If, for example, a structural engineering firm conducts the vast majority of its work for a single organization, we might expect the consulting engineers to adopt certain measures to ensure a harmonious relationship with the contracting firm; the engineers might eventually invest in similar software packages, develop specialized knowledge related to projects undertaken by their clients, come to agree on certain unspoken ethical positions, and employ similar project team structures. The engineers might move their offices to be closer to the contracting firm. They might even begin to dress and talk like those who contract their services, if only to be better

understood by the contracting firm, or merely as the unintended result of having interacted extensively over time.

The process through which a firm comes to resemble its primary client or clients may therefore provide both operational efficiency, through investment in knowledge and technology needed for effective daily operations, and institutional legitimacy in the eyes of clients, by adopting structures and practices that are familiar and reassuring to them. In the case of architecture firms, being perceived to be legitimate in the eyes of clients is a necessary (but not sufficient) precondition for perceived legitimacy within the profession itself, as the ability to undertake architectural work is dependent in part on having earned clients' trust. In order to establish a practicing architecture firm recognized as "legitimate" within the discipline, one must generally have undertaken architectural work; in order to undertake such work, firms must have clients; and in order to attract clients, firms must appear to be both legitimate and trustworthy. We may therefore be able to identify as "legitimate" those firms receiving recognition in leading architectural journals and guidebooks, or having received honors from the leading professional organization. Efficient firms, meanwhile, are those that survive, as an inefficiently operated firm is unlikely to last in a competitive market for long. Therefore:

> ***Hypothesis 3a (H3a):*** *Firms that develop structural or strategic similarities with their clients will be more likely to receive professional recognition for their work than those that do not do so.*
>
> ***Hypothesis 3b (H3):*** *Firms that develop structural or strategic similarities with their clients will have lower failure rates than those that do not do so.*

2.3: METHODS

2.3.1: Sample

This study is based on longitudinal data on the complete population of Chicago architecture firms engaged in practice from 1928 to 2000, a total of 3,882 firms and 41,099 individual observations (see Chapter 1). As no single, comprehensive source of data on architecture firms exists over this period, I assembled the sample through a range of archival sources, including Chicago commercial telephone directories for each year of the study; membership applications, dues bookkeeping logs and Architects' Record Questionnaires from the Chicago chapter of the American Institute of Architects (AIA); the *American Architects Directory*, published by the AIA in 1956, 1962, and 1970; the *ArchiPages* directory, published annually by the Chicago AIA chapter from 1990 to the present; the 1956 reference book *Biographical Dictionary of American Architects (Deceased);* the obituary archives of the *Chicago Tribune* and *New York Times;* Columbia University's *Avery Index to Architectural Periodicals*; the *AIA Guide to Chicago Architecture*; the City of Chicago Historic Resources Survey; and military records from the US Department of Defense and Department of Veterans' Affairs. I gathered data on the sociopolitical and economic climate over the period of study from the Economic Research Division of the Federal Reserve Bank of St. Louis; the *Statistical Abstract of the United States*, published annually by the US Department of Commerce, and the book *Historical Statistics of the United States: Colonial Times to 1970*, published by the US Department of Commerce in 1976.

2.3.2: Dependent and Independent Variables

Hypothesis 1 predicts a relationship between organizational traits of clients and focal firms, and the dependent variable is therefore defined as *isomatch*: instances in which firms and clients share key organizational traits. Independent variables for H1 are firm specialization generally, as well as specialization within different client sectors. Hypothesis 2 proposes that firms specializing in different client types will adopt different organizational traits, with organizational traits as dependent variable, and client specialty as the independent variable. Hypothesis 3a suggests a relationship between a dependent variable measuring professional recognition, and an independent variable measuring *isomatch,* per H1. Hypothesis 3b predicts a relationship between a dependent variable measuring firm survival and the independent variable *isomatch*, also per H1. Below, I explain the operationalization of these variables, as well as the sub-variables needed to arrive at the final measures.

Isomatch. The central measure of this study records instances in which clients and focal firms share certain organizational traits. Among architecture firms servicing a given client type, those that adopted organizational traits prevalent within that client type were assigned a value of 1, and those not adopting those traits were assigned a value of 0. In order to construct this variable, it was first necessary to develop a number of sub-variables measuring client types and traits. A description of these sub-variables follows below, as well as a description of what constitutes an instance of firm-client isomatch within the different client types:

Client Types. The 2012 AIA Survey Report on Firm Characteristics describes three broad categories of architectural work: residential, commercial,

and institutional (AIA, 2012). Residential work, according to the report, includes single-family and multi-family work as well as home improvements. Commercial work includes retail, hospitality, office, manufacturing and distribution facilities. Institutional projects, according to the AIA's categorization, include health care, education, government, cultural, transportation, and religious architecture. I use these three broad categories to describe three general client types, and add to these categories a separate variable for those firms engaged in military construction. I include this variable because at certain moments over the period of study, military clients would become increasingly important sources of large commissions and in turn, of operating capital (Cohen, 2011, see Chapter 1) and because the organizational characteristics of the military can be considered distinct from those bundled together in the "institutional" client type.

Specialists. According to the AIA, a specialist firm is one in which one client type accounts for at least 50% of firm billings (AIA, 2012). Detailed information about billing was unavailable for most firms in this study, and I therefore used firm strategy to classify firms as specialist or generalists (Mezias and Mezias, 2000). I considered a firm to be a specialist if it undertook projects in no more than two of the client types mentioned above. I created variables for specialist firms working with each of the 4 client types.

Hypothesis tests for H2 involve three firm-level traits, and and their relative prevalence among specialist firms in the four categories described previously. I chose traits that reflect structural, strategic, and institutional characteristics of firms:

Ownership. Pinnington and Morris (2002) argued that the ownership structures employed by architecture firms can reflect underlying organizational

archetypes. I therefore use ownership to describe a structural characteristic of firms. I distinguish among four types of ownership: sole proprietorship, partnership, limited liability partnership (LLP) or limited liability company (LLC), and corporation.

Multidisciplinarity. Greenwood, Suddaby, and Hinings (2002) described the gradual acceptance of multidisciplinary practices in Canadian accounting firms, defining the multidisciplinary firm as those offering “an extensive array of services” besides traditional accounting services (2002, p. 58). I therefore distinguish between architecture firms offering services beyond traditional architectural services (engineering, project management, interior design, or urban design, for example), and those that offer only architectural services. This measure therefore captures an important dimension of a firm’s strategy.

AIA Membership. The American Institute of Architects is the largest professional association of architects in the United States. Membership in the AIA, however, is not mandatory in order to practice in the United States, and we may therefore consider the decision to join the association to be, in part, an effort to project institutional legitimacy. I distinguish between those firms with at least one principal member of the AIA, and those with no such affiliation.

Isomatch, Traits, and Client Types. I paired each client type with a salient organizational trait in the focal firm. For firms engaged in residential, commercial, and military work, I used ownership structure as the paired client trait. A *residential* client is in many cases an individual, rather than an organization, and I therefore consider a residential firm adopting a sole proprietorship ownership structure to embody and instance of client-firm

isomorphism. A residential firm organized as a corporation, however, would be recorded as a case of divergence between firm and client.

The *commercial* category, as defined by the AIA, includes corporate, industrial, and retail work. While corporate work is, by definition, commissioned by a corporation, this ownership form is by no means universal among the several client types grouped together under the AIA “commercial” label. It is nevertheless possible to identify a shared ethic among commercial client types, and this is most frequently linked to market logics. That is, commercial clients are, above all, commercial. Pinnington and Morris (2002) found that architecture firms adopting a corporation ownership structure were more likely than others to embody market logics, instead of a professional or disciplinary logic. I therefore consider a commercial firm to have developed an isomorphic similarity with its client when it employs a corporation ownership structure.

Architecture firms engaged in *military* work, however, are not necessarily linked to any single ownership structure, as the military itself does not necessarily embody logics associated with ownership models. Huntington (1957) described the military officer as a professional, operating within an area of defined expertise, with responsibility over a clearly demarcated jurisdiction, and with an understanding of his or her belonging to “a group apart from laymen.” (1957: 10). Huntington thus describes the military attitude to be highly collectivist, one that defines the group not necessarily as the sum of individuals, but rather as a body distinct from other unlike bodies. We might thus define an instance of client-firm isomorphism to be one in which architecture firms adopted an ownership structure that deemphasized the role of the individual author by employing either a corporation, partnership, or LLP/LLC ownership

structure. An architecture firm engaged in military work while employing the sole proprietorship ownership form, would therefore be considered a case of firm-client divergence.

Firms that undertake work with *institutional* clients may be somewhat more difficult to categorize, as the institutional category, as defined by the AIA, is quite broad; institutional clients may commission architects to design primary and secondary schools, post offices, courthouses, jails, houses of worship, sports facilities, leisure centers, airports, and rail stations. These disparate project types suggest a somewhat disparate client logic or logics. The list of possible institutional clients, however, does share a position of institutional authority over a given domain. Governments and government agencies, religious organizations, and other non-governmental organizations depend on legitimacy claims in order to effectively and continuously exercise power within their domain. I therefore associate institutional work with those architecture firms that join the central institution conferring professional legitimacy, the AIA.

Professional Recognition. I considered a firm to have achieved recognition for its work when firm principals received the highest honor of the AIA, or when a firm's work was featured in architectural guidebooks, municipal landmark listings, or in journals listed in the *Avery Index to Architectural Periodicals*.

Firm Failure. Firms that ceased professional activity in a given year were considered to have failed. I consider failure to include exit, or subsuming of a firm within another firm that maintains its previous name. I also considered a firm to have failed if its partners disbanded and continued to practice individually or with new partners.

2.3.3 Control Variables

I included four additional variables to control for other factors that may contribute to client-firm isomorphism, or to the relative success and survival rates of firms that have developed isomorphically with respect to their clients:

Large firms may be better equipped than small firms to undertake big, complex architectural projects and to deal with large institutional or corporate clients (Hitchcock, 1947; Boyle, 1977) Small firms, on the other hand, may be better equipped than larger firms to deal with the high degree of customization and client “hand-holding” associated with residential construction(Blau, 1984). It is therefore possible that firm size may parallel that of clients. I include firm size within the models to control for this possible effect. The control variable *firm size* records the number of architects employed by a given firm in the year of observation. I used the criteria used in the AIA 2011 Compensation Report and 2012 Survey Report on Firm Characteristics to develop a four-tier classification system of firm size. Firms with less than ten architect employees were considered to be small, firms with 10 to 50 architects were considered to be mid-sized; firms with 51 to 100 architects were considered to be large; and firms with more than 100 architects were considered to be extra-large. Quantitative data on number of employees was, however, only available for a limited number of firms in this study. In order to record the size variable for a greater proportion of the firms included in this study, I used size and complexity of projects undertaken as a proxy for firm size, where no employee count was available (Chapter 1).

New firms may lack the legitimacy, skills, and size to take on complex projects and deal with large clients. Like firm size, the control variable *firm age*

may therefore influence the degree to which a firm adopts certain client characteristic; new firms may generally be smaller than their older competitors, and they may as a result tend to work with smaller clients and commissions. In tests of H3b, firm age may help control for the possible effects of a liability of newness (Stinchcombe, 1965), adolescence (Bruderl and Schussler, 1990), or old age (Barron, West, and Hannan, 1994). Firm age is measured as the number of years since a firm's first appearance in the study.

Stinchcombe (1965) argued that founding conditions at birth may leave a lasting "imprint" on a firm. I therefore used two variables to control for environmental factors at founding that may influence firm-client isomorphism and firm survival. Carroll and Hannan's (1989) theory of density delay (see also Haveman, 1993) suggested that population density at founding may affect firm survival, and I have therefore used the variable *founding density* to record the log of the number of architecture firms per 10,000 residents in the Chicago Metropolitan Statistical area in the year of a firm's first appearance in the study. I also considered the broader socioeconomic context at birth, through the measure *lowest decile birth climate*. This variable is based on four indicators of the general environment at founding: the change in US *construction spending* with respect to the previous year; the change in US *gross domestic product* with respect to the previous year the annual seasonally adjusted civilian *unemployment rate* for each year, and the percentage of total annual US labor hours lost due to strikes and other work stoppages, as a measure of *social stability*. For each year in this study, I used the mean of the four individual climate variables described above to determine a composite variable describing the general climate. The possible values of this variable range from 1

(extremely positive environment) to 10 (extremely negative environment). Those firms born in the lowest decile of birth climate were assigned a value of 1. The remainder were assigned the value of 0.

2.4: RESULTS

Table 2.1 provides frequency statistics for the full sample, comparing the relative frequency with which firms exhibited client-firm isomorphic match ("isomatch"), as a percentage of the population in general, and among specialist firms only. The table also presents the percentage of firms with each of the four

Table 2.1: Frequency Table

VARIABLE	VALUE	FREQUENCY	PCT.
ISOMATCH (all firms)	NO	17,637	42.91
	YES	23,462	57.09
ISOMATCH (specialist firms)	NO	3,137	18.75
	YES	13,592	81.25
ISOMATCH_commercial (trait only)	NO	35,617	86.66
	YES	5,482	13.34
ISOMATCH_commercial (all firms w/commercial work)	NO	11,644	67.09
	YES	5,712	32.91
ISOMATCH_commercial (specialist firms w/commercial work)	NO	8,024	73.25
	YES	2,931	26.75
ISOMATCH_institutional (trait only)	NO	14,903	36.26
	YES	26,196	63.74
ISOMATCH_institutional (all firms w/institutional work)	NO	1,790	11.74
	YES	13,461	88.26
ISOMATCH_institutional (specialist firms w/institutional work)	NO	850	11.74
	YES	6,390	88.26
ISOMATCH_military (trait only)	NO	23,093	56.19
	YES	18,006	43.81
ISOMATCH_military (all firms w/military work)	NO	536	40.73
	YES	780	59.27
ISOMATCH_military (specialist firms w/military work)	NO	242	40.00
	YES	363	60.00
ISOMATCH_residential (trait only)	NO	18,006	43.81
	YES	23,093	56.19
ISOMATCH_residential (all firms w/residential work)	NO	7,859	44.08
	YES	9,971	55.92
ISOMATCH_residential (specialist firms w/residential work)	NO	3,155	33.35
	YES	6,305	66.65

modes of client-type isomatch, among firms working with clients in that subsector, and those specializing in that client type, as well as those firms that

employ the trait associated with isomatch in each of the client categories. For example, AIA Membership is used to operationalize isomatch for firms undertaking institutional work. The variable “isomatch_institutional (trait only)” records all firms with AIA members among the firm’s principals, whether or not these firms engaged institutional clients in their work. The below table provides initial support for the hypothesis that specialist firms will tend to adopt traits that align with their clients, and that they will do so more frequently than non-specialists (81.25% vs. 57.09%). This effect differs, however, between specialists in the four client types, with little support among commercial specialist firms: Further, it may be observed that within each client type we can generally observe a greater percentage increase in the frequency with which the isomatch trait is adopted when comparing all firms working with a given client type.

Table 2.2 presents the correlation matrix for the central variables for the variables in this study. The data show high collinearity between the general variable *specialist* and the four sub-categories of specialists in each client area. This is not problematic, as the sub-categories are never included in the same regression model as the broad *specialist* variable.

2.4.1: Isomatch and Specialization

Hypothesis 1 proposes a positive relationship between specialist firms and the likelihood of isomatch. Table 2.3 shows support for this hypothesis among all firms (Model 2), and for firms specializing in three out of the four client types (Model 3). In Model 3, coefficients are positive and significant for specialist firms in the institutional, residential, and military sectors, but are

negative and statistically significant for commercial specialist firms. We therefore find strong support for H1, with contradictory results among commercial specialists.

2.4.2: Organizational Traits and Client Types

Hypothesis 2 predicted that architecture firms specializing in different client groups would adopt different organizational traits. Tables 2.4-2.9 present the results of the tests of this hypothesis. I performed tests of firm ownership, AIA membership, and the offering of extradisciplinary services among firms specializing in each of the four sectors. Table 2.4 shows a significant and positive relationship of the sole proprietorship ownership mode and residential specialist firms. No statistically significant relationship was recorded for firms specializing in military or institutional work, while a negative and significant result was recorded for commercial specialist firms. Table 2.5 shows a significant and positive coefficient for the adoption of a partnership structure among firms specializing in institutional and military clients. The coefficient for commercial specialists, however, is statistically significant and negative, while no significant result is recorded for specialists in residential clients. Table 2.6 shows a positive and significant relationship between LLC and LLP ownership structures and firms specializing in commercial clients. Institutional and residential specialists show a negative and statistically significant result, while no military specialist firms in this study adopted the LLC or LLP ownership forms. In Table 2.7, only commercial clients had a positive and significant result for the adoption of a corporate ownership structure, with statistically significant and negative coefficients for the remaining client specialist types.

Table 2.2: Summary Statitics and Correlations

Variable	Mean	S.D.	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Isomatch	0.794	0.404	0	1														
2. Specialist_Residential	0.351	0.477	0	1	.135													
3. Specialist_Institutional	0.264	0.441	0	1	.202	-.041												
4. Specialist_Military	0.023	0.150	0	1	.066	.021	.152											
5. Specialist_Commercial	0.392	0.488	0	1	.011	.329	.187	.063										
6. Specialist	0.609	0.488	0	1	.067	.590	.480	.123	.644									
7. Ownership Structure	1.811	1.120	1	4	.122	-.159	-.105	.000	.008	-.111								
8. Extradisciplinary Services	0.271	0.444	0	1	.134	-.169	.076	.056	.051	-.063	.318							
9. AIA Membership	0.812	0.648	0	20	.253	-.062	.071	.038	.044	.002	.125	.107						
10. Recognition	0.415	0.493	0	1	.176	.095	.028	.057	-.093	.019	.065	.156	-.040					
11. Failure	0.044	0.204	0	1	-.065	.013	-.014	-.005	-.036	-.003	-.056	-.054	-.031	-.008				
12. Size	1.571	0.680	0	4	.149	-.238	.118	.160	.048	-.080	.254	.375	.121	.300	-.052			
13. Age	11.981	12.023	0	73	.082	-.049	.064	.056	.053	.013	.071	.085	.058	-.034	.005	.112		
14. Log Density at Birth	9.330	0.141	8966	9.79	-.030	.004	.030	.041	.005	.021	-.080	.011	-.027	.038	.006	.060	.116	
15.Birth in Negative Decile	0.153	0.360	0	1	-0.02	.067	.034	.010	.031	.064	-.083	-.019	-.016	.055	.014	.008	.065	.123

Table 2.3: Results of Logistic Regression of Isomatch on Specializations

	Logistic Regression		
ISOMATCH	**M1**	**M2**	**M3**
Specialist_Residential			1.30*** (0.04)
Specialist_Institutional			1.72*** (0.05)
Specialist_Military			0.92*** (0.24)
Specialist_Commercial			-0.64*** (0.04)
Specialist		1.66*** (0.06)	
Recognition	0.86*** (0.04)	0.34*** (0.04)	0.65*** (0.03)
Size	0.47*** (0.03)	-0.14*** (0.03)	0.65*** (0.03)
Age	0.02*** (0.001)	0.02*** (0.002)	0.02*** (0.002)
Log Density at Birth	0.02*** (0.004)	-0.03** (0.01)	-0.05*** (0.01)
Born in Lowest Decile of Birth Climate	-0.23*** (0.04)	-0.30*** (0.05)	-0.36*** (0.04)
N	26,406	23,804	26,406
Log-Likelihood	-12612	-9059	-11553
Chi-square	7599.37	8183.69	7153.44
Prob > Chi2	0.0000	0.0000	0.000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses		

Table 2.8 shows that residential specialists were relatively less likely than other firms to join the AIA, with a negative and statistically significant result. All other client types returned a positive coefficient, though it is worth observing that military specialist firms returned a very high coefficient (1.91, with a p-value of less than 0.0001). Table 2.9 shows a positive and statistically significant relationship between commercial specialization and the offering of extradisciplinary services. A negative and significant result was found among residential firms, and no significant result was returned for firms specializing in military and institutional clients.

Table 2.4: Results of Logistic Regression Sole Proprietor Ownership Mode on Specialization

	Logistic Regression	
SOLE PROPRIETOR	**M4**	**M5**
Specialist_Residential		0.49*** (0.03)
Specialist_Institutional		0.03 (0.03)
Specialist_Military		0.05 (0.10)
Specialist_Commercial		-0.09** (0.03)
Recognition	-0.20*** (0.04)	-0.29*** (0.03)
Size	-1.09*** (0.02)	-1.00*** (0.02)
Age	-0.003** (0.001)	-0.003** (0.001)
Log Density at Birth	0.22*** (0.004)	0.18*** (0.004)
Born in Lowest Decile of Birth Climate	0.45*** (0.04)	0.42*** (0.04)
N	26,406	26,406
Log-Likelihood	-16373	-16250
Chi-square	3252.07	3426.76
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.5: Results of Logistic Regression Partnership Ownership Mode on Specialization

	Logistic Regression	
PARTNERSHIP	**M6**	**M7**
Specialist_Residential		-0.02 (0.04)
Specialist_Institutional		0.37*** (0.04)
Specialist_Military		0.72*** (0.09)
Specialist_Commercial		-0.27*** (0.04)
Recognition	0.60*** (0.03)	0.57*** (0.03)
Size	0.83*** (0.03)	0.79*** (0.03)
Age	-0.01*** (0.001)	-0.01*** (0.001)
Log Density at Birth	-0.32*** (0.004)	-0.32*** (0.005)
Born in Lowest Decile of Birth Climate	-0.01 (0.05)	-0.01 (0.05)
N	26,406	26,406
Log-Likelihood	-12030	-11918
Chi-square	8286.07	8314.73
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.6: Results of Logistic Regression LLP/LLC Ownership Mode on Specialization

	Logistic Regression	
LLP/LLC	**M8**	**M9**
Specialist_Residential		-0.23** (0.07)
Specialist_Institutional		-0.70*** (0.08)
Specialist_Military		0.00 (--)
Specialist_Commercial		0.24*** (0.07)
Recognition	-0.46*** (0.06)	-0.40*** (0.06)
Size	-0.08 (0.04)	-0.05 (0.04)
Age	-0.01*** (0.002)	0.01*** (0.002)
Log Density at Birth	-0.27*** (0.007)	-0.27*** (0.01)
Born in Lowest Decile of Birth Climate	-0.62*** (0.09)	-0.60*** (0.09)
N	26,406	25,817
Log-Likelihood	-5591	-5508
Chi-square	10823.49	10430.23
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.7: Results of Logistic Regression Corporation Ownership Mode on Specialization

	Logistic Regression	
CORPORATION	**M10**	**M11**
Specialist_Residential		-0.68*** (0.05)
Specialist_Institutional		-0.33*** (0.04)
Specialist_Military		-0.75*** (0.13)
Specialist_Commercial		0.33*** (0.04)
Recognition	-0.11** (0.04)	-0.01 (0.04)
Size	0.57*** (0.02)	0.48*** (0.03)
Age	-0.01*** (0.001)	-0.01*** (0.001)
Log Density at Birth	-0.28*** (0.004)	-0.25*** (0.005)
Born in Lowest Decile of Birth Climate	-0.58*** (0.05)	-0.53*** (0.06)
N	26,406	26,406
Log-Likelihood	-11186	-11021
Chi-square	9486.82	9276.32
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.8: Results of Logistic Regression AIA Membership on Specialization

	Logistic Regression	
AIA MEMBERSHIP	**M12**	**M13**
Specialist_Residential		-0.58*** (0.04)
Specialist_Institutional		0.72*** (0.04)
Specialist_Military		1.91*** (0.27)
Specialist_Commercial		0.54*** (0.04)
Recognition	-0.36*** (0.03)	-0.22*** (0.03)
Size	0.93*** (0.03)	0.71*** (0.03)
Age	-0.01*** (0.001)	-0.01*** (0.001)
Log Density at Birth	-0.01 (0.004)	-0.02*** (0.005)
Born in Lowest Decile of Birth Climate	-0.28*** (0.04)	-0.28*** (0.04)
N	26,406	26,406
Log-Likelihood	-12905	-12498
Chi-square	7394.24	7250.74
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.9: Results of Logistic Regression Extradisciplinary Services on Specialization

	Logistic Regression	
EXTRADISCIPLINARY SERVICES	**M14**	**M15**
Specialist_Residential		-0.79*** (0.04)
Specialist_Institutional		0.04 (0.03)
Specialist_Military		0.16 (0.10)
Specialist_Commercial		0.50*** (0.03)
Recognition	-0.31*** (0.03)	0.49*** (0.03)
Size	1.21*** (0.03)	1.05*** (0.03)
Age	-0.01*** (0.001)	0.01*** (0.001)
Log Density at Birth	-0.34 (0.004)	-0.32*** (0.005)
Born in Lowest Decile of Birth Climate	-0.15*** (0.04)	-0.11* (0.04)
N	26,406	26,406
Log-Likelihood	-13690	-13426
Chi-square	6527.9	6566.64
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.10: Results of Logistic Regression Recognition on Isomatch

	Logistic Regression	
RECOGNITION	**M16**	**M17**
Isomatch		0.84*** (0.04)
Size	0.98*** (0.02)	0.93*** (0.02)
Age	-0.01*** (0.001)	-0.01*** (0.001)
Log Density at Birth	-0.19*** (0.004)	-0.6*** (0.005)
Born in Lowest Decile of Birth Climate	-0.39*** (0.04)	-0.43*** (0.06)
N	26,406	26,406
Log-Likelihood	-16582	-11021
Chi-square	2998.08	9276.32
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Table 2.11: Results of Cox Model Isomatch and Failure

	Cox Proportional Hazards	
FIRM FAILURE	**M18**	**M19**
Isomatch		-0.51*** (0.09)
Specialist	-0.29** (0.09)	-0.22* (0.09)
Recognition	0.03 (0.08)	0.04 (0.08)
Size	-0.32*** (0.06)	-0.33*** (0.06)
Log Density at Birth	0.12 (0.25)	0.07 (0.25)
Born in Lowest Decile of Birth Climate	0.13 (0.10)	0.11 (0.10)
N	20,091	20,091
Log-Likelihood	-4492	-4478
Chi-square	49.98	77.17
Prob > Chi2	0.0000	0.0000
*p <.05; ** p <.01; ***p<.001	standard error in parentheses	

Taken as a whole, these tests of firm-level traits and client specializations lend support to hypothesis 2, especially as related to extradisciplinary services and ownership structure. Results are less clear with respect to AIA membership, as all client type specialists except residential firms returned positive and significant results.

2.4.3: Isomatch, Recognition, and Survival

Hypotheses 3a and 3b predicted that firms sharing client traits would be more likely to receive recognition for their work, and would have a reduced failure rate. Tables 2.10 and 2.11 present the results related to these hypotheses, showing a positive and statistically significant relationship between isomatch and firm recognition, and a negative and significant relationship of isomatch and failure. Hypotheses 3a and 3b therefore receive strong support.

2.5: DISCUSSION

The goal of this paper was to broaden the relevance of the phenomenon of isomorphism to the field of strategic management, by expanding the organizational field to include the client. I focused this theoretical discussion on the complete population of architects and architecture firms engaged in professional practice in the Chicago metropolitan area, from 1928 to 2000. I posed three research questions: do specialist architecture firms develop isomorphic similarities with their primary clients more frequently than generalist firms? Do specialist firms within a population differ in structure and strategy according to the type of clients they service? And does client-firm isomorphism

contribute to a firm's success and survival over time? My results suggest that the broad answer to all three questions is affirmative, but additional insights and boundary conditions come into focus when we analyze the results in detail.

As for the first research question, the evidence supports the broad hypothesis that specialist architecture firms will more frequently tend to adopt the traits of their clients than will generalist firms. My results suggest that this tendency is significant in both relative and absolute terms: 81% of specialist firms were found to have adopted traits associated with their primary client types, as compared to 57% of all firms in the study. The latter value is noteworthy as well, as it indicates that a majority of the 3,882 firms in this study adopted client traits whether or not a firm specialized in that client type, suggesting that the phenomenon of client-firm isomorphism may be more prevalent among specialists, but is not limited to these.

When I distinguished among firms specializing in four client types, I found that isomatch was more likely among specialists in military, institutional, and residential work, but was significantly less likely among firms specializing in commercial clients. As Pinnington and Morris (2002) found that a corporation ownership structure among architecture firms tended to support a market logic, rather than professional or disciplinary logics, this result was surprising. I had expected commercial firms to employ a corporate ownership structure, because I understood their practices to be primarily aligned with market logics. One possible explanation for this unexpected result is that commercial specialist firms may tend to service clients in other sectors more often than specialist firms in other sectors, and may therefore be subject to simultaneous competing

logics; the term “specialist” as defined by the AIA (2012) requires that a single client type account for at least 50% of a firm’s billing, and therefore does not necessarily imply a monogamist dedication to a single client type. In order to check whether this was, in fact, a possible explanation, I performed a logistic regression of the single-client-type “monogamist” orientation on client type. I found that commercial specialist firms were nearly 80% less likely than other specialist firms to pursue only one type of client[7]. This finding suggests that not all specialists are created equal, and that firms may simultaneously be subject to competing and possibly contradictory isomorphic pressure from clients. I will return to this observation below.

The second research question asked whether specialist firms differed in structure and strategy according to their client specialties. In general, the results suggest that this is the case. Commercial specialist firms, for example, were significantly more likely than other specialist types to offer extradisciplinary services, a finding which also tends to support the idea that commercial specialists are frequently engaged in a broad range of work. Ownership mode also tends to vary among specialist types, with residential firms tending to adopt a sole proprietorship structure, institutional and military specialist firms tending to work as professional partnerships, and commercial specialists working more frequently as corporations or LLP/LLCs. Results for AIA membership, however, were somewhat less clear. I found that all specialist types except residential firms tended to join the AIA at a greater rate than the population in general.

[7] Results of this test available on request. Coefficient: -1.48; Odds Ratio: .22; p-value < .0001

Military specialists were especially likely to join, with a coefficient of 1.91 and a p-value of less than 0.001.

The third research question dealt with legitimacy and efficiency: DiMaggio and Powell (1983) and Meyer and Rowan (1978) suggested that these values may frequently contradict one another. The results of this study provide strong support for the hypothesis that firms adopting client traits were more frequently recognized as exemplars through publications and awards, and were also less likely to fail. This observation leads me to suggest that in certain circumstances, PSFs need not resort to strategies of decoupling (Meyer and Rowan, 1977; Boxenbaum and Jonsson, 2008) in order to achieve both legitimacy and efficiency. The notion of decoupling assumes that efficiency and legitimacy are often at odds, as firms may be expected by others in their organizational field to adopt certain postures that contradict or oppose strategic innovation. This paper suggests that specialist PSFs can harmonize the competing imperatives of legitimacy and efficiency through a close relationship with primary clients or client types; PSFs that adopt the organizational forms, technologies, and cultures of their primary clients may be better able to service those clients, and may simultaneously be considered more trustworthy and relatable.

The findings of this study also indicate that PSFs are heterogeneous within fields. That is, an architecture firm specializing in residential clients may share little with a firm dedicated solely to institutional clients. This observation extends Malhotra and Morris's (2009) description of heterogeneity between

different sectors, and it points toward a finer-grained research in PSFs that distinguishes between fields and between specializations within fields.

The results also suggest that specialist PSFs may, in fact, engage multiple client constituencies simultaneously, and therefore encounter multiple sources of isomorphic pressures. A firm may specialize in more than one type of client, or rely on a handful of clients, in several sectors. It may therefore be useful to consider the PSF not as a unitary organization, but rather as a confederation of project teams or divisions in which working groups within the organization may differ from one another. Such an organization might thus resemble a professional services M-form. Even a relatively small architecture firm with no more than a handful of employees may have, for example, a project team or partner dealing with elementary schools and day care centers, and another dealing with single family houses. Presumably these project teams might adopt different organizational structures and strategies, under the banner of a unified office name. In other cases, firms may, in essence, decouple their "legitimate" practice from the bread-and-butter. That is, firms may on the one hand aim at high-profile design work and unpaid architectural competitions; this work is likely to win professional awards and publication in top architectural journals, but may also be relatively unprofitable, as high-quality work often requires firms to dedicate overtime hours to the project that are rarely if ever passed along to the client (Cuff, 1991). On the other hand, in order to subsidize the high-profile work, firms frequently dedicate a separate division to high-margin/low-prestige work, work that is unlikely to be published or to win awards, and about which firms sometimes actively work to suppress publication, for

example, by omitting these projects from their firm portfolio and promotional material. This relatively common arrangement suggests that PSFs such as architectural offices may employ something akin to a Professional Services M-Form, even at very small scales. This topic seems a fruitful area for future work.

This study has limitations that also suggest promising arenas for further research. One of the goals of this work was to approach the question of client-firm isomorphism at the field level, rather than at the level of the individual firm. Doing so has provided a robust source of data, with over 40,000 observations and over 3,800 firms. Nevertheless, a certain amount of detail on each firm was lost when collecting longitudinal, population-wide data. A case-study approach might allow a more nuanced understanding of how, exactly, firms can come to resemble their primary clients, and would allow a study of client-firm isomorphism that uses a broader collection of client traits than those included here. Another possible limitation of this work is the generalizability of the findings, given the focus on architecture practice. Malhtora and Morris (2009) have highlighted the differences between PSFs in different sectors, based on the nature of knowledge within a profession, the jurisdiction within which professions in a given field operate, and the relationship to the client. Architecture practice shares some of these traits with consulting engineering or advertising firms, but shares relatively little, with legal or management consulting firms. Future work might test the hypotheses of this study in a broader range of research settings, both within the area of PSFs and beyond.

Research dealing with isomorphism has tended to discount the role of managers, emphasizing instead environmental and institutional pressures as

the forces primarily responsible for determining an organization's structure and strategy (Hannan and Freeman, 1977; DiMaggio and Powell, 1983). Managers and scholars of strategic management would therefore seem to have little use for the concept. The current study, however, may be of use to managers as it proposes a mode of isomorphism in which managerial decisions and external pressures interact; managers decide whether and how to specialize; they may elect to change or add target client groups, and in turn initiate new processes of client-firm isomorphism.

If we understand isomorphism in this light, as a source of dynamism and responsiveness, it may no longer describe a closed process, with competing firms drifting inexorably toward a definitive common form, with apparently limited possibility of managerial agency, or even of resistance (DiMaggio & Powell, 1983; Pfeffer & Salancik, 1978). Isomorphism might instead be understood as a process: contingent, fleeting, and forever incomplete, driving firms forward rather than anchoring them to a shared condition of stasis. This is the aim of the current work. I propose a model in which organizations gradually come to resemble their primary clients in structure and strategy, and shifting once again if managers elect seek out a new primary client base. If one no longer views isomorphic transformation as a passive process, and instead understands it to be a conscious and complex process involving environmental pressures, managerial agency, improvisation and chance, isomorphism might no longer appear to be a dead end or a fate against which managers must wage a perpetual struggle.

ARCHIVAL AND PRIMARY SOURCES:

American Institute of Architects, 2011. *AIA Compensation Report: A Survey of U.S. Architecture Firms*. Washington, D.C.

American Institute of Architects, 2012. *The Business of Architecture: 2012 Survey Report on Firm Characteristics*. Washington, D.C.

American Institute of Architects, Illinois Chapter, 1990-2000. *Archipages: AIA Illinois Firm Profiles.* Chicago: AIA Chicago.

Art Institute of Chicago, Ryerson-Burnham Library, Chicago Architects Oral History Collection. Accesed online.

Avery Index to Architectural Periodicals, Columbia University. Accessed online.

Chicago Commercial Telephone Directories, 1928-2000. Chicago: R.H. Donnelley.

Chicago History Museum Research Center, Archives of the Chicago Chapter of the American Institute of Architects; Dues-Payment Bookkeeping Logs.

-----, AIA Chicago Applications for Membership.

-----, AIA Chicago Membership Notecards.

Chicago Tribune, Obituary/Death Notice Archive. Accessed Online.

City of Chicago Historic Resources Survey, City of Chicago Commission on Chicago Landmarks. Accessed online.

Federal Reserve Bank of St. Louis, Archival Federal Reserve Economic Data, Economic Research Dvision.

Historical Archives of the American Institute of Architects, Architects' Record Questionnaires, 1946, 1947, 1953. Accessed online.

Koyl, G. 1955. *American Architects Directory*. New York: American Institute of Architects/Bowker.

-----, 1962. *American Architects Directory*. New York: American Institute of Architects/Bowker.

-----, 1970. *American Architects Directory*. New York: American Institute of Architects/Bowker.

New York Times. Obituary/Death Notice Archive. Accessed online.

National Archives and Records Administration; World War II War Diaries, Accessed through Fold3 platform.

-----, United States Selective Service Registration Cards, "Old Man's Draft" Registration Cards, (SSS Form 1), Accessed online.

-----, Muster Rolls and Personnel Diaries of US Navy Ships, Stations, and Other Naval Activities, Accessed online.

-----, United States Department of Veterans' Affairs, BIRLS Death Files, 1850-2010. Accessed online.

-----, United States World War II Navy Muster Rolls, 1938-1949. Accessed online.

-----, United States Navy Cruise Books, 1918-2009. Accessed online.

Sinkevitch, A. 2000. *AIA Guide to Chicago Architecture.* Orlando: Harvest.

United States Census Bureau, 1928-2000. *Statistical Abstract of the United States.* Washington, D.C.

United States Department of Commerce, 1976. *Historical Statistics of the United States: Colonial Times to 1970*. Washington, D.C.

Withey, Henry F. and Withey, Elsie Rathburn. 1956. *Biographical Dictionary of American Architects (Deceased).* Los Angeles: New Age Publishing.

REFERENCES:

Alvarez, J., Mazza, C., Pedersen, J., & Svejenova, S. 2005. Shielding idiosyncrasy from isomorphic pressures: Towards optimal distinctiveness in European filmmaking. *Organization*, 12(6): 863–888.

Anderson-Gough, F., Grey, C., & Robson, K. 2000. In the name of the client: The service ethic in two professional services firms. *Human Relations*, 53(9): 1151–1174.

Barron, D., West, E., & Hannan, M. 1994. A time to grow and a time to die: Growth and mortality of credit unions in New York City, 1914-1990. *American Journal of Sociology*, 100(2): 381–421.

Bennett, R., & Savani, S. 2011. Surviving mission drift: How charities can turn dependence on government contract funding to their own advantage. *Non-Profit Management and Leadership*, 22(2): 217–231.

Blau, J. 1984. *Architects and Firms*. Cambridge: MIT Press.

Boxenbaum, E., & Jonsson, S. 2008. Isomorphism, diffusion and decoupling. *The SAGE Handbook of Organizational Institutionalism* (pp. 78–98).

Boyle, B. M. 1977. Architectural practice in America, 1865-1965: Ideal and reality. In S. Kostof (Ed.), *The Architect: Chapters in the History of the Profession*. Berkeley: University of California Press.

Broschak, J. P. 2004. Managers' mobility and market interface: The effect of managers' career mobility on the dissolution of market ties. *Administrative Science Quarterly*, 49(4): 608–640.

Brouthers, L. E., O'Donnell, E., & Hadjimarcou, J. 2005. Generic product strategies for emerging market exports into triad nation markets: A mimetic isomorphism approach. *Journal of Management Studies*, 42(1): 225–245.

Bruderl, J., & Schussler, R. 1990. Organizational mortality: The liabilities of newness and adolescence. *Administrative Science Quarterly*, 35(3): 530–547.

Carroll, G., & Hannan, M. 1989. Density delay in the evolution of organizational populations: A model and five empirical tests. *Administrative Science Quarterly*, 34: 411–430.

Chizema, A., & Buck, T. 2006. Neo-institutional theory and institutional change: Towards empirical tests on the “Americanization” of German executive pay. *International Business Review*, 15(5): 488–504.

Christensen, C., & Bower, J. 1996. Customer power, strategic investment, and the failure of leading firms. *Strategic management journal*, 17(September 1993): 197–218.

Cohen, J.-L. 2011. *Architecture in Uniform: Designing and Building for the Second World War*. Paris: Hazan.

Cooper, D. J., Hinings, B., Greenwood, R., Brown, J. L., Cooper, D. J., Hinings, B., Greenwood, R., & Brown, J. L. 1996. Sedimentation and transformation in organizational change: The case of Canadian law firms. *Organization Studies*, 17(4): 623–647.

Cuff, D. 1991. *Architecture: The Story of Practice*. Cambridge: MIT Press.

Dacin, M. T. 1997. Isomorphism in context: The power and prescription of institutional norms. *Academy of Management Journal*, 40(1): 46–81.

Dacin, M. T., Goodstein, J., & Scott, W. R. 2002. Institutional Theory and Institutional Change: Introduction to the special research forum. *Academy of Management Journal*, 45(1): 45–56.

David, R. J., Sine, W. D., & Haveman, H. A. 2013. Seizing opportunity in emerging fields: How institutional entrepreneurs legitimated the professional form of management consulting. *Organization Science*, 24(2): 356–377.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *Amercican Sociological Review*, 48(2): 147–160.

Dinovitzer, R., Gunz, H., & Gunz, S. 2014. Unpacking client capture: evidence from corporate law firms. *Journal of Professions and Organization*, 1(2): 99–117.

Feldman, M. S., & Orlikowski, W. 2011. Theorizing practice and practicing theory. *Organization Science*, 2(1): 71–87.

Filisko, G. 2014. New job titles reflect economic challenges, changing career expectations for lawyers. *ABA Journal*.

Fosstenløkken, S. M., Løwendahl, B. R., & Revang, Ø. 2003. Knowledge development through client interaction: A comparative study, 859–879.

Greenwood, R., Hinings, C., & Brown, J. 1990. “P2-form” strategic management: corporate practices in professional partnerships. *Academy of Management Journal*, 33(4): 725–756.

Greenwood, R., & Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *The*

Academy of Management Review, 21(4): 1022–1054.

Greenwood, R., Suddaby, R., & Hinings, C. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1): 58–80.

Gunz, H. P., & Gunz, S. P. 2008. Client capture and the professional service firm. *American Business Law Journal*, 45(4): 685–721.

Hannan, M. T., & Freeman, J. 1977. The population ecology of organizations. *American Journal of Sociology*, 82(5): 929.

Haveman, H. A. 1993. Follow the leader: Mimetic isomorphism and entry into new markets. *Administrative Science Quarterly*, 38(4): 593–627.

Hawley, A. H. 1968. Human Ecology. *International Encyclopedia of Social Sciences*. Macmillan.

Heugens, P. P. M. A. R., & Lander, M. W. 2009. Structure! Agency! (and other quarrels): A meta-analysis of institutional theories of organization. *Academy of Management Journal*, 52(1): 61–85.

Hitchcock, H. 1947. The architecture of bureaucracy & the architecture of genius. *Architectural Review*, 3–6.

Huntington, S. 1957. *The Soldier and the State*. Cambridge: Harvard University Press.

Jarzabkowski, P. 2008. Shaping strategy as a structuration process. *Academy of Management Journal*, 51(4): 621–650.

Jarzabkowski, P., & Spee, A. P. 2009. Strategy-as-practice: A review and future directions for the field. *International Journal of Management Reviews*, 11(1): 69–95.

Johnson, T. J. 1972. *Professions and Power*. London: Macmillan Press.

Jones, C., Maoret, M., Massa, F. G., & Svejenova, S. 2012. Rebels with a cause: Formation, contestation, and expansion of the de nnovo category “Modern Architecture,” 1870-1975. *Organization Science*, 23(6): 1523–1545.

Lawrence, T. B., Malhotra, N., & Morris, T. 2012. Episodic and systemic power in the transformation of professional service firms. *Journal of Management Studies*, 49(1).

Leicht, K. T., & Fennell, M. L. 2008. Institutionalism and the professions. *The SAGE Handbook of Organizational Institutionalism* (pp. 25–30).

Malhotra, N., & Morris, T. 2009. Heterogeneity in professional service firms. *Journal of Management Studies*, 46(6): 895–922.

Meyer, J., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340–363.

Mezias, J. M., & Mezias, S. J. 2000. Resource partitioning, the founding of specialist firms, and innovation: The American feature film industry, 1912-1929. *Organization Science*, 11(3): 306–322.

Mills, P. K., & Morris, J. H. 1986. Clients as “ partial” employees of service organizations: Role development in client participation. *Academy of Management Review*, 11(4).

Mizruchi, M. S., & Fein, L. C. 1999. The social construction of organizational knowledge: A study of the uses of coercive, mimetic, and normative isomorphism. *Administrative Science Quarterly*, 44(4): 653–683.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16(1): 145–179.

Pfeffer, J., & Salancik, G. R. 1978. *The External Control of Organizations*.

Pinnington, A., & Morris, T. 2002. Transforming the Architect: Ownership Form and Archetype Change. *Organization Studies*, 23(2): 189–210.

Scott, W. R. 2008. Lords of the dance: Professionals as institutional agents. *Organization Studies*, 29(2): 219–238.

Sherer, P. D., & Lee, K. 2002. Institutional Change in Large Law Firms : A Resource Dependency and Institutional Perspective, 45(1): 102–119.

Smets, M., Morris, T., & Greenwood, R. 2012. From practice to field: A multilevel model of practice-driven institutional change. *Academy of Management Journal*, 55(4): 877–904.

Stinchcombe, A. L. 1965. Social structure and organizations. *Advances in Strategic Management*, 17(1): 229–259.

Suddaby, R., & Viale, T. 2011. Professionals and field-level change: Institutional work and the professional project. *Current Sociology*, 59(4): 423–442.

Tan, J., Shao, Y., & Li, W. 2012. To be different, or to be the same? An exploratory study of isomorphism in the cluster. *Journal of Business Venturing*, 28(1): 83–97.

Vaara, E., & Whittington, R. 2012. Strategy-as-Practice : Taking social practices seriously. *Academy of Management Annals*, 6(1): 285–336.

Weber, M. 1978. *Economy and Society*. (G. Roth & C. Wittich, Eds.)*Economy and Society*. Berkeley: University of California Press.

CHAPTER 3

The Rush Job:
On the Creative Potential of Disorganization, Insubordination, and the "Do-or-Die" Deadline

During the first week that I was on duty there, I could not walk out of my office down the corridor to (Brig. Gen.) Hartman's office without being literally assailed by the officers or civilian engineers with liaison responsibility for the various camps. It is no exaggeration to state that during this period decisions involving up to $5,000,000 were made at the rate of one about every 100 feet of corridor walked. Usually four or five men would keep trailing me to take the place of the man who had first gotten hold of me…(T)hey had been completely overwhelmed with the decisions that they had to make and…they had not been able to obtain any decisions or advice or even to see their single superior, Mr. Loving, on their direct problems.

--Lt. Gen. Leslie Groves; appointed director of United States Army Quartermaster Corps, Construction Division, Fixed-Fee Branch; November 14th, 1940.

There was no question as to his ability, but his methods of working were to violate all channels.

--Col. Kenneth D. Nichols, on Groves, then director of the Manhattan Engineer District, United States Army Corps of Engineers

(Fine and Remington, 1989: 242, 677)

3.1: INTRODUCTION

When organizations are faced with high-stakes crises and "do-or-die" deadlines, individuals within those organizations may exploit the chaos and the mad rush of the moment by ignoring or evading norms of legitimate organizational behavior and formal chains of command in order to address external challenges within the insufficient time allotted (de Certeau, 1984). Through acts of creative insubordination, people may make immediate, approximate, and strategic assessments of how likely they are to be penalized for stepping outside the regular order of organizational life and how much their illicit actions are likely to

aid the cause (Jarzabkowski and Spee, 2009; Feldman and Orlikowski, 2011; Vaara and Whittington, 2012). These actions may be deliberate (Ezzamel, Willmott, and Worthington, 2001; Whittington, 2006), or they may be enacted instinctively and largely without strategic motivation (Chia and Holt, 2006). When these innovations are successful, they can ultimately be folded back into the organizations as legitimate strategies, and the actors may be further emboldened to engage in similar behavior in the future (Courpasson, Dany, and Clegg, 2012).

Organization scholars have recently turned their attention to issues of resistance within organizations (Courpasson, 2017; Mumby, Thomas, Martí, and Seidl, 2017), but this resistance is often understood to be undertaken with the goal of combating (Courpasson, 2016), delaying (Paulsen, 2015), or otherwise undermining the mission of the resisted organization (Martí and Fernández, 2013). This study examines instances in which extreme rush conditions made it possible or necessary for individuals to resist or evade organizational norms and structures in order to achieve the organization's stated objectives. Such actions, I argue, become necessary when people believe that the organization itself is behaving irrationally, inefficiently, or in a disorganized way. It is precisely these conditions that can give individuals the confidence not only that the ends of efficiency justify the illicit means used to achieve it, but also that the means themselves are unlikely to be detected or punished by the organization.

By broadening the concept of resistance in this way, I suggest that resistance need not only be a matter of opposition to the goals of the

organization (Juris, 2012), to new methods or working rules introduced within an organization (Knights and McCabe, 2000; Prasad and Prasad, 2000; Ezzamel et al., 2001; Courpasson, 2016), or a self-interested act of “making-do” or wasting time at work (de Certeau, 1984; Paulsen, 2015). People may instead engage in acts of creative insubordination, ignoring or evading their organization’s most fundamental rules and rituals in order to complete a mission understood to be central to the success of the organization itself.

Meyer and Rowan (1977) described a similar tension between the operational requirements of an organization and the “institutional myths” with which the organization must be seen to comply in order to maintain legitimacy. For Meyer and Rowan, the source of the tension—and of the temptation to decouple formal structure from actual operational efficiency—is external to the firm. That is, organizations face pressures to reconcile extrinsic institutional pressures with internal operational efficiency (Oliver, 1991). While the dynamic I identify in this study also understands efficiency to be at odds with formal structure, it is unlike Meyer and Rowan’s decoupling proposition because both of these imperatives come from within the organization itself, and not from the institutional environment outside the firm: the organization’s own self-image may be in part determined by its formal structure or hierarchy, which may in turn conflict with operational efficiency. In cases such as these, those within the organization may elect to pursue the latter at the expense of the former.

I explore this dynamic through a pair of related episodes bracketing the American engagement in the Second World War: the extensive and highly accelerated construction program for military encampments and munitions

factories executed by the US Army Quartermaster Corps (QMC) in the years immediately preceding formal American engagement in the war (1939-1941); and the conception, design, and execution of the secret city of Oak Ridge, Tennessee, under the direction of the "Manhattan Engineer District" of the US Army Corps of Engineers, where the fissile uranium-235 for the first atomic bombs was produced (1942-1945). Using data from oral histories, reports and official histories written by the United States Army Center of Military History, archival and secondary sources, I adopt an inductive, historical, interpretive approach (Vaara and Lamberg, 2016) that incorporates first-hand accounts of high-ranking military officials and official histories, as well as those provided by rank-and-file military personnel, architects, engineers, and civilians whose daily lives were affected by the extreme conditions surrounding these episodes of rapid mobilization under crisis conditions. The study therefore engages the voices of those organizing and those organized, focusing on people who ignored, evaded, or stretched the rules and norms of the organizations to which they belonged.

My analysis contributes to scholarship on organizations in two ways: First, I suggest that "do-or die" deadlines can create slack in organizational norms, and allow a more permissive climate to take hold, even (or, perhaps, especially) in highly regimented organizations such as the military. This slackening of organizational structure and culture emerges as the need for swift action becomes an existential issue, outweighing concerns about propriety and process. And while the breakdown of assumptions, hierarchies, and routines may cause panic and self-interest, the extreme time pressures generated by the

“do-or-die” deadline may, however, also provide room for creativity and improvisation that would not otherwise have been allowed in hierarchical organizations. In this climate, actors may feel justified in stepping out of line, and given the organizational chaos surrounding them, they may also feel a strong sense of impunity should they elect to do so. The second contribution of this study is to identify a mode of resistance in which the organization itself is to be resisted in the name of the goal which the organization ostensibly pursues; I describe instances in which those within organizations, driven by extreme haste and a sense of commitment to the organizations professed goals, are driven to subvert the norms of the organization itself.

Historical, interpretive analysis has proved a useful tool for examining how organizations respond to crises (Weick, 1990) and “extreme” situations (Martí and Fernández, 2013; Pina e Cunha, Rego, and Clegg, 2010). Scholars have also used an historical case study approach to study rare events (Sgourev, 2013), and how the dynamics of control and surveillance are enacted in organizations (Carmona, Ezzamel, and Gutiérrez, 2002). The present study of extreme deadlines and creative insubordination is similarly based on historical case studies, using an interpretive approach to highlight how productive resistance can emerge in the context of the “do-or-die” deadline. The goal of this study, which is based on oral histories, official historical accounts, books, and archival sources, is not necessarily to unearth new facts about the case studies in question, but rather to understand those facts through a lens that adds to our understanding of organizations under duress (Sgourev, 2013). Bamberger and Pratt (2010) called for the study of “lower-echelon employees”

and "unconventional contexts" in order to provide novel insights into organization. This study is, in part, driven by that motivation and that focus.

3.2 THEORETICAL BACKGROUND: The Do-or-Die Deadline as Tactical Resistance

Prior research has examined the effects of time constraints on work, with somewhat contradictory results; Amabile et al. (2002) argued that time constraints can limit creativity in organizations, while Lindkvist, Söderlund, and Tell (1998) found that deadlines can lead to a productive focusing of attention and collaboration across areas of expertise. Waller, Zellmer-Bruhn, and Giambatista's (2002) study of changing deadlines found that groups that had either more or lesss time to complete a creative project than they had been initially advised were more conscious of the time constraints than those whose deadlines had not been changed. The deadlines described in these earlier studies, however urgent, might well be categorized as routine time constraints; the allotted time may be limited, but it is not necessarily unreasonable. And while the consequences for missing a deadline such as this can be quite serious, they are unlikely to involve loss of human life. Deadlines are a basic fact of organizational life, but conditions of war or other sociopolitical turbulence can create a sense of urgency and time pressure that transcends that associated with ordinary deadlines; under such extreme circumstances, time constraints can become high-stakes, "do-or-die" deadlines when the timeframes are radically compressed, and when the consequences of non-compliance extend well beyond the organization itself (Blount, Waller, and Leroy, 2005).

For those involved in the development of the Manhattan Project[8], for example, the limited time allowed for completion of the atomic bomb was understood to be unreasonable, given the tremendous scientific and logistical challenges involved (Fine and Remington, 1989; Jones, 1985). And for the select few who understood the ultimate military objective of the "Development of Substitute Materials" program, failure to work quickly carried with it the risk that the weapon would be deployed first by Nazi Germany, perhaps on American soil; or that the prolongation of the war with Japan would lead the Soviet Union to come to the aid of their American allies in the Pacific, a development that the US, already contemplating the postwar balance of power and division of territory with the Soviets, wished to avoid at all costs (Gosling, 1999). Working quickly was therefore a matter of physical survival of the individual, as well as of the state, the national interest, and of the democratic values presumed to embody that interest.

At these extreme limits, then, ordinary time constraints become "do-or-die" deadlines: time is extraordinarily tight and the consequences of failure may be, quite literally, mortal to the individual and the group. Under such extreme external pressures, individuals in organizations may struggle to make sense of their surroundings and the deadline may take on characteristics of the rare event (Lampel, Shamsie, and Shapira, 2009) or crisis (Weick, 1990). Weick, Sutcliffe, and Obstfeld (2005: 409) have argued that when "the current state of

[8] The formal name of the organization in the US leading the effort to build the first atomic device was the "Manhattan Engineer District," (MED) after the New York City borough where it was initially headquartered, while the atomic project itself was given the intentionally ambiguous name "Development of Substitute Materials (DSM). For the sake of clarity, I use the popular shorthand "Manhattan Project," though it might more accurately be called the "DSM Project of the MED". Army Corps of Engineers Colonel James C. Marshall, who had been entrusted to set up the Manhattan Project, established the name "Development of Substitute Materials" (DSM). Marshall would later admit that DSM actually stood for "Distinguished Service Medal," which he had hoped to be awarded for his efforts. See Oral History of James C. Marshall, Atomic Heritage Foundation.

the world is perceived to be different from the expected state of the world," people struggle to proceed with their everyday activities and may engage in efforts at sensemaking; that is, they look for reasons to get back to work as before. Absent those reasons, Weick, Sutcliffe, and Obstfeld argued, people will either continue to observe and study the changed circumstances, or they will look for alternative modes of action, given the changed context. In his (1993) study of the "unravelling" of a paratrooping firefighter corps in the face of grave danger, Weick described an instance in which no coherent alternative mode of action could be formulated. Weick argued that routines, assumptions, and the chain of command all dissolved under pressure, using Freud's description of the breakdown of military order to characterize the dynamic: "A panic arises if a (military) group of that kind becomes disintegrated. Its characteristics are that none of the orders given by superiors are any longer listened to, and that each individual is only solicitous on his own account, and without any consideration for the rest. The mutual ties have ceased to exit and a giant and senseless fear is set free." (Freud, in Weick, 1993: 637)

For de Certeau (1984), time is a central element of challenges to structures of control. De Certeau argued that strategies "attempt to reduce temporal relations to spatial ones through the analytical attribution of a proper place to each individual element" (38). For de Certeau, then, strategy is the domain of control and power: "(t)he model was military," he notes, "before it was 'scientific.'" (38). By designating a place for everything and everybody, de Certeau argues, strategy aims to conquer time and to exert control. Tactics, on the other hand, exploit time to undermine structures of authority, and, ultimately

to reorganize physical space. According to de Certeau, tactical work can be categorized as a rapid sequence of steps or operations, able to reorganize or inflect physical space, but not to control it definitively. “(S)trategies,” de Certeau writes, “pin their hopes on the resistance that the *establishment of a place* offers to the erosion of time; tactics on a clever *utilization of time*, of the opportunities it presents and also of the play that it introduces into the foundations of power” (38-39).

The tactical mode of operation described by de Certeau may therefore allow us to understand the actions of those who, in the face of a “do-or-die” deadline, stepped outside the prescribed organizational structure and culture, not necessarily to resist the military or the goals it pursued, but instead to complete an important organizational mission by undermining or ignoring the norms that define the organization itself. It is the extreme compression of time that causes other institutional norms to relax; the organization’s ability to control itself according to its own rules and structures recedes as the external shock of the “do-or-die” deadline takes precedence, and time provides a tactical space for internal resistance.

3.3: DATA AND RESEARCH DESIGN

I collected data from a total of 35 oral histories with 40 interviewees, conducted by the Ryerson-Burnham Art and Architecture Library at the Art Institute of Chicago, the Atomic Heritage Foundation, and the Center for Oak Ridge Oral History, an organization composed of local, state, and federal organizations involved in the development and maintenance of the once-secret

atomic city of Oak Ridge, Tennessee. These oral histories, which were conducted as interviews ranging from 54 to 990 minutes, were transcribed and edited for clarity by the agencies that commissioned them. These transcripts total 5118 pages of text, documenting approximately 234 hours of interviews (see Table 1). Subjects of these oral histories include scientists, employees, and civilians who were present in Oak Ridge during the Manhattan project; architects and engineers who were involved in the design and construction of wartime facilities, including the city of Oak Ridge; as well as architects and engineers who formed part of the US armed forces during the war, but were not directly involved in the case studies described here. I have elected to include their voices in this study as they describe in vivid terms the effects that wartime stress caused on the military organization, and can provide insight on the broader context of “do-or-die” deadlines that permeated the US military during the Second World War, especially as viewed by those *being* organized, rather than those doing the organizing.

I also studied official military histories elaborated by the US Army Center of Military History (Fine and Remington, 1989; Jones, 1985; Risch, 1953). These extensive volumes (totaling over 1800 pages) were based on archival data from the US National Archives and Records Administration (NARA), including the archives of the US Army Corps of Engineers, Quartermaster Corps, War Department, and the Department of Energy. In the preparation of these official histories, archival sources were complemented by several hundred interviews with

Table 3.1: Interview/Oral History Details

SUBJECT	POSITION	DURATION (min)
1	Architect US Army, 1943-46	510
2	Architect US Navy Construction Battalions (Seabees), 1941-45	90
3	Architect	135
4	Architect US Army Corps of Engineers, 1944-45	900
5	Architect US Navy, 1945-46	420
6	Architect US Army Corps of Engineers, 1942-46	600
7 8	Electrical Engineer, Manhattan Project/Eastman-Kodak Homemaker	60
9	Architect US Army Air Forces, 1942-45	90
10	Architect	540
11	Infrastructure Planner, Consultant US Army, 1943-46	360
12	Engineer US Army, 1944-46	540
13	Architect/Engineer US Federal Housing Administration, 1941	90
14	Architect/Engineer US Army Corps of Engineers, 1944-46	720
15	Architect US Army Engineer Special (Amphibious) Brigade, 1942-45	450
16	Architect US Navy, 1943-45	990
17	Architect, Naval Architect US Navy, 1918	990
18 19	Electrical Estimator, Manhattan Project/Stone and Webster Homemaker	60
20	Architect US Army 1942-46	90
21	Architect US Army Corps of Engineers 1941-1945	720
22	Architect US Army Signal Corps, 1954-56	540
23	Architect US Army Corps of Engineers, 1942-45	540
24	Architect US Army, 1941-45	630
25 26	Construction Worker, Stone and Webster Homemaker	60
27	Physicist, Manhattan Project/Eastman-Kodak	86
28	Engineer, Manhattan Project/Kellex	95
29	Architect US Army Corps of Engineers, 1943-46	990
30 31	Physicist, Manhattan Project/U.C. Berkeley Homemaker	54
32	Architect	540
33	Architect US Army Air Forces, 1942-45	45
34 35	Personnel Director Homemaker	60
36	Architect US Army Air Forces, 1942-45	630
37	Architect/Engineer US Navy, 1941-46	810
38	Architect US Army Corps of Engineers 1942-46	180
39	Chemist, Manhattan Project/Eastman-Kodak	86
40	Architect	360

key military, governmental, and scientific figures. As relatively little has been written about the US Army construction campaign of 1939-41, my research on that period draws in large part on one of these volumes, Fine and Remington's (1989) exhaustive official history of the WWII construction activities of the Quartermaster Corps and Army Corps of Engineers. Produced under the direction of the US Army Center of Military History and originally published in 1971, Fine and Remington's text forms part of a 78-volume series produced by the US Army to document in detail the activities of the US armed forces during the Second World War. The series uses as source material "one of the largest masses of records and recollections ever produced," including over 17,000 tons of Army files and in the estimation of the Army itself, it constitutes "one of the most ambitious historical writing projects ever conducted" (Adamczyk and MacGregor, 1992: iii). I have tried to allow the voices of those individuals cited in the official military histories to emerge from the secondary sources and appear in the present study, in the first person. These voices provide accounts of how the experience of the "do-or-die" deadline was lived by those *doing* the organizing, and by those who found it necessary and expedient to resist organizational norms and structures in order to complete their missions successfully and on time.

To these sources, I also added a review of relevant books on the periods in question (eg. Hewlett and Anderson, 1962; Johnson and Jackson, 1981; Gosling, 1999) and a once-restricted 12-volume internal history of the Manhattan Engineer District, prepared by the US Atomic Energy Commission in 1948, declassified by the US Department of Energy in 2013. As before, I

focused on first-person accounts contained in these documents, and have allowed these accounts to be drawn into the current study.

Finally, I have analyzed original archival sources, including contracts and correspondence, from the archives of the Manhattan Engineer District at the NARA Atlanta archive. These documents complement the first-person and historical accounts with direct evidence of the formal conversations and contracts committed to file. At times, this official account alludes to disciplinary problems or systematic evasions of order, especially where it refers to means necessary to establish or reassert organizational control over those who had stepped outside the range of acceptable behavior. Throughout, I have maintained a dual focus: I include everyday, “minor” acts of disobedience by those being organized, and more systematic and strategic acts of insubordination or impropriety by those in middle or upper-level managerial roles.

I have allowed theory to emerge from the analysis of the above data, and used this emergent theory to suggest further areas and sources for analysis. These new sources, in turn, suggested further refinements to the theoretical model, and still more questions for additional sources, and for a reconsideration of sources already analyzed. When no further refinements to the model emerged from my analysis, I concluded the phases of data collection, coding, and theory development.

3.4 CASE STUDIES

3.4.1: Mobilization and Construction, 1939-1941

Until mobilization for the Second World War, the US had little tradition of a standing army, or any significant facilities for housing or outfitting a large military force. Indeed, suspicion of large standing armies and foreign alliances had formed part of the guiding ideology of the US since independence (Dolbeare, 1996). During conflicts such as the War of 1812, the US Civil War, or the Spanish-American War, newly mobilized troops had been housed in temporary tent cities erected in fairgrounds, racetracks, and parks. These mobilizations required relatively little technical training of soldiers or mass production of munitions, and there was as a result little need for large-scale armament factories, or for permanent structures and barracks for housing and training of soldiers before entering combat (Fine and Remington, 1989). The First World War (WWI) was different. During the mobilization of 1917-8, modern warfare had made it necessary to provide more training before sending soldiers overseas, and for that reason, a massive and accelerated building campaign was needed in order to house the rapid influx of troops (Schubert, 1995). The conscripted Army of nearly 3 million soldiers that had been assembled for the First World War (WWI) was quickly dissolved at war's end, and by 1939, the total personnel of the US Armed Forces had dropped to approximately 334,000 (United States Department of Defense, 1997). The US Army was at that time the world's 17th-largest, with an active troop population smaller than the armies of Portugal, Bulgaria, or Romania (Marshall, 1996). In the two years that preceded the formal entry of the United States into the Second World War

(WWII) in December 1941, approximately $15.6 billion was spent on military construction. Most of this total was dedicated to the construction of cantonments and munitions factories in US territory, meant to house and arm what was originally intended to be an army of 4 million, although by 1945 the total US military population would exceed 12 million. In order to prepare for this a rapid and enormous mobilization of troops, the Army would reflect on its earlier experience in preparation for WWI. That earlier campaign would therefore serve as both template and cautionary tale for the subsequent, and much more ambitious, mobilization plan in advance of American entry into WWII. I briefly describe that foundational episode before turning to the campaign of 1940-41.

3.4.1.1: *Lessons Learned (and Forgotten): Mobilization for the First World War*

As in 1940, the 1917-8 mobilization was entrusted to the Construction and Repair Division of the Army's Quartermaster Corps (QMC), the department responsible for outfitting, transporting, supplying, and housing American soldiers (Risch, 1953). As would also occur in the mobilization for the Second World War, many in the US Army Corps of Engineers (ACE) felt that their highly specialized and professionalized organization would be better able to manage the massive construction campaign than would the QMC. Having proved its capacities with the execution of the Panama Canal and a range of large public infrastructure projects around the US, the ACE had the abilities and the experience to address a nationwide construction campaign. The QMC did not. But work nevertheless remained in the hands of the QMC, as internal rivalries

within the Army and private-sector fears of an overly strengthened public construction and engineering agency made untenable any move to concentrate the mobilization work with the ACE (Fine and Remington, 1989).

The Army Corps of Engineers' skepticism would prove to be justified. When The US declared war against Germany in April 1917, the QMC was unprepared to house the rapidly assembling Army. A visitor to construction headquarters in the early days of American engagement in the war described a climate of chaos:

> There were a couple of Army officers and stenographers…Every contractor in the country was here. All those men did was to stand in front of the desk and shake hands all day…Paper was stacked high on the desks and there was confusion galore.
> (Fine and Remington, 1989: 7)

The disorder was evident to prominent architects, engineers, and contractors in the private sector, and architect William A. Starrett, president of the New York firm Starrett and van Vleck, volunteered to chair a newly-formed "Committee on Emergency Construction," staffed by a range of private sector experts with relevant experience. Starrett's first suggestions were to physically remove the Construction and Repair Division of the QMC from the headquarters of the War Department as "it (was) no fit place for a man to try to do business" and to create a new organization, to be called the "Cantonment Division" (Fine and Remington, 1989: 9). This division would, in theory at least, continue to form part of the QMC, but would in fact report directly to the Secretary of War, a major exception to the formal military chain of command. The head of this new division, Col. Isaac Littell, would be able to communicate directly with division commanders without consulting the Quartermaster General, as military

structure would require. Littell could also issue travel orders and directly appoint his own officers, also major departures from the formally prescribed military order. Civilian experts with no military background—but with relevant experience in design, engineering and contracting—were therefore commissioned as military officers. This team of civilians was “impatient with military discipline, channels of command, customs of the service, and the caution displayed by old-line officers” (Fine and Remington, 1989: 12). One of the newly inducted civilian officers, former Wall Street lawyer Evan Shelby, would later recall that after assuming his military post as head of the Contracts Branch of the Cantonment Division, he was issued a handbook of US Army regulations. He immediately dropped it in the trashcan. Shelby’s team followed four rules: “build a team, throw away peacetime yardsticks, substitute the day for the dollar; and get the job done” (Fine and Remington, 1989: 11).

By the end of the war, all mobilization-related construction, which had initially been shared by the ACE, Army Signal Corps, and the Ordinance Department, had been concentrated in the new Cantonment Division, which in less than two years spent approximately $1 billion on nearly 600 separate projects (Fine and Remington, 1989: 26). The army had been housed, and the war won. But in the years following this experience, the costs of trading “the day for the dollar” would become apparent. Congressional investigations would later allege corruption and “a veritable riot of waste and extravagance” in the Cantonment Division (Fine and Remington, 1989: 29). Most of this excessive spending arose through the use of Cost-Plus-Fixed-Fee (CPFF) contracts, a type of agreement which did not rely on competitive bidding and which the US

government had since 1861 been prohibited from using except in cases of national emergency. In 1917, Secretary of War Newton D. Baker declared that such an emergency did, in fact, exist. The use of CPFF contracts had allowed the Cantonment Division to meet its goals by hiring contractors even before plans had been drawn and sites chosen. The efficacy of the technique had become clear, as had the price associated with it.

3.4.1.2.: Mobilization for the Second World War: The Construction Campaign of 1939-1941

By the mid 1930's, political turbulence in Europe and Asia had begun to suggest that the "war to end all wars" had not done so. In 1934, Colonel Charles D. Hartman, who had served as a Construction Officer in the Cantonment Corps during WWI, returned to the QMC to assemble plans for a hypothetical mobilization for war. Most of the infrastructure constructed for WWI mobilization was not intended to last, and it had not. Hartman discovered that the Army had saved few records of what had been done to mobilize for WWI, and had not prepared drawings of standard barracks and base designs, or even formulated a clear idea of what infrastructure would be needed, should the Army be called to mobilize once again (Fine and Remington, 1989: 67-70).

In 1939, Secretary of War Harry H. Woodring warned President Roosevelt that "immediate action in defense of this Republic" was now necessary, and that the Armed Forces urgently needed "complete equipment, clothing, supplies, subsistence, transportation, training and instruction to prepare them for any eventuality" (US War Office, 1939: 5). Despite these dire warnings and the deteriorating situation abroad, Roosevelt was reluctant to request massive funding for mobilization (Schubert, 1995). Although a $175

million “Expansion Program” had begun in January 1939, Roosevelt’s initial focus in military preparedness was on increasing the production of military aircraft, noting that “runways, barracks, and schools would not impress Hitler at all” (Fine and Remington, 1989: 76). Directly contradicting Roosevelt’s express instructions to prepare a mobilization plan based primarily on airplane production, Acting Secretary of War Louis A. Johnson directed the Army to prepare a comprehensive two year plan for mobilization, worth approximately $1.8 billion, including extensive provisions for barracks and ordinance factories. Unhappy with this plan, an irritated Roosevelt insisted to his advisors that he “wanted planes” (Fine and Remington, 1989: 76-77), and that he would request no more than $500 million in military funding. Despite the challenge to his authority, Roosevelt would ultimately accept a more balanced plan, as proposed by Johnson, albeit one that fit the half-billion price tag, and not the War Department’s more ambitious scheme.

Meanwhile, the Army had still not conclusively decided which organization would be responsible for construction. The rivalry between the ACE and the QMC, which had been a major point of debate in WWI, remained an issue as another great mobilization loomed (Risch, 1953). A 1920 law had specified that all construction must be executed by the QMC, except for fortifications, which would be the responsibility of the ACE. Roosevelt and officials at the War Department, however, felt that all work should be redirected to the engineers, and began to consider designating all airfields as fortifications, in order to ensure these bases would be planned and executed by the ACE rather than the QMC (Fine and Remington, 1989: 87). One official in the War

Department would later argue that all construction-related work should be removed from the “strait-jacket organizational set-up” of the QMC, thus extricating “what is fundamentally a civilian undertaking from the dead hand of orthodox military organization” (Fine and Remington, 1989: 253). Although internal political considerations made this shift impractical for the moment, the issue of who would undertake construction was far from settled. Individual base commanders had begun executing projects on their own, without consulting Washington, and the Army Air Corps had begun to display “strong separatist tendencies” agitating for greater control of their built infrastructure (Fine and Remington, 1989: 84), and at times requesting that individual commanding officers develop expansion plans without consulting the QMC, the organization that had statutory responsibility for the task. Doubts about the QMC would persist.

Despite these internal challenges to its authority, and without a clearly articulated plan or congressional approval of construction funds, the QMC was nonetheless determined to begin work in mid-1939, and they received an “unofficial directive” from Brigadier General George P. Tyner, Assistant Chief of Staff in the War Department, allowing them to begin construction (Fine and Remington, 1989: 94). After Germany’s invasion of Poland in September of 1939, American mobilization preparations grew even more urgent, though no additional construction funding would become available until June of 1940. Until then, the QMC continued their construction projects without authorization or funding by using active-duty troops to perform construction work, and by using funds that had been allocated for furniture, fuel, or building maintenance.

Brigadier General Hartman, Chief of the QMC Construction Division, recalled that material shortages had, during the mobilization campaign of 1917-18, forced him to use wood to construct pipelines, and in order to avoid that hardship, he commissioned the production of 2,000 miles of iron pipe, without funding, and without authorization from the War Department. Worried about a possible shortage of wood, and unable to acquire it through formal and official channels, Hartman created an “emergency organization” to create a stockpile on his own, again without funding or approval from the War Department or from Congress (Fine and Remington, 1989: 123). When the Bureau of the Budget denied Hartman $150 million in funding to expedite the construction of ordinance factories, he decided to proceed with construction, regardless Fine and Remington, 1989: 149-150).

The gradual arrival of additional funds in the summer of 1940 did not solve one of the primary contradictions of the mobilization campaign, a contradiction that had not applied during the WWI mobilization effort: the United States was mobilizing for war without actually being engaged in one. Peacetime restrictions therefore applied. Labor laws established minimum construction labor rates; land seized for public construction could not be used until the title had been cleared of liens through the Office of the Attorney General; civil service regulations set strict limits as to who could join government service; the Surgeon General set high standards on the health of those wishing to enlist, even for those destined for desk jobs in the Construction Division; and, perhaps most problematically, CPFF contracts were prohibited. As one regional representative of the QMC would remark, “it is very difficult to accomplish

wartime orders with *peacetime restrictions*" (Fine and Remington, 1989: 144) Faced with these constraints, the QMC worked to relax its own regulations in order to speed construction: a "pep letter" from the head of the lump-sum construction division of the QMC to local Constructing Quartermasters obliquely suggested that corner-cutting would be tolerated: "The necessity for completing this work at the earliest possible date is most essential, and necessary steps will be taken to expedite construction in every way," the letter read. "This cannot be too strongly emphasized" (Fine and Remington, 1989: 143). In practice, the QMC would depart from its own longstanding traditions and its preference for centralized decision making, and would now allow local officers to make changes to the standardized plans in order to expedite construction, or to change the building specifications if local materials were more readily available than those in the original plans.

The urgency of the construction campaign grew even more acute with the passage of the Selective Service Act of 16 September 1940, which allowed for conscription of any male between the ages of 21 and 36, specifying that none could be inducted "until adequate provision shall have been made for…shelter, sanitary facilities, water supplies, heating and lighting arrangements, medical care, and hospital accommodations" (76th *Congressional Record*, Ch. 720: 885-897). The military draft would begin in October 1940. Troops were intended to report for duty in late December. But at as of October, they would not be able to do so, because the "adequate provision" of shelter could not be guaranteed. The deadline was set. Hartman, the director of QMC Construction Division acknowledged that the both the

budget and the deadlines were impossible, admitting later that he had only agreed to them because refusing to do so would have meant that the ACE would likely take over the work (Fine and Remington, 1989: 151).

Not only had Congress allocated insufficient time and funds to complete the task, but the intense pace of wartime mobilization had also led to rapid inflation. Budgets prepared only weeks earlier would no longer be honored by contractors, as prices for construction materials were increasing by the day. Hartman therefore took radical steps to save money, even below the relatively modest original budget, while also accelerating the pace of construction (Fine and Remington, 1989: 153-154): He unilaterally declared the minimum construction wage for all QMC projects, as specified by the Department of Labor, to be the maximum wage as well; he received approval to at last implement the CPFF contract, despite Congressional skepticism; he ordered that construction plans be reworked to take advantage of odd-size structural elements available on the market; he successfully pushed for exemptions from local and state taxes, and he increased the QMC staff so radically and so quickly that storage closets were converted to offices, and furniture moved so close together that people were forced to climb over the desks of others in order to reach their own.

The extreme time pressure also led to innovations or adaptations in the construction process. Typically, general contractors preferred to proceed with construction on a large project in logical phases (e.g. site grading, utility work, pouring foundations, erecting framing). Given the compressed schedule, this was no longer an option, and contractors were convinced to “waive and

disregard a normal plan of good construction scheduling" (Fine and Remington, 1989: 231). In other cases, contractors experimented with assembly-line techniques, prefabrication, and the combination of skilled and unskilled labor on the jobsite. The QMC was even able to reach an agreement with the painters' union, permitting the use of spray painting – a technique that the union had previously rejected, as they felt it represented a threat to the tradecraft of the painter (Fine and Remington, 1989: 323-235).

The introduction of the CPFF contract carried with it a new series of challenges. While the cost-plus contract allowed the QMC to engage contractors in the work even before drawings and specifications had been completed, the nature of these contracts required more precise auditing tools, as the government would reimburse general contractors for all costs incurred. A detailed audit, however, could take time, and contractors depended on quick reimbursement in order to keep tools, equipment, material, and labor on site as needed. Lincoln G. Kelly, vice president of the American Institute of Accountants, joined the Army and developed a new system for the QMC, which would involve a continuous rolling audit, rather than periodic inspections. This technique would, in theory, allow quick reimbursement and would also help prevent contractor fraud with through close and continuous control. The rolling audit, however, would require a much larger corps of Army accountants than was available (Fine and Remington, 1989: 236). When Lt. Colonel Leslie Groves was named head of the Fixed-Fee Branch of the CQM Construction Division, he abandoned the idea, and stressed speed over control, requiring all payment vouchers to be reimbursed in a week, and directing contractors to take

whatever shortcuts were possible and spend as much as necessary to ensure that the bases were complete in time to house the newly conscripted Army.

Despite Hartman's efforts to meet a deadline he recognized was unreasonable, the work was gravely behind schedule as the late December induction date approached, and he was replaced as head of the Construction Division by the engineer and former Works Progress Administration official Lt. Col. Brehon B. Somervell. Through his previous work as a New Deal administrator, Somervell was familiar both to Roosevelt and to the new War Secretary Henry Stimson, and was therefore able to step outside the established chain of command, and to coordinate directly with Army Chief of Staff George C. Marshall. Somervell thus bypassed his superiors within the QMC, as well as the Deputy Chiefs of Staff of the Army, who also outranked the lieutenant colonel. As part of what became known as the "Somervell Blitz," the new director of the Construction Division reshaped his organization to favor the young, aggressive, and inexperienced. Somervell was quick to dismiss team members that he felt were not contributing. "I will not talk," he explained, "I will just move" (Fine and Remington, 1989: 265). Upon taking office, wrote a letter to general contractors that were behind schedule. Somervell made clear that speed was more important than any other consideration:

> A bridge completed after a battle is over may be a marvel of engineering skill and ingenuity…but it is absolutely worthless for the purpose for which it is intended. The United States mean to arm for defense—the determination of their people is unequivocal. Your work will determine the speed with which additional forces can become effective. You are the country's agent. Immediate and telling action on your part is necessary to place your project on the most efficient basis. RESULTS MUST BE SECURED. (Fine and Remington, 1989: 318)

On April 24th, 1941, four months after the original deadline, Somervell announced that the mobilization campaign had been completed, and that “the new army” had been “housed” (Fine and Remington, 1989: 294). This was only partially true, as many of the camps were unfinished when newly inducted troops occupied their barracks. Construction materials were stored on site and frequently stolen by military personnel, either for personal ends, or to alter or complete buildings still unfinished on the cantonment grounds (Fine and Remington, 1989: 293). Maintenance and management of these massive new cantonments was also a problem, as no provisions had been made. Somervell planned to recruit city engineers and city managers from municipal government into the Army, and to assign them the rank of major or colonel, thus allowing them to be named Utility Officer: a position that would ordinarily be occupied by a more experienced and higher-ranking officer. When informed of this plan by Somervell, one Brigadier General objected to the departure from protocol, accepting the idea only on the condition that the overall base hierarchy be maintained: “It should be thoroughly understood,” he noted, “that when these boys come down in the Fourth Corps Area, I am the boss” (Fine and Remington, 1989: 303-305).

The final area of the mobilization campaign to be completed was the network of ordinance factories intended to arm the growing military forces. Lt. Col. Groves, now director of Operations of the QMC Construction Division, argued that the urgency of the situation required round-the-clock construction. A third shift was needed. Such an arrangement, however, would require funding and permission that they did not have. This did not seem to worry Groves, who

remarked: “it is going to cost money, and if anybody doesn’t like it after we have started, we say, ‘what are you going to do about it?’” (Fine and Remington, 1989: 341).

These complex ordinance installations were often developed in close coordination with end-users, occasionally from the private sector. As the factories were often composed of multiple buildings and production lines, a dilemma emerged. At several plants, some production lines had been completed, while other adjacent lines were still under construction. DuPont operated one such plant, and they were unwilling to risk the lives of factory or construction personnel by allowing explosives and ammunition to be produced near an active building site. Construction crews, DuPont managers argued, were unaccustomed to working near explosive material and could easily cause a fatal accident. Groves argued that the safety of the individual workers was less important than the national interest: “TNT was badly needed,” he later recalled. “(U)ndue regard for the lives and safety of a relatively small number of employees and the safety reputation of the DuPont Company and of the Ordinance Department were far outweighed by the possible thousands of casualties which would result from a shortage of TNT if war came.” After consulting with DuPont HQ, the plant manager acquiesced. The dangerous combination of active construction and live ordinance production would from that point on become standard operating procedure around the country (Fine and Remington, 1989: 339).

On December 1, 1941, the long-standing rivalry between the QMC and the ACE was at last resolved, as Roosevelt signed a bill entrusting all war-

related construction to the Army Corps of Engineers. The Chief of the ACE, Lt. Gen. Eugene Reybold, noted the scale and complexity of the handover about to occur:

> If we were organized as a corporation, we should be the world's largest. In fact, this merging of functions involves about the same number of persons as might be affected if the United States Steel Corporation should decide to combine with the Bell Telephone System…Obviously, it will take some time to work out the details. (Fine and Remington, 1989: 476)

Six days later, Japan attacked the US naval base at Pearl Harbor, Hawaii, and within a week the US was formally at war with Japan, Germany, and Italy. There would, as had become customary, be no time at all to work out the details.

3.4.2: Oak Ridge: Building the Secret City of the Manhattan Project, 1942-1945

The “Manhattan Project” to develop an atomic weapon was born out of a short letter written by Albert Einstein to Roosevelt in the summer of 1939. The letter advised that based on current research, a controlled nuclear chain reaction could be created, and that “extremely powerful bombs of a new type” might therefore be possible. Einstein encouraged the President to fund this research, and to bring industrial firms into the effort. The letter ended with an ominous aside that Germany had stopped uranium exports from its conquered territory in Czechoslovakia, and that German physicists had been successfully replicating the latest developments in atomic research at the Kaiser-Wilhelm-Institut in Berlin (Jones, 1985: 609-610).

Roosevelt acted quickly, ultimately entrusting the matter to Vannevar Bush, the director of the Office of Scientific Research and Development (OSRD). The extreme secrecy surrounding both the initial research and the

formal establishment of the Manhattan Project meant that the entire effort would not comply with the norms of the legislative process; no congressional approval was necessary or possible. The effort to develop the atomic bomb was transformative: the Manhattan Project would mobilize the nation's scientific, industrial, and building construction sectors; it would reshape the American landscape and economy with a vast network of research laboratories, experimental factories, and nuclear test sites; it would ultimately claim over 200,000 lives at Hiroshima and Nagasaki, cost approximately $1.4 trillion, end the war, and introduce the persistent threat of total global thermonuclear destruction. Yet it was formally approved, not through a legislative process of any kind, but with a curt handwritten note from Roosevelt to Bush, in June of 1942. The entire text of this note, a response to Bush's proposal to move from basic nuclear research to the active development and production of a weapon, and the only document establishing formal approval of the Manhattan Project, read as follows: "OK. Returned. I think you had best keep this in your own safe. FDR." (Memo, Roosevelt to Bush, 19 January 1942; US Department of Energy – Office of History and Heritage Resources.)

Lt. Col. Groves, who as chief of operations in the QMC Construction Division had led the final, crucial phases of the mobilization construction campaign of 1939-41, and had later supervised construction of the Pentagon, was named Officer in Charge of the Manhattan Engineer District in September 1942. Groves, who had instead wished to join overseas combat operations, was not pleased with the appointment, suspecting that failure in this endeavor would likely end his military career:

> The President has selected me to carry the ball, which is another way of saying that I am to be the Goat if it doesn't work…If our gadget proves to be a dud, I and all of the principal Army officers of the project . . . will spend the rest of our lives so far back in a Fort Leavenworth dungeon that they'll have to pipe sunlight in to us. (Fine and Remington, 1989: 661)

One of Groves' colleagues in the ACE expressed to him the dangers associated with the appointment, not only for Groves, but also for the institution itself:

> I hate to see you get this assignment, because if you fail in it, it will destroy you. I would be sorry to see that. But it would be still worse if it destroyed the Corps of Engineers. That would really make me sad. (Fine and Remington, 1989: 662)

Bush, the OSRD director, was not at all convinced that the Manhattan Project should be directed by the Army (Hewlett and Anderson, 1962: 81-83), and even less that the aggressive, corner-cutting, and occasionally ruthless Groves was the appropriate leader for this important effort, doubting "whether he had sufficient tact for the job." Bush had hoped that scientists like Enrico Fermi or J. Robert Oppenheimer might lead the effort (Jones, 1985), and although he would later come to respect Groves and recognize that he had been the right choice, when the appointment was initially announced, he was despondent: "I fear," Bush wrote to an advisor in the War Department, "we are in the soup" (Jones, 1985: 76).

Groves's actual status within the Army chain of command was unclear. With the change in responsibility came a promotion to Brigadier General, and although he had officially been instructed to report to the Commanding General in the Services of Supply (SOS), Groves himself claimed to have written these orders, and he would convincingly argue that the formal directive was mere

“eyewash” and that his authority was much actually broader than officially described:

> General Somervell seemed to think that I would be under the SOS. This was never straightened out on paper. I never thought he wanted me to be under the Chief of Engineers. He wanted me to run the thing and he didn’t want anyone to interfere with me in any way. (Fine and Remington, 1989: 662)

Given the great expense of the project and the very real prospect of failure, many in the Army considered the Manhattan Project to be a “hot potato” and did not want to be blamed if it failed (Fine and Remington, 1989: 662). This arrangement gave Groves even greater latitude than that which he had achieved through the somewhat elastic interpretation of his orders; Groves saw little need to consult his superiors, and his superiors had little desire to be consulted, or even connected, to the risky project.

The Manhattan Project was a nationwide effort, but the Oak Ridge site—officially, the “Clinton Engineer Works” (CEW) –was eventually the endeavor’s headquarters and its largest installation. The roughly 100-square-mile (260 km^2) parcel of land outside Knoxville, Tennessee had been selected for several reasons: it was located sufficiently inland to make aerial attack unlikely; it was secluded, but still relatively easy to access; and its proximity to the recently-completed hydroelectric dams of the Tennessee Valley Authority (TVA) meant that a reliable supply of electricity would be available to power the massive uranium processing plants. This last concern would prove to be an important one, as the Oak Ridge nuclear plants would eventually come to consume one-seventh of the entire electrical output of the US (Gosling, 1999: 20). Though the site had been thoroughly researched prior to Groves’s appointment, it had not

yet been formally approved. Groves was named director of the Manhattan Project on 23 September 1942, and that evening he boarded a train for Knoxville to visit the proposed site. He approved it immediately.

Two weeks later, the ACE filed a “declaration of taking”, which allowed the Army to seize land from residents, even before agreeing on terms of purchase. On November 11, for example, one local resident received a letter from the fictitious “Kingston Demolition Range” of the Army Corps of Engineers: “The War Department intends to take possession of your farm December 1, 1942,” the short memo read. “It will be necessary for you to move, not later than that date” (Letter, Morgan to Parlee Raby; 1 December 1942. Clinton Engineer Works Archives. NARA Atlanta).

Residents were forced out, and were unsurprisingly upset not only by the fact of their displacement (many local residents had already been relocated on much friendlier terms by the TVA) but also by the brusque manner and the speed with which this was done. One resident likened the land seizures to an attack by the Union Army during the American Civil War: “The only difference,” he remarked, “is when the Yankees came before, we could shoot at them” (Johnson and Jackson, 1981: 45)

The CEW, eventually given the intentionally unremarkable name “Oak Ridge,” (Jones, 1985: 443) would, in less than three years, become a city of 75,000—the fifth largest in the state of Tennessee—complete with schools, hospitals, bus stations, shopping centers, as well as the uranium processing plants and a small “atomic pile” nuclear reactor for the production of plutonium. While the ACE did take limited measures to try to make life as apparently

normal or comfortable as possible for those that lived behind the barbed-wire fences and armed security checkpoints, the town was clearly exceptional in several important ways, aside from the mysterious industrial plants it contained: the city appeared on no maps, and had its own strict code of moral behavior, enforced by a private police force that was authorized to enter any residence at any time, with no warrant or warning. Although the Army itself was racially integrated, Oak Ridge followed a policy of strict Jim Crow racial segregation, while women were unable to request housing as heads of households, even where that was demonstrably the case; and the city's residents, very few of whom understood the nature or purpose of the work they were doing, were sworn to absolute secrecy, punishable by the Espionage Act of 1917. Newly arrived residents received the following orientation memorandum: "You are a resident of Oak Ridge, situated within a restricted military area…What you do here, What you see here, What you hear here, let it stay here" (Johnson and Jackson, 1981: 150).

Groves had kept the existence of Oak Ridge a secret even from the Governor of the State of Tennessee. While the brigadier general had himself determined that he was not required to report to his superiors within the Army, the entire operation was, in fact, located within the boundaries of the state of Tennessee, and final jurisdiction of the city might logically fall to the state in which it was located. In July of 1943, when land had been seized and the city was already taking shape with personnel living on site, Groves dispatched a mid-level officer to inform Republican Governor Prentiss Cooper that the ACE was about to enact "Public Proclamation Number Two," which would effectively

close off the district from the rest of state territory, transforming it into “a total exclusion area”. Cooper, who had had no knowledge that Oak Ridge even existed, was furious, calling the entire project an “experiment in socialism,” and refusing even to read the text of the proclamation that effectively compromised the sovereignty of the state he had been elected to govern. The proclamation was enacted nevertheless (Johnson and Jackson, 1981: 49).

The Manhattan Project depended on, and was shaped by, a combination of extreme secrecy and speed. The need for secrecy meant that there would be no congressional oversight, no need to provide progress reports or to endure public questioning; no need to inform and update the public or its representatives (Wilcox Oral History). Neither would Groves need to worry about funding, as Roosevelt had committed to spending whatever was needed. But the rush to complete the project as soon as possible—before the Germans did so, most urgently—would mean that planning and construction would have to begin without any conclusive proof that any of the various industrial processes being tested would actually work and that they could successfully be weaponized and deployed (Gosling, 1999).

One important test of these processes was to be undertaken in December of 1942. As land had been seized and construction was beginning in Oak Ridge, the Chicago Metallurgical Laboratory, run by Enrico Fermi, was preparing for an initial test of a controlled nuclear reaction. Fermi, however, had never sought approval to build the test reactor he had ordered constructed under the grandstand of the University of Chicago football stadium. Fermi was confident, but not certain, that the nuclear chain reaction he was planning to

initiate would be able to be brought under control once it had begun. When Groves finally became aware that the facility had been built and that tests were about to proceed, he was concerned that the test might result in a large, uncontrolled, and potentially catastrophic nuclear explosion on the South Side of Chicago. Despite Groves "great alarm" at this unauthorized experiment, he relented. The test proceeded successfully, though as a protective measure, one member of the laboratory team stood at the ready with an axe as the test proceeded, prepared to cut a rope that suspended a large cadmium emergency control rod over the uranium pile, should the reaction begin to spread out of control (see Gosling, 1999; Jones, 1985; Hewlett and Anderson, 1962). Although Groves did hesitate when confronted with the possibility that a major American city could be destroyed by a nuclear test, he was much more willing to proceed with the construction of production facilities in Oak Ridge while the science was not yet clear: "We just can't wait for these people to perfect things," Groves argued. "We have got to go ahead and build something and work out the details as we build it" (Fine and Remington, 1989: 666).

Speed would lead to unorthodox ways of negotiating contracts. Stone and Webster (S&W), a large Boston-based engineering firm, was chosen to develop the entire town of Oak Ridge, and signed a preliminary contract, which instructed the firm to begin work even before the terms and scope of the contract had been definitively established:

> The United States of America, acting through the undersigned Contracting Officer, hereby places an order with you for Architect-Engineer Construction-Management services and [*sic*] that you shall, in the shortest possible time, furnish the labor, material, tools, machinery, equipment, facilities, supplies not furnished by the United States of America, and services, and do all things necessary to

> design and construct the Army installation as discussed at our conference of this date. The work referred to shall be started within three days from date of acceptance of this order and shall be completed as soon as practicable…The Secretary of War finds that it is in the interest of the War Effort that this work not be delayed awaiting the negotiation of a formal contract. (US War Department, Office of the Chief of Engineers, to Stone and Webster Engineering Company, 29 June 1942; Clinton Engineer Works, NARA, Atlanta.)

Speed would also mean making do with inexperienced personnel, when those with more experience were not available or willing to join the effort. While both the town and the production facilities at Oak Ridge were originally been entrusted to S&W, a much younger firm was eventually put in charge of the design of the town itself, after the industrial specialists at S&W had proven unable to tackle the challenge of designing residences, community facilities, and a comprehensive city plan while they also developed the complex factory buildings. In December 1942, two civilian representatives of the “Development of Substitute Materials” program requested a meeting with the young Chicago-based architecture firm Skidmore, Owings, and Merrill (SOM). The firm, which had been founded only five years earlier, had done a few small buildings for the US Navy, but had little experience with large-scale work, and having been founded in the midst of the Great Depression, had scarce building experience of any kind, as very little was being built. The interview was unusual:

> So the question…they asked these people was, "Where is this project?" They said, "We can't tell you." They asked, "How big is the project going to be?" They said, "We can't tell you." They asked, "How many people is it going to involve?" "We can't tell you." And…of course, there were no answers to any of the questions that the architects had. They said, "Do you think you can accomplish the project?" And Skidmore and Owings—knowing the kind of people they were—said, "Of course!" Their theory was get the job first and then figure out how to do it. Well, apparently, these civilians, representing General Leslie Groves were so impressed with this confidence that they said, "Well, you're the twelfth architectural firm

> we've interviewed and the first one that says you'd even touch it." (Richardson Oral History: 129-130)

The untested SOM were therefore awarded the contract, and given four days to design an entire city for an undisclosed purpose, on an undisclosed site. While the firm did receive topographical drawings and information about climate and soil conditions, the drawings did not specify where, specifically, the site was located, or even which side of the site drawings pointed north, a key consideration when considering solar orientation for a new city (Metschke memoirs: 33). After completing the drawings, the SOM team was transferred to Oak Ridge to supervise construction on site, though their actual destination was not revealed to them until they were already aboard a train *en route* to Tennessee.

Once they arrived in the remote, muddy valley that would soon become Oak Ridge, the SOM team occupied an abandoned farm house that had been seized by the Army, and set up a satellite office. While the architects worked furiously to complete drawings for the town, material had in many cases already been ordered and delivered: thousands of toilets and bathtubs would arrive via train to an empty site in rural Tennessee, where they would be stored outdoors, sometimes covering entire hilltops (Normand Oral History; Richardson Oral History: 131). The Army would later report that SOM's team of architects, engineers and draftsman worked "an unusual amount of overtime" but given the constantly growing scope of work and the frequent "changes in policy as to design standards," the client admitted that such extra work was "unavoidable" (Completion Report of Skidmore, Owings, and Merrill, Contract No. W-7401-eng.69, 9 October 1944; Clinton Engineer Works Archives, NARA Atlanta).

Frequently, new work was commissioned with no discussion or explanation of the budget or actual programmatic requirements. In one such case, S&W sent a memo to the District Engineer, seeking guidance on a problem they had noticed during construction:

> (The memo) said, “We are finishing the high school, but we observe there is no gymnasium. What are your wishes?” And Colonel Nichols just sent back the original memorandum, he scribbled on the bottom, “Build one.” And that’s the way it was built. (Keim Oral History)

In this environment, where improvisation and pressure were constants, Groves found it both expedient and possible—in the words of one of his superiors in the ACE—to “violate all channels”. Working with Groves was, this officer remarked, “an interesting and difficult problem” (Fine and Remington, 1989: 677). Col. James C. Marshall, officially the District Engineer and commanding officer of the entire Manhattan Engineer District, objected to Groves’ broad interpretation of his authority, and his willingness to ignore the rules. In spring of 1943, he confronted Groves:

> "Who is the District Engineer?" he demanded. "You are," Groves replied. "Who gives the orders?" "You do." Nevertheless, as time went on, (Groves) exerted more and more authority. At one point, Marshall told him, "There is no need for both of us here; I want out." Groves demurred, but finally agreed: "O.K., at the first opportunity. (Fine and Remington, 1989: 677)

Marshall later explained that he had still believed in the official chain of command and his place atop it, no matter that Groves, his subordinate, did not:

> Groves had authority in an indirect way, and I assumed that anything that Groves told me… came either from Stimson, George Marshall, Somervell, or Styer or from the White House, or from Secretary Wallace…None of this was in writing, or some of it was. But, I never considered Groves as being the Commanding General of the Manhattan Project. Up to the time I left, I considered myself as in charge of the Manhattan Project. I accepted orders, suggestions, whatever you want to call them from Groves, just like he was a five

> star general and I was a captain, for instance. The idea was to get the job done.
> (Marshall Oral History)

In July of 1943, Marshall was promoted to Brigadier General, and removed from the Manhattan Project. Groves assumed even more authority, and his unorthodox way of working would become institutionalized at Oak Ridge. Fine and Remington (1989) described the shift as a tradeoff of formal structure for operational efficiency: “Going out of channels became more or less routine,” they wrote. “Informal and unmilitary, the system worked successfully because the officers involved were more intent on getting the job done than on asserting prerogatives” (Fine and Remington, 1989: 682).

This “informal and unmilitary” structure did, indeed, work. On 16 July 1945, the first nuclear weapon, armed with fissile uranium produced at Oak Ridge, was tested successfully in the desert of New Mexico. Groves felt he could exhale at last: “I personally thought of Blondin crossing Niagara Falls on his tightrope, only to me this tightrope had lasted for almost three years.” (Fine and Remington, 1989: 701) On 6 August, the “Little Boy” bomb, again powered by Oak Ridge uranium, was dropped on Hiroshima, destroying approximately 70 percent of the city and killing 70,000 people instantly. Oak Ridge was no longer a secret, as the Army immediately distributed explanatory press releases that had been prepared years in advance. And for many those in the city who had unwittingly built the atomic bomb, the true nature of their work and the reason for their ordeal was at last clear. Many celebrated in the streets. But that night, another, smaller group of Oak Ridge residents, either unwilling to participate in the program once aware of its true goal, or simply fearful for their

safety, gathered their belongings and passed through the armed checkpoint at the Elza Gate, leaving Oak Ridge and the Manhattan Project behind (Hagaman Oral History).

3.5 FINDINGS

I have identified five phenomena that underpin the “do-or-die” deadline and the creative potential of disorganization and insubordination. First, the *urgency* of the deadline caused individuals to struggle to understand how to proceed, and to begin to grapple with the reality that without a change in tactics, failure was likely. In this context of urgency, many important decisions were made by people with little or no preparation for the tasks that they were being assigned. This *inexperience* led or allowed people to distort or challenge organizational norms either because they did not take those norms seriously, or because they were scarcely aware they existed. In many cases, the *inefficiency and irrationality* of the organization became evident to those within it, and this loss of faith in the effectiveness of the organizational structure would lead some to believe not only that certain forms of *insubordination* might be justified, but that these actions were unlikely to be punished or even detected or by the organization itself. These acts of insubordination included tactics intended to advance the war effort, and quite often, acts unrelated to the mission at hand. These unrelated actions, which frequently went unpunished or undetected, further strengthened the sense that the organization was irrational and that certain kinds of unacceptable behavior (including “useful” insubordination) might be tolerated. When the *usefulness* of these unsanctioned tactics became

apparent, they were folded back into the institutions themselves as legitimate acts (Courpasson et al., 2012).

While the previous section dealt primarily with the voices and actions of those doing the *organizing*, in the current section I will also incorporate the perspectives of those being *organized*. Architects, engineers, scientists, civilians, and low-level military personnel were also part of the dynamic I describe here, and their accounts help illuminate the dynamic. I have included the wartime accounts of architects and engineers not directly involved in the two episodes described in this paper, because their observations suggest that the pressure of the "do-or-die" deadline was felt throughout the military, and that as a result, certain organizational norms were slackened across the organization.

3.5.1: Urgency

The "mad rush" of the war effort created both the need for creative insubordination and the necessary preconditions for it. The combination of existential danger ("it was a desperate race against time"), professional accountability ("if you fail…it will destroy you"), and deadlines widely perceived to be unrealistic ("It appears absolutely impossible") led people to question organizational norms and routines. In some cases, simple physical exhaustion may have set the stage for unorthodox behavior, or it may already become apparent that the mad rush meant that decisions would have to be made differently, or that that the deadline itself was irrational and that it could only be met with similar departures from the established order of things.

The extreme pressure is evident in a stern 1943 letter to the architects and engineers at S&W. Colonel Marshall of the Manhattan Engineer District

complained about the slow pace of work, articulating a clear schedule of deliverables, one that he argued was “impossible” unless S&W changed course:

> Studies made by this office indicate a serious deficiency in the rate at which design drawings are being prepared for the Y-12 project.
>
> In order to complete the 1700 drawings to be prepared in Boston for the project by August 1st, it is expected that approximately 790 should be completed in March, 580 in April, 150 in May, 95 in June, and 85 in July. By comparison, only 45 drawings were completed in February and only 46 during the first half of March.
>
> It appears absolutely impossible to complete the preparation of plans within the time necessary, unless drastic steps are taken to enlarge your drafting and design force even beyond your recent expansion of that group.
>
> You must give this problem your personal attention and inform me very soon as to the plans you have for expediting completion of the design work and drawings. (Marshall to Branch, 25 March 1943; CEW files; NARA Atlanta Archive)

For architects and engineers involved in meeting these extreme deadlines, the practical and physical consequences of completing the work in the time allotted could be extremely taxing. The architect leading the design team for the initial design and planning of Oak Ridge described a breakneck pace:

> We were given four days and nights to prepare a site plan, including floor plans for the units, town center plans, neighborhood shopping center plans, and elementary and high school plans. Nat asked me what I needed to meet this schedule. I said, "I need ten of the best men you have." At that time, SOM had an office in Chicago and one in New York with about twelve people in each. Ten men were assigned to me. We worked for four days and nights. We left the office only to eat at a nearby restaurant. This was a twenty-four-hour-a-day operation. When we got so tired we couldn't navigate anymore, we slept on the drafting table for maybe an hour, then back to work. (Metschke memoirs: 32)

Once on site in Oak Ridge, the architects faced a “mad rush” of drawing and construction, activities that were often overlapping rather than logically sequenced:

> Immediately after construction orders were issued a full complement of grading equipment was released. It was as if the starting gun at a race track had been fired. The mad rush was on for my design crews to stay ahead or get buried by the onrushing conglomeration of equipment, turnapuls, dozers, graders, and what have you—as many pieces of equipment as could be squeezed into the road right of way. One mad rush led to another. Housing construction had to immediately follow as the road construction workers practically absorbed every available existing housing unit, including remodeled chicken coops. (Metschke memoirs: 39)

Working on projects in this manner would call for a mobilization of civilian labor well beyond the ordinary work day. An architect assigned to the team in Oak Ridge described the work conditions:

> It wasn't much of a life because we were working about fifteen, sixteen hours a day because we had to get this project out. I think we were given six weeks to do these 600 apartments or whatever, 450 apartments, and all this stuff. (Richardson Oral History: 135)

For those working on other construction projects within the military, the pace was similarly punishing:

> We are facing tough problems…When you take a plant scheduled for completion one year from now and try to complete it in five months, you have a job on your hands." (Wilson, in Fine and Remington, 1989: 329)

One young architect, working for the Army Air Corps, was given the responsibility to design and construct approximately 100 airfields in Britain, in preparation for the Allied invasion at Normandy:

> Frankly, there wasn't time for anything. It was a desperate race against time. And, believe me, when I said we worked seven days a week for at least sixteen hours a day, we did. (Hartman Oral History: 55)

The mobilization campaign of 1939-1941 had been similarly accelerated. While the military price of failure was clear, the personal and professional fortunes of those involved were often inextricable from the success of the military objective.

One Army Brigadier General warned the head of land acquisition for the QMC that he would be held responsible personally:

> If you delay this munitions program, you will be crucified for it.
> (Vaillant, in Fine and Remington, 1989: 174)

The urgency of the war effort was used to justify extreme measures, including the seizure of land from civilians. One farmer, who had complained about the taking of his home and livelihood, received the following response:

> I agree with you that it is hardly a pleasant thing to give up a home that one's family has occupied for nearly eighty years, but it is hardly a pleasant thing to have to build an ammunition plant. Ours, unfortunately, is a world in which such things are necessary.
> (Patterson, in Fine and Remington, 1989: 178)

Groves himself, the apparently indefatigable leader of construction of both case studies described here, noted that after completing the 1939-41 mobilization construction campaign, he had hoped to be transferred to a more relaxed posting:

> I was hoping to get to a war theater so I could find a little peace.
> (Groves, in Fine and Remington, 1989: 513)

3.5.2: Inexperience

The urgency of the mad rush at times forced people with no relevant experience into positions of authority. Having no real awareness of the rules, nor any experience in the organization, these newcomers often bent or disregarded the rules without necessarily intending to do so. In other instances, these new arrivals actively disregarded customs and organizational structures of their new organizations, literally dropping the Army manual in the trash, or displaying a general impatience with the military hierarchy.

One young architect, working in the Army as part of the 1939-41 mobilization campaign described the enormous responsibility entrusted to him, immediately after graduation from MIT:

> I remember I was sent out to Cleveland once. I was to locate an assembly plant in Cleveland at the airport. So, I would go to the president or the chairman of the power company, the mayor and others. See what they're ready to commit to on the land. Is there power available? Is there labor available? All these kind of things. Decide where that plant was going to be and how big it was going to be and then select the architects and engineers and get the project going. Just like that! Off to Omaha on a modification plant. Off to somewhere else… I was a second lieutenant, hardly wet behind the ears, and had the tools of government to do staggering projects, to be able to do them in a coherent way. What an experience, right? (Hartman Oral History: 49)

While the military was at times forced to rely on relatively inexperienced officers to lead important work, the architecture firms they hired were also reliant on the young and inexperienced. Sometimes, the presence of such inexperienced staff angered or surprised those in the military, who had expected more senior staff to be assigned. When SOM's young chief of design appeared on site at Oak Ridge, Leroy Jackson, the ACE officer responsible for overseeing construction, was not pleased:

> I went in to see Jackson as soon as I got down there. I went in and introduced myself, and said, "I'm Ambrose Richardson from the Chicago office. I'm down here to be the head of the design crew." Well, he looked at me, and he just laughed and said..."Well, hell, Nat Owings told me he was going to send down his chief of design." I said I was chief of design. He said, "The hell you are! You're a goddamn, snot-nosed kid. You're wet behind the ears." He took me aside and he said, "Well, let me tell you, kid, Nat Owings is a damn fool"—he used worse words than that—"for sending a kid like this down. What in the hell is he thinking? Does he realize and do you realize that there's a $130 million of work hanging on what you're going to do here in the next six weeks?" And I said, "Well, I guess he does because I'm here." (Richardson Oral History: 134-135)

Elsewhere in the service, many officers were trained as part of the so-called "ninety-day-wonder" course, in which college graduates with no military background were given approximately 3 months of officer training, and then sent into service with high rank:

> I went to the engineers training center at Fort Leonard Wood, Missouri, and then they'd cut it down to eight or nine weeks, and we spent one of those training weeks building the officers' swimming pool. So I always thought if I were killed in action it was probably because I hadn't learned enough when I was building this swimming pool. (Holabird Oral History: 57)

When officers such as these entered service, they were sometimes given tasks for which they had no preparation:

> When I ended up in the 82nd, my company commander said, "If you went to Harvard, you must be a lawyer," and I tried to explain that Harvard was a university with many disciplines. He said, "No, you are a lawyer." When they had a battalion court-martial, I became the defense counsel because he said, "You're a lawyer." I said, "I don't know beans about it." (Holabird Oral History: 83)

Officers who had recently graduated architecture school were at times assigned tasks related to building, but for which they were nevertheless unprepared:

> I was an Air Installation Officer, which meant that I was in charge of cleaning the runways of snow in winter and in charge of building things when I wasn't cleaning the runways. I didn't have the vaguest idea of how to build anything, much less military buildings and runways. I had a commanding officer who knew a little more, but not much. (Grunsfeld Oral History: 113)

This approach would lead some to question the rationality of a system that would place them in charge of an area for which they, themselves, understood they ought not be responsible:

> The Army, in its all-wisdom, thinks that if architects know how to build buildings, they should know how to blow them up. So I, whose notions of explosives come from the funny papers where things go boom, you know, became sort of a demolition expert. (Wieting Oral History: 15)

3.5.3: Inefficiency and Irrationality

Instances such as the above would at times suggest to those involved in the war not only that the system was not working, but that the system was itself the problem. Some decried the rigidity of military order (”the dead hand of military bureaucracy”), or the lack of coordination among various departments. In other instances, the combination of extreme speed and inexperience would simply lead to actions that people involved could only chalk up to stupidity or arbitrariness. The growing perception among those being organized that the organizing system itself was both irrational and inefficient would occasionally lead to the interlocking conclusions that it was both possible and necessary to defy authority.

One District Engineer of the ACE recounted an experience during in which two important projects in his district were delayed due to a shortage of iron pipe. Having pressured the War Production Bureau (WPB) for a priority designation for one of the projects, a navigation school at Monroe, Louisiana, he visited the site of the second, an ordinance plant at El Dorado, Arkansas. After an entire day of on-site meetings and telephone negotiations, he at last convinced Washington to provide pipe for that project as well. Things did not, however, go according to plan:

> Reaching Vicksburg that same night about 11 P.M., I went to my office to review the "hot" mail, which was left on my desk on days I was out of town. There I found two wires from the WPB. The first wire read something like this: "This confirms telephone approval of priority for 12-inch pipe for the El Dorado Ordnance Plant." The second wire read: "Priority recently granted Monroe Air Corps Base for cast iron pipe disapproved since this pipe is needed for the El Dorado Ordnance Plant." (Sturgis, in Fine and Remington, 1989: 541)

Officers would also come to resent the various military and civilian inspectors sent to observe the progress of Army construction projects, noting that in many cases the “visiting hatchetmen” wrote reports intended “to show how good *they* were, rather than…to help the project” and that once the inspections concluded, “these vermin disappeared…back into the woodwork” (Fine and Remington, 1989: 510). One high-ranking ACE officer noted the corrosive effect of these efforts to control the work of the Army Corps:

> With very few exceptions, the reports are lacking in constructive criticisms or suggestions, lead to no useful result, and, on the contrary, are the cause of delay and of annoyance and discouragement." (Memo, Control Sec OCE for Robins, in Fine and Remington, 510)

Civilian residents of Oak Ridge observed many instances of “stupid” or arbitrary administration, including unannounced 2AM visits from plumbers and electricians (Reynolds Oral History), or random and unexplained inspections of their homes:

> I had a man walk in and the painters were in the house and he just walked in and came in and sat down on my ottoman. I said, “Was there something you wanted?” he said, “No.” Finally, he walked all through the house and then walked out. I asked the painters who he was, and they said, “We don’t know.” (Laughter) We decided he must be an inspector or something, but we never did know who that man was. (Reynolds Oral History)

One common anecdote among Oak Ridge residents was that they were frequently asked by those outside the city what, precisely, they were making inside the gated area into which trainloads of material entered and from which nothing ever seemed to exit. Many residents asked similar questions among themselves. Their replies describe a generally derisive attitude toward the endeavor and the government itself. Some replied sarcastically that they were

making election buttons for Roosevelt's 1944 presidential campaign. Another, possibly apocryphal, explanation provided by a child was that the city was producing toilet paper. The child had arrived at this conclusion "because every day my father brings home two rolls in his lunch pail." Several interviewees share what appears to have been a common, sardonic response to the question, a reply that illustrates the esteem in which they held their elected leaders:

> What we're doing is making a bunch of full-size front ends of horses to ship to Washington to go with the excess of horses' rears that they got up there. (Wilcox Oral History)

Many architects who were engaged elsewhere in the armed forces noted irrationality in how the Army approached the training of new recruits, sometimes preparing troops for conditions they would never face, and not preparing them for the ones that they would:

> We went through basic training at Camp Robinson, and then we went out for desert training just outside of Los Angeles. Of course, after we finished our desert training they took us up to Brigham City, Utah, and we then learned at the end of our Brigham City experience that we were going to the Pacific, so we went to the jungle instead of the desert. That was sort of SOP. (Hammond Oral History: 22)

Another who was among the first to be drafted, and who reported to one of the hastily completed cantonments in 1941 describes a hapless and ill-supplied army:

> It was the most ragtag, funniest time. Of course, this was also the days of the "tin Kelly" World War I helmets. That's what we had. They said that the only thing those were good for was digging foxholes because you could scoop dirt with them… (I)t is amazing that we won. (Honda Oral History: 25)

One soldier who would eventually join the “ninety-day-wonder” program of officer training suggested that he would ultimately decide to do so because he felt he could do better than those commanding them at the time:

> (T)he people that were sent there as engineer-officers were usually ROTC people who had thought they had resigned their commissions and were back on duty. They were always marching us into the ditch or a wall. They had forgotten all about close order drill! But, anyway, one day we were called to the headquarters of the unit…and told that all of us that had college degrees were being given the opportunity to sign up for Officer Candidate School… This friend of mine decided not to do it. I said, "If you look at the kind of officers we've got here, if we depend on them we're going to be here forever. I want to get home." (Wieting Oral History: 15-16)

In one case, the dangerous irrationality and cruelty of a commanding officer led one architect, who would later work for SOM in Oak Ridge, to contemplate a radical form of insubordination:

> The captain who ran our outfit had psychological problems, and he made a boy act like a dog—roll over, bark and so forth, and some of us took umbrage. He also made us throw all of the washing machines off the end of the dock if we did something wrong…He had problems. We stayed up all one night, three of us, deciding whether we would kill him. You laugh, but it was deadly serious. It was very easy, because the crew chief could do something to the airplane, and he could take off and he just wouldn't come back down. (Netsch Oral History: 36)

3.5.4: Insubordination

In order to complete the construction campaigns associated with the mobilization of 1939-41 and the Manhattan Project, officers in the QMC and the ACE would repeatedly ignore the standard operating procedures or the official chain of command in order to facilitate the construction process. This was most pronounced in the approach Groves would take (“if anybody doesn’t like it after we have started, we say, ‘what are you going to do about it?’”) as well as that of

Somervell (“I will not talk…I will just move”), and Hartman, who frequently acted to relax or evade regulations that stood in the way of the mission. Aside from this systematic and repeated distortion of the chain of command described in the two case studies, or the informality with which the Manhattan Project was approved and funded (“OK…FDR”), there is also evidence to suggest that a similar attitude of insubordination had also taken root among the organized, and that other tactical episodes of resistance—not necessarily linked to the pursuit of the mission—were beginning to arise..

At the Manhattan Project laboratories in Los Alamos, for example, a restricted military site dedicated primarily to scientific research, the commanding officer developed a stress-related heart condition and had to be replaced after being hounded by civilian residents, many of them scientists from Berkeley, Columbia, and University of Chicago, who resented and resisted military administration. Of particular concern was a series of episodes involving “housewives who flung hamburger on the commander’s desk, shrieking ‘dogmeat’” (Fine and Remington, 1989: 698). When Groves named a replacement commander, he warned him of the resistance he would face, and also advised him to acquiesce to it whenever possible:

> The scientists detest the uniform. They'll make your life a hell on earth and will do everything they can to embarrass you. When you start talking to them about property accountability… they'll scream that you are a Fascist and that you are trying to regiment them. Your job will be to run the post. Try to satisfy these temperamental people. Don't allow living conditions, family problems, or anything else to take their minds off their work. (Groves to Tyler, Résumé of Instructions, in Fine and Remington, 1989: 699)

The new commander appears to have followed Graves’s advice and would largely pacify the unruly scientists at Los Alamos, though he would also warn

that the first person to throw hamburger meat at him would “go straight through my screen window” (Tyler in Fine and Remington, 1989: 699).

At Oak Ridge, a much larger and more diverse military city, where scientists, administrators, factory workers, and builders lived side-by-side, resistance sometimes took a somewhat different and more self-interested form. One husband and wife described how they had begun to tend to the landscaping around the house they had been assigned before the official land survey had been completed. When the surveyors arrived, a problem became evident:

> Mrs. Reynolds: And they would come along and put stakes in your yard. I went out to one and asked what that was for and they said, “This is your lot line.” Well, the lot line they put in came from over there and went right past our front door and went out that way. It cut off a lot of the yard that we had already done. So I said, “Okay,” and when they left, I moved the stakes back. (Laughter) We got by with murder.
>
> Mr. Reynolds: Everybody did.
> Mrs. Reynolds: Everybody was doing it, but it made no sense. It was all just so government. (Reynolds Oral History)

Just as Somervell and Groves had developed a reputation for passing over their immediate superiors, one civilian at the base adopted a similar technique, albeit for a mundane matter such as telephone service, a rarity for households in Oak Ridge. Having been unable to get permission for a phone from a lower level official, he contacted Groves directly:

> The boss down there said, “I hear you’re having a crusade to get a telephone.” I said, “Yes.” He said, “Well, Bill, if I hear one more word from you about that telephone,” he said, “You’re fired.” I said, “Okay.” So I wrote to General Groves and within a week I had a telephone. (Reynolds Oral History)

Those involved in combat operations also pursued a tactical mode of self-interest. One architect, serving with the ACE, devised a novel refrigeration system:

> We got one case of beer a month. That was our rations, and it would come in. Of course, it was hot, so we'd always con one of the pilots into loading up the C-47 with the cases of beer and flying it around up high and cooling it off. It would be a little cool, and he'd get back down and it would be fairly drinkable. (Brownson Oral History: 52)

Another solider, serving in an amphibious division in Europe, took advantage of his participation in the Normandy invasion to contact the French Resistance on his own, and to continue an involvement with socialist and Zionist politics that he had begun before the war:

> At the very end of the war we watched people coming out of the concentration camps and I was involved with them assisting those people. Then there were ships that were destined to go to Israel—Palestine, in those days—and they were illegal boats because Israel was a forbidden territory because of the British embargo. We loaded ships with refugees on some of those boats…And that was sort of illegal, on my part, but I was involved in these things, nevertheless…After the war ended I was busy with other things there, mostly of not exactly of a legal nature, okay? (Gordon Oral History: 14)

The decision to not ask questions or to seek permission was not necessarily an act of resistance at all, at least not intentionally so. In certain cases, this was merely a matter of not having enough time, or enough clarity, to follow the proper channels. One architect, who had arrived in Normandy just after the D-Day invasion explained why he and his team began to rebuild French infrastructure without consulting the French, in whose territory they were operating:

> Interviewer: Did you, in any way, work with any of the local engineers, construction people, the French people in that area?

> Hartmann: Later on, but not in Normandy. It was too fast moving. We weren't about to wait for anybody. You know, or consult anybody. (Hartman Oral History: 59)

It appears that some in the Army did not object to a “build first, ask questions later” approach. Clearly, Groves’s actions suggested that for him, the goal was more important than the organizational structure. One ACE general suggested that in wartime, the speed at which work had to take place made futile or counterproductive and attempt to control it:

> It was too big for any strict control from the Washington office. Things were happening in the field at such a rapid rate that it was impossible for any group of men, no matter how competent they might be, whether they worked 24 hours a day or only 12, to influence the direction with too much detail. You could see what was happening and maybe guide the future…But if you held the reins on the people in the field who were so energetic and so enthusiastic about accomplishing results…you'd find them losing their initiative. (Hardin, in Fine and Remington, 1989: 489)

3.5.5. Usefulness

The previous quote points to an instance in which a commanding officer recognized that allowing subordinates more independence, even at the expense of formal military order, might be an effective way to keep up with the rapid pace and the “do-or-die” conditions of wartime. In the case studies described previously, Groves’s implementation of an “informal and unmilitary” arrangement was ultimately understood to be a useful way of working, and was rendered institutional once he consolidated his control in Oak Ridge. The military organization was willing and able to digest a controlled dosage of insubordination, without fundamentally challenging the organizational structure, because it was understood to be useful in winning the war.

Other innovations and improvisations were also understood to be useful, and were carried on after the war. The use of overlapping construction schedules, for example, or the incorporation of substitute materials and prefabrication into the building process, these would all become lasting contributions to the building trades, born out of the exigencies of wartime. The Engineering News-Record would, in a 1942 article on “Beehive” structures used for munition storage, remark that many of these innovations were likely to be useful in the postwar:

> Recent successes attending the use of so-called substitutes for materials that are no longer abundantly available suggest that some of the new designs may turn out to be more than just temporary expedients. . . . They may be new applications that are here to stay. (Fine and Remington, 1989: 531)

For SOM, who had begun the war with little work of importance, and had handled a complex and extremely compressed project in Oak Ridge, the war had not only provided an important, satisfied client, but it had also taught the organization a new way of working, and had given the firm new capacities:

> The war made (SOM) into a responsible organization. They were seen as having energy, and they were selected to do Oak Ridge, Tennessee, which was again, of vital importance, I think, to the historical development of SOM. By the time Oak Ridge was finished or the war was over and our activity ceased, SOM had the capability of dealing with almost any kind of project, whether it be a school or a hospital or a house or prefabrication or anything. The organization had capability. (Hartman Oral History: 71)

On the level of the individual, one architect who had been required to assume a position for which he felt himself to be unqualified, noted how he benefitted from that experience:

> I got a lot of experience that I never should have had. I wasn't really qualified to do, but if someone sits you in an office, you do it, somehow. (Grunsfeld Oral History: 115)

3.6 DISCUSSION AND CONCLUSION

My objective in this study was to examine how “do-or-die” deadlines can create both the opportunity and the perceived need for people to bend the rules and the formal structures of the organizations to which they belong. Using a mix of oral histories, archival data, and secondary sources, I examined two case studies related to American involvement in the Second World War: the mobilization campaign of 1939-1941 and the conception, design and construction of the city of Oak Ridge, part of the Manhattan Project. I argue that people involved in these episodes were immersed in a “do-or-die” deadline, a climate and a pace so urgent that it assumed the character of the crisis (Weick, 1993) in which individuals’ expectations about the how the world works are challenged, and in which people struggle to make sense of their plight and how to confront it.

When faced with “do-or-die” deadlines such as these, organizations may be unprepared to confront the radically changed context in which they are being asked to operate; the tools, routines, and structures that work in ordinary circumstances may no longer be of much use (Weick, Sutcliffe, and Obstfeld, 2005; Lampel et al., 2009). People may therefore begin to feel that the organization itself is acting as an obstacle to achieving important organizational goals. Others may be forced into roles for which they are unqualified, or brought into organizations with little or no training or enculturation process. In this context, the pressure to maintain or respect dominant organizational values, structures, and routines may slacken (Weick, 1993), and individuals may come to believe that that in order to achieve the goals of the organization, a degree of

organizational custom and structure must be sacrificed. Furthermore, I argue, the atmosphere of chaos and desperation surrounding the “do-or-die” deadline can lead people to believe that their insubordinate actions are unlikely to be detected, let alone punished. Where these deviations prove useful, organizations can fold them back into the formal structure.

We know relatively little about how deadlines and extreme rush conditions affect organizations, and in approaching this question, this study makes two principal contributions to the organizations literature. First, I suggest that “do-or die” deadlines can cause organizational norms to slacken, leaving more room for people to disobey, experiment, innovate, and otherwise misbehave within their organizations. This study of the military suggests that the temptation and the perceived need to challenge the limits may be more pronounced if the organizational structure is rigid, or is at least perceived to be so. A second contribution of this study is to broaden the discussion of resistance in organizations (Courpasson, 2016; Ezzamel et al., 2001; Knights and McCabe, 2000; Prasad and Prasad, 2000) to include pursuit of an organization’s stated goal at the expense of the structure of the organization itself.

While my focus here is on those modes of misbehavior that tend to advance organizational goals, it is apparent that the slackening of order may also permit more common forms of misbehavior, such as self-interested behavior or wasting time. Indeed, this study provides ample evidence that this was indeed the case. As the military was stretched to its limits, those who wished to waste time and material or to pursue their own interests found ample space to do so. One might also expect such a situation to prove favorable to

sabotage and spying, that is, to active resistance to the organization's goals, though I encountered little evidence of this. Yet, I would argue, for those who truly wished to further the Army's wartime mission, these episodes of self-interested behavior would only serve to strengthen the conviction that the organization itself was behaving irrationally and that in order to be effective, one would have to step outside the limits of traditionally accepted behavior.

This study has limitations, which also suggest directions for further research. I deal here with a very extreme condition, one in which success and failure were truly questions of life and death. The demand for speed is perhaps confounded in these by other concerns, including physical survival. Further work might examine less extreme contexts where time is nevertheless compressed, in order to more conclusively interrogate the question of time in isolation. Also, while the historical, archival approach provides a rich research context, it precluded direct interviews with those who were present in the events described. It may be of interest to address the questions raised here in a contemporary setting, one in which subjects might be interviewed, and follow-up questions asked.

In January of 1944, the United States Office of Strategic Services (OSS), the predecessor of the Central Intelligence Agency, issued a field manual for "simple sabotage" of enemy activities by agents that had infiltrated Axis-controlled countries. The manual was intended to arm the "ordinary everyday citizen-saboteur" (OSS, 1944: 1) with tools for undermining efficiency and morale, including the use of everyday materials such as salt, candy, or nails, as well as the fomentation of "stupidity" and "faulty decisions" in organizational life

by those who had assumed managerial roles within enemy regimes. In a chapter dedicated to “General Interference with Organizations and Production,” the first directive advises agents involved in running organizations in Axis-controlled territory to: “(i)nsist on doing everything through ‘channels’,” admonishing them to “(n)ever permit short-cuts to be taken in order to expedite decisions.” Elsewhere, saboteur mangers are advised to “demand written orders,” “hold conferences,” and to “insist on perfect work,” while worker-saboteurs are directed, quite simply, to “work slowly” or to “pretend that you are particularly anxious to do your work, and pester the foreman with unnecessary questions.” (OSS, 1944: 28-31) This advice to spy-saboteurs roughly inverts the illicit tactics used by those within the US Army to further the war effort through acts of creative insubordination. By evading official regulations or “channels” and instead devising shortcuts; by accepting imperfection; and by stressing speed and not asking questions, organizational goals were reached and manifestly unreasonably deadlines were met, occasionally at the expense of organization itself.

ARCHIVAL AND PRIMARY SOURCES:

Center for Oak Ridge Oral History, *Oral History of David and Juanita Cardwell*, interviewed by Charles Jackson, 3 April 1976.

----, *Oral History of Carl and Ida Hagaman*, interviewed by Charles Jackson and Charles Johnson, 15 May 1976.

----, *Oral History of George and Katherine Kearsley*, interviewed by Charles Johnson, 27 March 1976.

----, *Oral History of Carl and Christopher Keim*, interviewed by Dean Novelli and Steve Buxton, 13 June 2000.

----, *Oral History of Mike Lundin*, interviewed by Connie Callan, 9 March 2005.

----, *Oral History of Dr. Charles E. Normand*, interviewed by Joan Carden and Ada Misek, 25 April 1972.

----, *Oral History of William and Doris Reynolds*, interviewed by Charles Jackson and Charles Johnson, 26 June 1976.

----, *Oral History of Bill Wilcox*, interviewed by Bart Callan, 10 March 2005.

Chicago Architects Oral Histories Project, The Art Institute of Chicago. *Oral History of Edward Charles Bassett*, interviewed by Betty J Blum, 1992.

----, *Oral History of Edo J. Belli*, interviewed by Betty J. Blum, 1995.

----, *Oral History of Monroe B. Bowman*, interviewed by Betty J. Blum, 1995.

----, *Oral History of Jacques Calman Brownson,* interviewed by Betty J. Blum, 1996.

----, *Oral History of C. William Brubaker*, interviewed by Betty J. Blum, 2000.

----, *Oral History of Gordon Bunshaft*, interviewed by Betty J. Blum, 1990.

----, *Oral History of Christopher John Chamales*, interviewed by Betty J. Blum, 1995.

----, *Oral History of Natalie de Blois*, interviewed by Betty J. Blum, 2004.

----, *Oral History of Arthur Detmers Dubin*, interviewed by Betty J. Blum, 2003.

----, *Oral History of Sidney Epstein*, interviewed by Betty J. Blum, 1994.

----, *Oral History of Charles Booher Genther*, interviewed by Betty J. Blum, 1995.

----, *Oral History of Myron Goldsmith*, interviewed by Betty J. Blum, 1990.

----, *Oral History of Ezra Gordon*, interviewed by Annemarie van Roessel, 2004.

----, *Oral History of Bruce John Graham*, interviewed by Betty J. Blum, 1998.

----, *Oral History of Ernest Alton Grunsfeld*, interviewed by Annemarie van Roessel, 2004.

----, *Oral History of James Wright Hammond*, interviewed by Betty J. Blum, 1995.

----, *Oral History of William Hartmann*, interviewed by Betty J. Blum, 1991.

----, *Oral History of John F. Hartray, Jr.*, interviewed by Annemarie van Roessel, 2004.

----, *Oral History of John Augur Holabird*, interviewed by Susan S. Benjamin, 1998.

----, *Oral History of Ben Honda*, interviewed by Betty J. Blum, 2001.

----, *Oral History of Walter Netsch*, interviewed by Betty J. Blum, 2000.

----, *Oral History of Lawrence Bradford Perkins*, interviewed by Betty J. Blum, 1986.

----, *Oral History of Donald D. Powell and Robert D. Kleinschmidt*, interviewed by Betty J. Blum, 2012.

----, *Oral History of William Turk Priestley*, interviewed by Betty J. Blum, 1995.

----, *Oral History of Ambrose M. Richardson*, interviewed by Betty J. Blum, 1990.

----, *Oral History of Richard Ten Eyck*, interviewed by Annemarie van Roessel, 2003.

----, *Oral History of Harry Mohr Weese*, interviewed by Betty J. Blum, 1991.

----, *Oral History of Wesley Senn Weiting*, interviewed by Betty J. Blum, 1995.

----, *Oral History of William Turk Priestley*, interviewed by Betty J. Blum, 1995.

----, *Memoirs of L. Morgan Yost*, interviewed by Betty J. Blum, 1986.

US Atomic Energy Commission, 1948. *Manhattan District History*, Vol. 1-12.

US *Congressional Record*, 1940; 76th Congress, Chapter 720. S. 4164.

US Department of Defense, Directorate for Information Operations and Reports, 1997. *Selected Manpower Statistics.*

US Department of Energy, Office of History and Heritage Resources. Memo, Roosevelt to Bush, 19 January 1942.

US National Archives and Records Administration, Atlanta Branch. RG-326 Atomic Energy Commission; Oak Ridge, Tennessee.

US Office of Strategic Services (OSS), 1944. *Strategic Services Field Manual No. 3 – Simple Sabotage Field Manual*, Washington, D.C.

US War Office, 1939. *Report of the Secretary of War to the President – 1939*. Washington, D.C.

Voices of the Manhattan Project, Atomic Heritage Foundation and Los Alamos Historical Society, *Oral History of Leroy Jackson and Ernest Wende*, interviewed by Stephane Groueff, 13 July 1965.

----, *Oral History of Roger Rohrbacher*, 2005.

REFERENCES:

Adamczyk, R. D., & MacGregor, M. J. (Eds.). 1992. *United States Army in World War II - CMH Publication 11-9*. Washington, D.C.: United States Army Center of Military History.

Amabile, T., Mueller, J., Simpson, W., Hadley, C. N., Kramer, S. J., & Fleming, L. 2002. *Time pressure and creativity in organizations: a longitudinal field study*. no. Harvard Business School Working Paper #027-073. Cambridge, MA.

Bamberger, P., & Pratt, M. 2010. From the Editors: Moving forward by looking

back: Reclaiming unconventional research contexts and samples in organizational scholarship. *Academy of Management Journal*, 53(4): 665–671.

Blount, S., Waller, M., & Leroy, S. 2005. Coping with temporal uncertainty: When rigid, ambitious deadlines don't make sense. In W. H. Starbuck & M. Farjoun (Eds.), *Organization at the Limit: Lessons from the Columbia Disaster* (pp. 122–139). Malden, MA: Wiley.

Carmona, S., Ezzamel, M., & Gutiérrez, F. 2002. The relationship between accounting and spatial practices in the factory. *Accounting, Organizations and Society*, 27: 239–274.

Chia, R., & Holt, R. 2006. Strategy as practical coping: A Heideggerian perspective. *Organization Studies*, 27(5): 635–655.

Courpasson, D. 2016. Impactful resistance: The persistence of recognition politics in the workplace. *Journal of Management Inquiry*, 25(1): 96–100.

Courpasson, D. 2017. The politics of everyday. *Organization Studies*, 38(6): 843–859.

Courpasson, D., Dany, F., & Clegg, S. 2012. Resisters at work: Generating productive resistance in the workplace. *Organization Science*, 23(3): 801–819.

de Certeau, M. 1984. *The Practice of Everyday Life*. Berkeley: University of California Press.

Dolbeare, K. E. 1996. *American Political Thought* (3rd ed.). Chatham House Publishers.

Ezzamel, M., Willmott, H., & Worthington, F. 2001. Power, control and resistance in "the factory that time forgot." *Journal of Management Studies*, 38(8): 1053–1079.

Feldman, M. S., & Orlikowski, W. 2011. Theorizing practice and practicing theory. *Organization Science*, 2(1): 71–87.

Fine, L., & Remington, J. A. 1989. *United States Army in World War II - The Technical Services; The Corps of Engineers: Construction in the United States*. Washington, D.C.: United States Army Center of Military History.

Gosling, F. 1999. *The Manhattan Project: Making the Atomic Bomb*. Oak Ridge, TN: United States Department of Energy.

Hewlett, R., & Anderson, O. E. J. 1962. *A History of the United States Atomic Energy Commission: Volume 1 - The New World 1939/1946*. University Park, PA: The Pennsylvania State Univerity Press.

Jarzabkowski, P., & Spee, A. P. 2009. Strategy-as-practice: A review and future directions for the field. *International Journal of Management Reviews*, 11(1): 69–95.

Johnson, C. W., & Jackson, C. O. 1981. *City Behind a Fence: Oak Ridge, Tennessee: 1942-1946*. Knoxville, TN: University of Tennessee Press.

Jones, V. 1985. *United States Army in World War II - Special Studies; Manhattan: The Army, and the Atomic Bomb*. Washington, D.C.: United States Army Center of Military History.

Juris, J. S. 2012. Reflections on #Occupy Everywhere: Social media, public space, and emerging logics of aggregation. *American Ethnologist*, 39(2): 259–279.

Knights, D., & McCabe, D. 2000. “Ain”t misbehavin’? Opportunities for resistance under new forms of “quality” management. *Sociology*, 34(3): 421–436.

Lampel, J., Shamsie, J., & Shapira, Z. 2009. Experiencing the improbable: Rare events and organizational learning. *Organization Science*, 20(5): 835–845.

Lindkvist, L., Söderlund, J., & Tell, F. 1998. Managing product development projects: On the significance of fountains and deadlines. *Organization Studies*, 19(6): 931–951.

Marshall, G. C. 1996. *Biennial Reports of the Chief of Staff of the United States Army to the Secretary of War*. Washington, D.C.: United States Army Center of Military History.

Martí, I., & Fernández, P. 2013. The institutional work of oppression and resistance: Learning from the holocaust. *Organization Studies*, 34(8): 1195–1223.

Meyer, J., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340–363.

Mumby, D. K., Thomas, R., Martí, I., & Seidl, D. 2017. Resistance redux. *Organization Studies*, 38(9): 1157–1183.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16(1): 145–179.

Paulsen, R. 2015. Non-work at work: Resistance or what? *Organization*, 22(3): 351–367.

Pina e Cunha, M., Rego, A., & Clegg, S. R. 2010. Obedience and evil: From Milgram and Kampuchea to normal organizations. *Journal of Business Ethics*, 97(2): 291–309.

Prasad, P., & Prasad, A. 2000. Stretching the iron cage: The constitution and implications of routine workplace resistance. *Organization Science*, 11(4): 387–403.

Risch, E. 1953. *United States Army in World War II - The Technical Services - The Quartermaster Corps: Organization, Supply, and Services (Volume 1)*. Washington, D.C.: United States Army Center of Military History.

Schubert, F. N. 1995. *Mobilization: The U.S. Army in World War II, The 50th Anniverary*. Washington, D.C.: United States Army Center of Military History.

Sgourev, S. V. 2013. How Paris gave rise to Cubism (and Picasso): Ambiguity and fragmentation in radical innovation. *Organization Science*, 24(6):

1601–1617.

Vaara, E., & Lamberg, J.-A. 2016. Taking historical embeddedness seriously: Three historical approaches to advance strategy process. *Academy of Management Review*, 41(4): 633–657.

Vaara, E., & Whittington, R. 2012. Strategy-as-Practice : Taking social practices seriously. *Academy of Management Annals*, 6(1): 285–336.

Waller, M. J., Zellmer-Bruhn, M. E., & Giambatista, R. C. 2002. Watching the clock : Group pacing behavior under dynamic deadlines. *Academy of Management Journal*, 45(5): 1046–1055.

Weick, K. E. 1990. The vulnerable system: An analysis of the Tenerife air disaster. *Journal of Management*, 16(3): 571–593.

Weick, K. E. 1993. The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38(4): 628.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. 2005. Organizing and the process of sensemaking. *Organization Science*, 16(4): 409–421.

Whittington, R. 2006. Completing the practice turn in strategy research. *Organization Studies*, 27(5): 613–634.

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SPANISH TRANSLATION / TRADUCCIÓN AL CASTELLANO

Introducción General:

Esta tesis analiza las organizaciones en contextos de crisis y transición ambiental. Mi planteamiento es que las normas y las presiones institucionales pueden relajarse en tales climas, y que las organizaciones pueden explotar tal laxitud desviándose de los estándares de las prácticas legítimas, comunes y aceptables sin por ello exponerse necesariamente a los peligros que conlleva la inconformidad. La teoría institucional plantea que las organizaciones de un determinado campo institucional propenderán a parecerse entre sí (DiMaggio y Powell, 1983), y que las firmas corren el riesgo de parecer ilegítimas si se alejan de las lógicas y los modelos institucionales establecidos (Meyer y Rowan, 1977; Deephouse, 1999). Las investigaciones previas plantean que estas presiones de conformidad pueden ser especialmente agudas en campos profesionalizados como la contabilidad (Greenwood, Suddaby, y Hinings, 2002), consultoría de gestión (David, Sine, y Haveman, 2013) y arquitectura (Jones et al, 2012), donde las profesiones mismas pueden establecer normas colectivas de lo que es importante, correcto y apropiado. En los estudios que figuran aquí planteo que estas normas pueden acarrear un menor peso cuando el entorno se encuentra en una situación inestable, y que, en lugar de eso, ciertos modos de inconformidad o insubordinación pueden tolerarse y recompensarse en tales contextos.

Exploro este fenómeno por medio de una combinación de métodos cualitativos y cuantitativos, incluyendo un estudio longitudinal del número total de los 3.882 estudios de arquitectura del área de Chicago existentes entre

1928 y el año 2000. He obtenido los datos de una serie de fuentes archivísticas, incluyendo los listines telefónicos a lo largo del período de estudio, los documentos históricos de la sección de Chicago del Instituto Americano de Arquitectos (*American Institute of Architects*), obituarios, registros militares y encuestas de arquitectura históricas. En total, la base de datos comprende 41.000 observaciones individuales aproximadamente, lo que proporciona una fuente de información robusta en lo tocante a la relación entre las condiciones ambientales, la supervivencia y la inconformidad de las empresas con las normas institucionales y profesionales.

La práctica de la arquitectura es un contexto de gran utilidad para poner a prueba un modelo institucional, dado que el diseño y la construcción del entorno edificado es, por regla general, dependiente de fuerzas sociales y económicas de mayor magnitud para la contratación y financiación del trabajo (Blau, 1984). En muchos casos, pues, la práctica de la arquitectura es un epifenómeno de la macroeconomía (Tafuri, 1980; Jameson, 1991) y, sin embargo, la disciplina cultural y artística de la arquitectura en sí se basa en ideales y principios internos que pueden estar desvinculados de las fuerzas que en última instancia edifican y pagan el trabajo arquitectónico. Esta tensión entre la arquitectura como disciplina autónoma y la práctica de la arquitectura como instrumento de desarrollo opera como el trasfondo de cada uno de los estudios aquí contenidos.

Mis hallazgos indican que ciertas presiones de conformidad institucional pueden remitir o desaparecer por entero durante periodos de transformación ambiental esencial (Haveman, 1992), y que en ciertas circunstancias las

nuevas firmas pueden beneficiarse de una inconformidad inicial en su estrategia. Sin embargo, las nuevas firmas que no se conformaron a las normas de una estructura societaria siguieron exponiéndose a un peligro mayor que las que mantuvieron su conformidad en ese sentido. Plantearía que este fenómeno puede estar vinculado con la relación de una firma con su cliente primario o tipos de clientes. Considero que las empresas especializadas en ciertos clientes o tipos de cliente son más proclives a desarrollar semejanzas estructurales y estratégicas con sus clientes que las que adoptan un enfoque generalista, y que esta tendencia isomórfica estuvo vinculada positivamente a la reducción de las tasas de riesgo, y a una probabilidad mayor de obtener un reconocimiento profesional por medio de publicaciones y premios. En el último capítulo de la tesis -un estudio cualitativo de la actividad de construcción, diseño y planificación de EEUU en relación con la Segunda Guerra Mundial- advierto que los individuos en el seno de las organizaciones pueden explotar el caos y el estrés vinculado a los plazos “a vida o muerte” pasando por alto o saltándose las normas de la conducta organizativa legítima y las cadenas formales de mando. Planteo que este tipo de insubordinación no se deriva necesariamente de la resistencia a los objetivos organizativos, sino que, más bien, puede aflorar cuando los individuos consideran que les resulta tanto posible como necesario desestimar las normas de la organización para alcanzar objetivos organizativos de importancia. Como resultado de esto, las extremadas presiones temporales en lo tocante a un plazo de entrega “a vida o muerte” pueden abrir ciertas vías a la improvisación y la creatividad que de otro modo estarían cerradas.

Estos estudios brotan de mi interés en la forma que tienen las organizaciones de reaccionar a situaciones de crisis. Si bien los peligros asociados a tiempos difíciles son ciertamente reales, mi objetivo es investigar los límites de esos riesgos e identificar cómo y en qué condiciones puede llegar a ser positivo vivir en malos tiempos.

Capítulo 1: Resumen

Impronta de un mundo venidero: Relajación institucional, encaje anticipatorio, e inconformidad en los estudios de arquitectura de Chicago (1928-2000)

1.1: INTRODUCCIÓN

Las nuevas firmas se enfrentan a la presión de conformarse a la lógica o lógicas institucionales dominantes en sus respectivos campos (Friedland y Alford, 1991; Thornton, 2002; Thornton, Ocasio, y Lounsbury, 2012), y a adoptar características y estrategias que siguen tales lógicas (Haveman y Rao, 1997; Thornton y Ocasio, 1999; Almandoz, 2014). La teoría institucional plantea que las presiones isomórficas miméticas, coercitivas y normativas (Haveman y Rao, 1997; Thornton y Ocasio, 1999; Almandoz, 2014) son importantes fuentes de conformidad y que desviarse de las lógicas y los modelos establecidos puede restar legitimidad a las empresas (Meyer y Rowan, 1977; Deephouse, 1999; Deephouse y Suchman, 2008), lo que vuelve aún más desalentador la ya arriesgada perspectiva de iniciar un nuevo negocio (Sine, Haveman, y Tolbert, 2005; Deephouse, et al., 2017). Aunque los investigadores han comprobado

que las lógicas institucionales son maleables (Sine, Haveman, y Tolbert, 2005; Deephouse, et al., 2017) y que pueden coexistir múltiples lógicas simultáneamente (Dunn y Jones, 2010), las investigaciones realizadas indican que la presión a la conformidad sigue siendo muy considerable y que puede ser especialmente aguda en los campos profesionalizados, donde los profesionales mismos se ocupan de imponer las normas colectivas de lo que se considera importante, correcto y apropiado. Pero cuando el entorno económico y social atraviesa una fase convulsa, ¿siguen manteniéndose vigentes tales presiones de conformidad? ¿Y, una vez que se ha disipado el estrés, sufren algún tipo de penalización esas empresas que se sacuden el yugo? El propósito de este estudio es abordar la cuestión de la conformidad al nacer en condiciones de crisis: ¿es útil la conformidad para las firmas que nacen en entornos profundamente turbulentos? O, dicho de otra manera, cuando el contexto institucional y económico se encuentra en transición, ¿tienen más probabilidades de sobrevivir las nuevas empresas que adoptan formas y estrategias organizativas inconformes que las que se rigen por las convenciones? ¿Las empresas que adoptaron prácticas inconformistas al nacer en condiciones de crisis seguirán manteniendo sus prácticas inconformistas en el futuro? Y, si lo hacen, ¿qué beneficios les reportará semejante postura?

Las investigaciones que se han llevado a cabo anteriormente solo ofrecen respuestas parciales a esas preguntas. Por ejemplo, Hiatt y Sine (2014) han examinado la forma en que los contextos de violencia política y civil afectaban las tasas de supervivencia y las estrategias de planificación de las nuevas firmas nacidas en contextos de inestabilidad, pero no han abordado la

cuestión de la inconformidad de nacimiento. Deephouse (1999) planteaba que la adopción de una posición de conformidad intermedia de “equilibrio estratégico” llevaba aparejada un mayor rendimiento que una estrategia altamente conformista o inconformista, pero presuponía unas condiciones de estabilidad institucional y económica. Gran parte de los estudios llevados a cabo en lo tocante al isomorfismo (e.g., Haveman, 1993; Shane y Foo, 1999; Tan, Shao, y Li, 2013) presuponían un contexto institucional relativamente estable en el que las características copiadas hoy también se presuponen válidas mañana. Por ejemplo, Thornton (2002) estudiaba las forma en que las empresas editoras existentes adaptaban sus estrategias y estructuras para encajar en un entorno institucional que ya había atravesado cambios fundamentales.

Sin embargo, si existe un clima socioeconómico turbulento y el contexto institucional se halla en un proceso de transición desde una situación conocida hacia un futuro aún emergente y brumoso, ¿podría ser peligroso para una nueva empresa adoptar las estructuras y las estrategias prevalecientes de un entorno en aparente declive? ¿No sería más ventajoso—en la medida en que esto sea posible—mostrar la impronta de la situación emergente y conformarse al mundo venidero en lugar de al orden en declive? En resumen, ¿pueden prepararse las empresas para el futuro conduciéndose como inconformistas en el presente? ¿Pagarán un precio por su inconformidad inicial?

Un modelo de relajación institucional y encaje anticipativo describe la forma en que las firmas fundadas en momentos de transformación ambiental esencial (Haveman, 1992) pueden mostrar la impronta de un contexto

institucional minoritario en lugar de las características prevalecientes del entorno dominante aunque en declive, y que, en ciertas circunstancias, pueden evitar los peligros asociados a la inconformidad con las lógicas institucionales dominantes. Mi planteamiento es que este fenómeno está impulsado en parte por las presiones isomórficas que ejercen sobre las firmas una parte esencial de su contexto social: los clientes primarios con los que interactúan a diario y que les encargan el trabajo (Miller y Chen, 1996; Jones et al., 2012). La teoría institucional plantea que las presiones sociales y simbólicas tienden a impulsar a las nuevas firmas a emular las formas y estrategias dominantes en la población para adquirir la legitimidad dentro del contexto institucional (Miller y Chen, 1996; Jones et al., 2012). La perspectiva de la contingencias (Woodward, 1965; Lawrence y Lorsch, 1967; Siggelkow, 2002) razona que los gestores pueden y deben adaptar sus empresas para lograr que las características concretas de su organización encajen en el panorama competitivo vigente. Un modelo de encaje anticipatorio amplía tanto las teorías institucionales como contingentes al plantear que las fuerzas incipientes, aunque aún no dominantes, en el entorno también pueden ejercer presiones. Entra en juego el tiempo. Planteo que la intervención de los *managers* también entra en juego, dado que la decisión de adoptar características minoritarias puede ser simplemente eso: una decisión. Al elegir su base de clientes objetivo, una empresa puede optar por no encajar con el presente a cambio de la posibilidad de estar preparada para el futuro.

Pongo a prueba este modelo por medio de un estudio longitudinal de la práctica arquitectónica en Chicago. Concretamente, estudio toda la población

de los 3.882 estudios de arquitectura existentes entre los años 1928 y 2000, centrándome en las firmas nacidas durante el periodo que abarca la Gran Depresión, el *New Deal* y la Segunda Guerra Mundial (1929-1945). De este modo, el estudio no solo recoge la profunda turbulencia del periodo de crisis inicial (1929-1945), sino también varios periodos posteriores de crisis socioeconómica más leves hasta justos antes de los acontecimientos del 11S en 2001. Investigo las tasas de supervivencia e inconformidad de estas firmas nacidas en crisis en el marco del entorno cambiante de los años de la posguerra y en el de la población de estudios de arquitectura de Chicago, incluidos aquellos fundados antes y después de la crisis. Distingo entre dos modos de inconformidad: *inconformidad estructural*, que describe la decisión de una firma de no conformarse a las expectativas exteriores de lo que debe parecer o autodenominarse un estudio de arquitectura legítimo, y la inconformidad estratégica, que describe la adopción que hace una empresa de modos de trabajo más infrecuentes sin desafiar necesariamente las normas institucionales de identidad corporativa.

1.2: RESULTADOS Y CONCLUSIÓN

El objetivo de este estudio ha sido comprobar si las firmas nacidas en momentos de transformación ambiental fundamental pueden beneficiarse de adoptar estrategias y estructuras inconformistas. Mi hipótesis ha sido que los climas de transformación ambiental fundamental pueden ocasionar un "relajamiento institucional" dado que las presunciones habituales acerca de lo que constituye una estructura y una estrategia organizativa legítima pueden

quedar erosionadas durante las crisis, lo que permite deducir que las firmas fundadas en semejantes climas pueden beneficiarse de ciertos tipos de inconformidad al nacer, y que pueden emprender una estrategia de “encaje anticipatorio” sin incurrir en los riesgos de ilegitimidad percibida que afrontarían en caso de adoptar enfoques inconformistas en climas más estables.

Mis resultados apoyan sólidamente la hipótesis de partida de que, por regla general, las empresas se enfrentarán a una tasa de riesgo mayor por su inconformidad al nacer (H1a). Este hallazgo, que tiene el propósito principal de proporcionar un trasfondo para las hipótesis subsiguientes, apoya una de las presunciones básicas de la perspectiva institucional: la idea de que las organizaciones se enfrentan a una presión para conformarse a las prácticas y los procedimientos dominantes de sus respectivos campos, y que pueden pagar un precio por no hacerlo. La hipótesis 1b, no obstante, predecía que tales presunciones pueden no ser aplicables si las condiciones de nacimiento son lo suficientemente turbulentas. Esto es, he planteado que las condiciones de transformación ambiental fundamental (Haveman, 1992) puede tender a producir un relajamiento de las presiones de conformidad, y que, en lugar de eso, las nuevas empresas pueden beneficiarse de adoptar enfoques inconformistas en climas de crisis (H1b). Aunque mis resultados no apoyan esta hipótesis, los hallazgos sugieren que el nacimiento en una crisis puede mitigar moderadamente el peligro asociado a la inconformidad. Los resultados indican que el clima de nacimiento por sí solo quizá explique este fenómeno de manera únicamente parcial, y que la inconformidad relativa de las firmas con las normas estructurales y estratégicas quizá también desempeñe un papel

importante. Si bien veo pruebas de que las presiones institucionales pueden relajarse bajo el estrés de las condiciones de crisis, y que las firmas nacidas en condiciones de crisis pueden afrontar una penalización menor por su inconformidad, no parecen ser capaces de evitar por completo las consecuencias de ser diferentes. Las presiones institucionales parecen algo más resilientes de lo que había anticipado, aun en caso de turbulencias ambientales.

Con las hipótesis 2 y 3 he distinguido entre los modos de inconformidad estratégica y estructural. He visto respaldadas las H2a y H3a, que pronosticaban que, en general, las nuevas firmas se enfrentarían a una tasa de peligro mayor si hubieran adoptado enfoques inconformistas estratégicos o estructurales al nacer. Sin embargo, en climas de crisis esperaba observar una dinámica distinta, con la hipótesis de que las nuevas firmas nacidas en condiciones de crisis podrían beneficiarse de una inconformidad estratégica (H2b), pero seguirían sufriendo una tasa de peligro mayor al abrazar una inconformidad estructural (H3b). Esto es, esperaba que las firmas nacidas en momentos de turbulencia fueran relativamente libres para experimentar con la forma en que un estudio de arquitectura *trabaja*, pero menos libres para cuestionar la forma en que se *manifiesta*. Las pruebas de H2b y H3b se ajustaron a mis predicciones: advertí que se veía refrendada la idea de que las nuevas firmas pueden beneficiarse de la inconformidad estratégica en contextos de transformación ambiental fundamental, y que la inconformidad estructural sería peligrosa con independencia de la inestabilidad en el clima de nacimiento.

Los resultados indican, pues, que las ideas habituales acerca de una estructura corporativa legítima podrían estar fuertemente vinculadas a la imagen propia de los arquitectos como autores autónomos (Blau, 1984; Cuff, 1991), y que las presiones de conformidad podrían resultar más ineludibles cuando se trata de la estructura de una firma y no de su estrategia. Mi predicción era que las nuevas firmas que adoptasen enfoques inconformistas estructurales se enfrentarían a mayores tasas de peligro, con independencia de que nacieran en condiciones de crisis. Los resultados apoyan esta perspectiva: incluso para las firmas nacidas en crisis, puede seguir habiendo un incentivo para conformarse a las normas de lo que se supone que debe parecer un estudio de arquitectura, con independencia del enfoque estratégico adoptado. Más concretamente, los resultados indican que había oportunidades para las firmas que adoptaban *estrategias* de lógica de servicios (por ejemplo, ofreciendo una serie de servicios extra arquitectónicos) mientras mantenían la apariencia estructural asociada a la lógica disciplinaria (por ejemplo, identificándose con los nombres de socios individuales y asociándose al AIA).

Las hipótesis 4a y 4b indicaban una posible extensión de la literatura referida a la impronta de las condiciones fundacionales en las firmas (Stinchcombe, 1965; Marquis y Tilcsik, 2013; Simsek et al., 2014). La idea del encaje anticipatorio sugiere que las condiciones fundacionales pueden configurar ciertamente las firmas a lo largo del tiempo, pero que, en algunos casos, la impronta puede tratarse menos de un rasgo específico del entorno de nacimiento que de una disposición mayor a adoptar posiciones inconformistas a lo largo del tiempo, así como una inmunidad continuada para hacerlo. Mis

resultados respaldan esta idea parcialmente, con un peligro incrementado para las firmas que se vuelven más inconformistas a lo largo del tiempo, y un peligro claro, pero significativamente reducido, entre las firmas nacidas en el periodo de crisis. Estos resultados indican, pues, que el nacimiento en crisis puede no facilitar una inmunidad a las penalizaciones de una inconformidad creciente a lo largo del tiempo, pero que sí puede vincularse con un efecto paliativo considerable.

Capítulo 2: Resumen

"Haz lo que decimos *y* lo que hacemos": El isomorfismo firma-cliente y el campo organizativo ampliado

2.1: INTRODUCCIÓN

Los investigadores de las firmas de servicios profesionales (PSFs en sus siglas en inglés) están cada vez más interesados en la interacción entre los clientes y las firmas que los contratan (Anderson-Gough, Grey, y Robson, 2000; Malhotra y Morris, 2009; Lawrence, Malhotra, y Morris, 2012). Los estudios anteriores han examinado la forma en que los clientes pueden contribuir al conocimiento en la firma (Fosstenløkken, Løwendahl, y Revang, 2003), cómo el abandono de *managers* tanto en el cliente como en las firmas focales puede disolver la relación firma-cliente (Broschak, 2004), y cómo la preferencia de un cliente geográficamente distante de reuniones presenciales puede inducir a una firma a montar filiales (Malhotra y Morris, 2009). Una rama de esta investigación ha

desarrollado la idea de “captura de cliente”, que indica que cuando las PSFs dependen de un cliente dado, quienes las contratan pueden llegar a “capturarlas” y controlarlas (Johnson, 1972; Leicht y Fennell, 2008), y que, a consecuencia de ello, pueden traspasar límites éticos (Gunz y Gunz, 2008; Dinovitzer, Gunz, y Gunz, 2014) o aceptar condiciones de trabajo que no son necesariamente beneficiosas para los intereses a largo plazo de la firma (Malhotra y Morris, 2009). Gran parte de la investigación vigente de la captura del cliente afronta, pues, este fenómeno como algo que conviene evitar o frenar, una situación que lleva a la firma a firmar contratos desfavorables (Malhotra y Morris, 2009) o a descuidar su responsabilidad profesional al sucumbir a la presión de decir a los clientes “lo que *quieren* oír en lugar de lo que *deben* oír” (Dinovitzer et al., 2014: 99).

Como resultado de esto, sabemos relativamente poco acerca de las formas en que las influencia de los clientes puede contribuir al éxitos de las PSFs, y cómo esa influencia puede configurar las estructuras y las estrategias. Cubro esta laguna en la literatura por medio de un estduio longitudinal de la práctica arquitectónica en Chicago, desde 1928 al año 2000, un periodo que empieza justo antes de la Gran Depresión y concluye antes de los ataques del 11S. Este periodo incluye periodos de gran turbulencia y dificultades económicas, así como periodos de prosperidad y estabilidad y, por tanto, ofrece una fuentes de datos variada y robusta acerca de la práctica arquitectónica en una gran zona metropolitana. A lo largo del periodo de estudio irían apareciendo nuevos grupos de clientes dominantes (Jones et al., 2012), y los estudios de arquitectura se verían obligado a ajustarse a nuevos

patrones y exigencias de nuevos y variados tipos de servicios arquitectónicos. Planteo que esta transformación de lo que se demanda a los arquitectos impulsaría un cambio similar en la forma en que los arquitectos respondían a tales demandas y a los clientes que las hacían, y que cabe esperar asistir a una presión isomórfica (DiMaggio y Powell, 1983; Haveman, 1993) por parte de los clientes sobre las firmas a las que contratan, especialmente en casos en los que una firma se ha vuelto dependiente de un solo cliente o tipo de cliente para su capital operativo. Esto es, la lógica de la teoría institucional podría llevarnos a esperar que las firmas especialistas trabajen *como* aquellos *para* los que trabajan.

2.2: RESULTADOS Y CONCLUSIÓN

El propósito de este estudio ha sido ampliar la relevancia del fenómeno del isomorfismo al campo de la gestión estratégica, ensanchando el campo organizativo para abarcar también al cliente. He centrado este análisis teórico en la población total de arquitectos y estudios de arquitectura implicados en la práctica profesional en el área metropolitana de Chicago, desde 1928 al año 2000. He planteado tres cuestiones que investigar: ¿desarrollan los estudios de arquitectura especializados similitudes isomórficas con los clientes primarios para los que trabaja con mayor frecuencia que las firmas generalistas? ¿Difieren las firmas especialistas de una población en su estructura y estrategia en función del tipo de clientes al que atienden? ¿Y contribuye el isomorfismo cliente-firma al éxito y la supervivencia de la firma a lo largo del tiempo? Mis resultados indican que la respuesta general a esas tres preguntas es

afirmativa, pero que pueden surgir visiones adicionales y condiciones fronterizas si analizamos los resultados de forma detallada.

En lo tocante a la primera cuestión de la investigación, las pruebas respaldan la hipótesis general de que los estudios de arquitectura especializados tenderán a adoptar los rasgos de sus clientes con mayor frecuencia que las firmas generalistas.

Al distinguir entre las firmas que se especializaban en cuatro tipos de cliente, advertí que el isoemparejamiento era más probable entre los especialistas en trabajo militar, institucional y residencial, pero que era considerablemente menos probable entre las firmas especializadas en clientes comerciales. Este hallazgo indica que no todos los especialistas se crean iguales, y que las firmas pueden estar sujetas de forma simultánea a presiones isomórficas encontradas y posiblemente contradictorias por parte de sus clientes. Retomaré esta observación más adelante. La segunda cuestión de la investigación planteaba si las firmas especialistas diferían en su estructura y su estrategia en función de las especialidades de sus clientes. En general, los resultados indican que ese es el caso. La tercera cuestión de la investigación abordaba la legitimidad y la eficiencia. Los resultados de este estudio respaldan sólidamente la hipótesis de que las firmas que adoptan los rasgos de sus clientes recibían mayores reconocimientos por medio de publicaciones y premios, y que tenían menos posibilidades de fracasar. Esta observación me lleva a plantear que, en determinadas circunstancias, las PSFs no necesitan recurrir a estrategias de desvinculación (Meyer y Rowan, 1977; Boxenbaum y Jonsson, 2008) para alcanzar la legitimidad y la eficiencia.

Capítulo 3: Resumen

El trabajo urgente: Del potencial creativo de la desorganización, la insubordinación, y los plazos “a vida o muerte”

3.1: INTRODUCCIÓN

Cuando las organizaciones se enfrentan a crisis de alto riesgo y plazos “a vida o muerte”, los individuos en el seno de tales organizaciones pueden explotar el caos y las prisas alocadas del momento pasando por alto o saltándose las normas de una conducta organizativa legítima y las cadenas de mando formales para afrontar los desafíos externos cuando no se cuenta con el tiempo suficiente para ello (de Certeau, 1984). Por medio de actos de insubordinación creativa, las personas pueden llevar a cabo evaluaciones inmediatas, aproximadas, y estratégicas de las probabilidades de que sean penalizadas por salirse del orden habitual de la vida organizativa y de cómo tales acciones ilícitas pueden contribuir favorablemente a la causa (Jarzabkowski y Spee, 2009; Feldman y Orlikowski, 2011; Vaara y Whittington, 2012). Estas acciones pueden ser deliberadas (Ezzamel, Willmott, y Worthington, 2001; Whittington, 2006) o se pueden adoptar de forma instintiva y, en gran medida, sin una motivación estratégica (Chia y Holt, 2006). Cuando estas estrategias son exitosas, las organizaciones pueden reabsorberlas en última instancia como estrategias legítimas y los actores pueden sentirse reforzados para adoptar un comportamiento similar en circunstancias futuras (Courpasson, Dany, y Clegg, 2012).

En los últimos tiempos, los investigadores en organización han dirigido su atención a las cuestiones de la resistencia dentro de las organizaciones (Courpasson, 2017; Mumby, Thomas, Martí, y Seidl, 2017), pero muchas veces esta resistencia se interpreta como algo que combatirse (Courpasson, 2016), delaying (Paulsen, 2015), o al menos con un efecto debilitador de la misión de la organización a la que se ofrece resistencia (Martí y Fernández, 2013). El presente estudio examina los casos en los que las condiciones de extrema urgencia posibilitaron u obligaron a los individuos a resistirse o saltarse las normas y estructuras organizativas para poder alcanzar los objetivos declarados de la organización. Argumentaría que tales actos se vuelven necesarios cuando las personas creen que la organización misma se está comportando de forma irracional, ineficiente o desorganizada. Son precisamente estas circunstancias las que pueden dar la confianza a los individuos no ya solo en que los fines de eficiencia justifican los medios ilícitos para alcanzarlos, sino en que la organización no tiene muchas posibilidades de detectarlos o castigarlos.

Al ampliar el concepto de resistencia de semejante forma, planteo que la resistencia no tiene por qué ser únicamente una cuestión de oposición a los objetivos de la organización (Juris, 2012), a los nuevos métodos o a las normas de trabajo que se implantan en una organización (Knights y McCabe, 2000; Prasad y Prasad, 2000; Ezzamel et al., 2001; Courpasson, 2016), o a un acto por interés propio de una “chapuza” o por perder el tiempo en el trabajo (de Certeau, 1984; Paulsen, 2015). En lugar de eso, las personas pueden implicarse en actos de insubordinación creativa, pasando por alto o saltándose

las reglas y los rituales más fundamentales de su organización para poder completar una misión que se considera esencial para el éxito de la organización misma.

Al usar una mezcla de historias orales, datos archivísticos y fuentes secundarias, examino dos casos relacionados con la implicación norteamericana en la Segunda Guerra Mundial: la campaña de movilización de 1939-1941 y la ideación, diseño y construcción de la ciudad de Oak Ridge, que fue parte del Proyecto Manhattan. Argumento que los implicados en tales episodios estaban inmersos en un plazo de entrega “a vida o muerte”, un clima y un ritmo tan apremiante que adoptó el carácter de una crisis (Weick, 1993) en la que las expectativas de los individuos acerca del funcionamiento del mundo se ven cuestionadas, y en la que las personas intentan adivinar a duras penas el sentido del aprieto en que se encuentran y cómo afrontarlo.

3.2: RESULTADOS Y CONCLUSIÓN

Al enfrentarse a plazos de entrega “a vida o muerte” como los explorados en este estudio, puede que las organizaciones no estén preparadas para enfrentarse al contexto radicalmente cambiado en el que se les pide que operen; puede que las herramientas, rutinas y estructuras que funcionan en circunstancias ordinarias ya no sean de gran utilidad (Weick, Sutcliffe, y Obstfeld, 2005; Lampel et al., 2009). Por tanto, las personas pueden empezar a sentir que la organización misma se está convirtiendo en un obstáculo para la consecución de importantes objetivos organizativos. Otros pueden verse obligados a cumplir funciones para las que no están preparados o integrarse en

organizaciones sin el debido proceso de formación y aclimatación. En este contexto, la presión de mantener o respetar las rutinas, estructuras y valores organizativos dominantes puede relajarse (Weick, 1993), y los individuos pueden llegar a creer que, para poder cumplir con los objetivos de la organización, debe sacrificarse un cierto grado de costumbres y estructura. Es más, argumentaría que la atmósfera de caos y desesperación que impregna un plazo de entrega “a vida o muerte” puede conducir a las personas a creer que sus acciones insubordinadas no corren gran riego de ser detectad y mucho menos castigadas. Allá donde tales desviaciones sean de utilidad, las organizaciones pueden integrarlas en su estructura formal.

Sabemos relativamente poco acerca de cómo los plazos de entrega y las circunstancias de urgencia extrema afectan a las organizaciones y, al afrontar esta cuestión, el presente estudio ofrece dos aportaciones fundamentales a la literatura de las organizaciones. En primer lugar, planteo que los plazos de entrega “a vida o muerte” pueden conducir a una relajación de las normas organizativas, dejando más margen para la desobediencia, la experimentación y la innovación de las personas, o bien a una conducta errónea en el seno de sus organizaciones. El presente estudio del ejército indica que la tentación y la necesidad percibida de desafiar los límites puede ser más pronunciada si la estructura organizativa es rígida o, al menos, así se percibe. Una segunda aportación del presente estudio es la ampliación del debate de la resistencia en las organizaciones (Courpasson, 2016; Ezzamel et al., 2001; Knights y McCabe, 2000; Prasad y Prasad, 2000) para incluir la

búsqueda del objetivo declarado de la organización a expensas de la estructura de la organización misma.

Si bien aquí me centro en esos modos de conducta errónea que tienden a impulsar los objetivos organizativos, es obvio que el relajamiento del orden también puede permitir tipos de conducta errónea más comunes, tales como el comportamiento por interés propio o la pérdida de tiempo. Ciertamente, el presente estudio proporciona abundantes pruebas de que este fue el caso. A medida que el ejército se tensaba hasta el límite, quienes deseaban malgastar tiempo o material o bien atender sus propios intereses tuvieron muchas posibilidades de hacerlo. Cabría esperar que tal situación fuera propicia para el sabotaje y el espionaje, esto es, la resistencia activa a los objetivos de la organización, aunque he encontrado pocas pruebas de ello. Sin embargo, argumentaría que, para quienes de verdad deseaban apoyar la misión del ejército en tiempos de guerra, estos episodios de conducta por interés propio no harían más que reforzar la convicción de que la organización misma se estaba conduciendo de forma irracional y que, para ser eficaz, uno tenía que traspasar los límites de la conducta tradicionalmente aceptada.