Why Did They Comply While Others Did Not?: Environmental Compliance of Small Firms and Implications for Regulation

by

Eungkyoon Lee

B.A., Anthropology, Seoul National University
M.C.P, Urban and Regional Planning, Seoul National University
M.P.A., Public Administration, University of Southern California

Submitted to the Department of Urban Studies and Planning
in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in Public Policy

at the

Massachusetts Institute of Technology

September, 2005

Signature of Author .....
Department of Urban Studies and Planning
September, 2005

Certified by .....
Martin Rein
Professor of Urban Studies and Planning
Dissertation Supervisor

Accepted by .....
Frank Levy
Rose Professor of Urban Economics
Chairman, Committee on Ph.D. Program

Why Did They Comply While Others Did Not?
: Environmental Compliance of Small Firms and Implications for Regulation

by

Eungkyoon Lee

Submitted to the Department of Urban Studies and Planning
on July 18, 2005 in partial fulfillment of the
requirements for the Degree of Doctor of Philosophy in
Public Policy

ABSTRACT

This doctoral dissertation aims to offer new insights into the environmental compliance behavior of small firms (SFs). Specifically, the dissertation examines the impacts of two categories of factors. The first category concerns internal motivations that drive SFs' decisions to comply or not comply with a formal environmental regulation. The other comprises external factors that affect formation of SFs' perspectives on rule compliance.

Rule compliance behavior results from complicated webs of both economic and social factors. Nevertheless, existing regulatory enforcement strategies have focused heavily on rational/economic factors without considering the significant effects of interactions between the two and consequently failed to produce the behavior they seek. Starting from an examination of the crucial characteristics of SFs that distinguish them from large firms, the dissertation sheds light on how social factors affect SFs' views on economic factors such as the price of penalty and compliance costs/benefits. In so doing, it contributes to knowledge of how formal regulatory enforcement can alter SFs' environmental compliance behavior.

The regulatory programs in Massachusetts and southern California targeting the dry cleaning industry are excellent cases through which to evaluate the central issues of SFs' compliance. The two programs are comparable in that regulatory requirements are equally strict; formal sanctions are equally severe; and regulated groups are similar in cultural background and other sectoral aspects. A notable difference is that there was a sudden rise in compliance rates in Massachusetts as compared to southern California. The comparative case study draws on ethnographic analysis based on participant observation, in-depth interview data and surveys.

Unlike scholarly works in the traditions of deterrence theory and the theory of norms which depicted compliance behavior as a function of either a strict cost-benefit calculation or of a sense of moral obligation to obey the law, respectively, my dissertation portrays compliance as a configuration of regulatory relationships between regulated entities and regulators, with trade associations playing a steering role. In so doing, the dissertation suggests how regulatory policies can alter SFs' choices of actions to best

encourage compliance. With a redefinition of the role of government, the dissertation proposes strategies for institutional arrangements that create and sustain reflexive trust, and thus expand SFs' willingness, opportunity and capacity to comply.

The dissertation is a pioneering study examining dynamic interactions between economic and social factors in the context of regulatory enforcement. It will contribute to both rule compliance and regulation theory by advancing several principles not clearly delineated in existing theories. Considering the large cumulative impacts of SFs on the environment and human health, effective regulatory enforcement is crucial. A better understanding of SFs' motivations for compliance will assist agencies to meet this challenge.

Dissertation Supervisors: Martin Rein (MIT) & David Laws (MIT)
Readers: Archon Fung (Harvard), Dara O'Rourke (UC Berkeley) & Michael Piore (MIT)

ACKNOWLEDGMENT

I would like to acknowledge the love of my family, especially, my parents who have endured and supported my long journey.

I cannot thank my dissertation committee members enough: Martin Rein, David Laws, Archon Fung, Dara O'Rourke, and Michael Piore. They are all my intellectual fathers. This dissertation would not have been possible without their support and substantial guidance. Readings and comments with which they provided me were invaluable when formulating and reformulating my ideas.

I would also like to express my gratitude to Lawrence Susskind and JoAnn Carmin. As faculty members in the Environmental Policy Group, they have cared about my academic life throughout the ups and downs. Special thanks to Raul Lejano at UC Irvine, as well.

I am also indebted to an unusually long list of friends who read various chapters of the draft and offered their insight and friendship during this dissertation research. My warm thanks to Jeff Duritz, Susanne Seitinger, Tracy Sayegh, Sarah Connolly, Ray Hodges, Robin McGregor, Lyssia Lamb-Macdonald, Gan Golan, Celina Su, Yong-Wook Lee, Seung-Yong Rho, Young-Soo Choi, Sang-Joon Hwang, Young-Ho Rho, and many other friends at the Department of Urban Studies and Planning.

I was fortunate to have Michael Crow's comments and the cooperation of Korean drycleaners associations in Massachusetts and southern California, Massachusetts Department of Environmental Protection and South Coast Air Quality Management District.

Finally, I am grateful to the National Science Foundation. This dissertation research would have been incomplete without the Foundation's financial support.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

THE SUBJECT OF STUDY: RULE COMPLIANCE AND REGULATORY REFORM

Puzzle in a Story of the Dry Cleaning Industry

With growing concerns about the cumulative impacts of small pollution sources, Occupational Health and Safety Administration (OSHA) assessed in 1988 which small business sectors were considered high-risk. The dry cleaning industry was second only to auto body repair shops (Hillenbrand 1988). Furthermore, the U.S. Environmental Protection Agency (EPA), in the1990 Clean Air Act (CAA) Amendment, classified 189 chemicals as hazardous air pollutants (HAPs) and attempted to set a national emission standard (NESHAP) for each classified chemical. In 1991, Perc, a potential human carcinogen, was the first NESHAP promulgated by EPA under section 112 of the 1990 Amendment (EPA 1993). The dry cleaning industry is the single largest user of Perc.

Provided with this regulatory rationale, federal and state environmental agencies have attempted to increase the compliance rate of the dry cleaning industry—the majority being small shops—with regard to Perc's NESHAP. Agencies' strategies have focused on increasing the severity of formal sanctions. Despite these regulatory efforts, there have been no significant increases in compliance rates in most states. The exception to the nationwide trend was Massachusetts. The Massachusetts Department of Environmental Protection (MADEP) launched the Environmental Results Program (ERP) in 1997, which significantly increased compliance in the dry cleaning industry. Before the ERP, the industry's estimated compliance rate remained below 10%. One year after the ERP, the compliance rate skyrocketed to 76% and showed an increasing trend, reaching 86% in 2001. As a result, the industry reduced its Perc use by 80% during the same time period (Personal communication with the MADEP).

Meanwhile, in the late 1990s, South Coast Air Quality Management District (SCAQMD) in California, which has the most stringent environmental regulatory policies in the U.S., began investing greater resources in compliance efforts. SCAQMD's compliance efforts were a response to the low compliance rate of the dry cleaning

industry between 1990 and 1996. They included both increased formal sanctions and a compliance assistance program (Cleaners Assistance Project) via community groups and a university-based research center. Unlike the Massachusetts case, however, the southern California case did not produce satisfactory outcomes. An audit in 1999 of 340 dry cleaning facilities in the district demonstrated a 5 percent rate of compliance. While a majority of the violations involved recordkeeping, Perc leaks, one of the most serious violations, were detected in 35 percent of the facilities. The results of the 1999 audit were even worse than those of a 1997 audit, when 208 dry cleaning facilities demonstrated a 10 percent rate of compliance. Perc leaks were detected in 22 percent of the facilities in 1997 (SCAQMD 2002).

The southern California case was an unhappy reminder that even with greater threats and assistance, there was still uncertainty on whether regulatory requirements would be met (Gottlieb 2001). Why did drycleaners in Massachusetts and in southern California produce different outcomes under similar regulatory conditions? How can we account for the difference in compliance in the two cases?

Environmental Regulations and Compliance of Small Firms

The situation in which one agent commands others to do something turns up as a significant theme in social relations (Milgram 1965). It is expressed in our everyday life where government "regulation" occurs in many rooms. I must clarify at this moment that this dissertation is not concerned with the question of whether or not formal regulations undermine individual freedom, which has brought about an intellectual stalemate between those who argue for strong regulation of business and those who advocate total deregulation. The dichotomized regulation/deregulation debate seems quite unproductive because, as Polanyi (1944) argues, regulation both extends and restricts freedom; only the balance of the freedoms lost and won is important.

Rather, the research project is grounded on a fair assumption that at least in some social arenas, government regulations are required to control socially harmful behavior and to advance collective social ends. My focus is strictly on this kind of protective regulation. Smoking-ban policy is a good example that falls into the above category. I remember that fifteen years ago, people were allowed to smoke while traveling by

airplane a ıd studying in classrooms. Today, smoking in public spaces is strictly regulated in the U.S by public and private policies in the name of the public interest. It appears universall ' agreed-upon regulation supported by the general public.

Aı other example is found in the environmental arena which I propose to study in this disser ation. Growing public concerns about environmental degradation and its impacts oı human health have forced government to attempt to reduce pollutants generated ɔy industrial activities. As far as the public health is concerned, few people deny the r ɛed for protective regulations albeit there is a disagreement on specific ways.

In he environmental arena, a number of regulations have been created and enforced ş nce the 1970s for the purposes of preserving the natural environment and protecting human health. One of agencies' greatest responsibilities has been ensuring compliane ɛ with statutes and regulations (Crow 2003) because the level of compliance could be ν iewed as a proxy of effective regulation and a fair test of the state authority (Tylor 19ʕ 0). However, compliance has never been complete. The compliance issue has become agencies' greatest challenge. Regulatory agencies report that small firms are even more troublesome than large ones with respect to compliance (Hawkins 1984). A recent report by the Federation of Small Businesses (FSB 2002) reveals that across a range of legislative areas, small businesses have a negative view of government regulation with key concerns including the complexity, volume, rate of changes, and inspections. (Patton & Worthington 2003).

Indeed, traditional wisdom says that small firms are more pollution-intensive than large firms because their use of inputs is inefficient, pollution control equipment is rarely installed, and owners/managers are unaware of the health and environmental impacts of operation (Blackman 2000, Kent 1991, Brown, Hamilton & Medoff 1990). An individual small firm's impact on the environment may be negligible. When they are summed up, however, the cumulative impact becomes significant. Yet despite their adverse impacts, regulatory agencies have paid scant attention to small firms for various reasons.

From a technical perspective, small firms are difficult to monitor because they are numerous and geographically dispersed. Given staffing and resource limitations, government agencies attempt to deploy constrained resources in an effective manner, and thus target more visible, large-scale firms while overlooking small ones.

Economically, small firms are characterized by small operating margins and working capital difficulties, and thus lack capacities to absorb rising costs (Mead & Liedholm, 1998). They, therefore, tend not to install non-productive assets such as pollution abatement equipment (Crow 1998). While large firms can disperse compliance cost burdens by slightly increasing product prices, this tactic is unavailable to most small firms as their level of production is too low to diffuse increased costs among consumers. In this context, small firms are left with two choices. One is to fully comply with requirements and assume significant increase in costs; the other is partial or complete non-compliance, hoping to escape unnoticed by regulatory agencies. Conventional theories predict that most small firms fall into non-compliance because compared to large firms, they are more likely to experience significant cost burdens in meeting regulatory requirements (Sommers & Cole 1988). Because rising costs threaten firms' profits and their survival, agencies tend to be sympathetic and give them exemptions from severe enforcement of regulations.

A third reason, if not universal, lies in a tacit, political deal between small firms and elected officials who are in charge of agencies. Tendler calls it the "devil's deal": "If you vote for me, I will not force you to comply with regulations; and I will keep the police and inspectors from harassing you". This political deal advocates reforms that grant small firms special relief from burdens associated with environmental and labor regulations (Tendler, 2002).

Given the situation, is there any way to promote small firms' compliance with formal regulations? This is the issue I pose in the dissertation in the most general terms. Before discussing this issue, however, I must remind readers of the story of the dry cleaning industry that prompted me to grapple with the environmental compliance behavior of small firms. Certainly, we can infer from low environmental compliance rates that small drycleaners face difficulties meeting regulatory requirements. But this does, of course, not mean that all drycleaners do not comply, as shown in the Massachusetts case. Why did the Massachusetts drycleaners outperform their equivalents in other states? What caused such a wide difference in rule compliance?

The puzzle raised in the story needs to be approached in a broader context to address the general problems of regulating small firms: "*Why do some small firms in an*

industry comply with regulation while others do not?" In the more concrete, researchable form, the question is rephrased as follows: "*When an authority commands small firms to meet regulatory requirements, under what conditions or combination of conditions will they carry out the command, and under what conditions or combination of conditions will they refuse?*"[1] This is a primary research question which aims to identify underlying reasons for small firms' moving toward or away from a desired regulatory outcome.

There have recently been a growing number of studies exploring the issue of environmental regulation in the context of its impact on small firms. Although they have provided instructive insights into small firms' environmental behavior, few have investigated reasons underlying their actual behavior. As Petts et al. (1999) stated, quoted in Patton and Worthington (2003), many studies have predominantly examined 'what' actions have been undertaken and 'which' attitudes are important. However, simply knowing the what and the which is not enough if our goal is to yield better outcomes through higher compliance. What is necessary to know is 'why' the actual action has occurred and 'in what ways' the attitudes driving the actions have been formed and developed. Making a policy recommendation without acknowledging the true reasons behind actions is much the same as writing a medical prescription without a diagnosis. The dissertation's central research question aims to fill the gap left in this under-explored arena of small firm regulation.

Theories of Rule Compliance in Brief

The reasons for rule compliance have been discussed in two distinctive theories: deterrence theory and the theory of norms. Although the two theories were initially developed to explain individual behavior, they have exerted greater influences in analyzing firm behavior regardless of its size.

Their basic notions and relative strengths/weaknesses are discussed in greater detail in Chapter 2. Very briefly, deterrence theory posits that rule compliance is based exclusively upon a strict cost-benefit analysis. This theory assumes that actors make choices in a way that maximizes their expected utility by comparing the monetary costs of compliance with the multiplication of deterrence factors such as probability of

[1] I am indebted to Milgram (1965) for the form of this question.

detection, probability of penalty imposition when detected, and severity of punishment. Assuming that the monetary costs for meeting regulatory requirements are invariable, the three deterrence factors are the major determinants identified by this theory that should explain compliance (or noncompliance).

In contrast, the theory of norms claims that rule compliance is based more on the internalized values of regulated entities than on rational calculation. Credible commitment to compliance is determined by two related sets of considerations: a sense of civic duty to obey laws and a more specific evaluation of the appropriateness of a given regulation. The former appeals to moral obligation or conscience by putting shame on violators as a self-imposed deterrent while the latter is comprised of the reasonableness of the rule resulting from the manner in which the rule is enacted, the fairness of the authorities in enforcing the rule, and the extent to which other people comply (Tyler 1990).

As we will see throughout the dissertation, however, applications of both theories to the dry cleaning cases introduced in the first section of this chapter do not yield satisfactory explanations of the observed phenomena. Recognizing the limits of the existing theories, I turn to an institutional explanation which has received scant, if any, attention in relation to this topic. The idea is that it is something about the patterns of interactions among actors that will account for the differential compliance trends. I propose that regulatory relationships (adversarial vs. cooperative) function as a primordial factor that determines firms' compliant behavior by affecting their *subjective* perspectives on the legitimacy and compliance costs/benefits, and formation of norms-like behavioral guidance. The idea was inspired by the framing theory (Schon & Rein 1994). I argue that the framing of a given regulation is even more important than currently appreciated. It seems that institutional arrangements frame action situations and the way a situation is framed has significant effects on choice behavior (Bowles 1998). The main framework I will use to develop an institutional account is to examine in the regulatory system of these cases the relationship among small firms and the relationship between the groups of small firms and formal regulators.

Once we confirm that the institutional approach, which I call the 'relational' approach, provides a convincing account, we will proceed to deal with in an informative

manner the aforementioned issue of "*how regulation can alter small firms' behavior to promote compliance.*" In a narrow sense, this intends to show technical ways of removing regulatory barriers to rule compliance. In a broader and more fundamental sense, the discussion seeks to engage current debates about regulatory reform. The discussion in this dissertation will be restricted to just two subtopics: reasons for small firms' compliance behavior and implications for regulatory reform (in relation to institutional development).

Small Firms' Rule Compliance and the Need for Regulatory Reform

Generally speaking, regulatory reform aims to make regulation more effective. But what does "reform" aim at in a rigorous sense? In other words, in which direction should it go to be more effective?

During the 1960s, regulatory agencies were viewed as weak, understaffed, and unduly inclined towards cooperative rather than coercive manners of enforcement. Regulations were said to have been captured by the regulated entities. Consequently, regulatory reform in the 1970s meant to make regulation "tougher" (Bardach & Kagan 1982). The basic reform strategy for effective regulation, therefore, was to: 1) tighten legal standards; 2) make enforcement intensified; 3) increase inspections in frequency; and 4) increase sanctions in severity. In the arena of pollution control, this strategy has taken on the features of what is now derisively called command-and-control (CAC) regulation, which requires industry to install specific technologies onto the end of the pipes in order to meet permitted pollution level. Firms were obligated to get permits in advance for a wide range of new operations, and in addition, were required to undertake extensive record keeping and reporting of compliance efforts and of the environmental and health impacts of their operations (Levin 1982).

In the late 1970s and 1980s, regulatory reform took on a totally different meaning. From the perspective of reformers, most being economists, CAC regulation was too costly. Until the early and mid 1970s, the costs of compliance were not a serious concern for reformers. It was usually thought that firms could pay for required abatement measures out of profits or pass them onto consumers. But experience revealed that the regulatory pendulum had swung too far and had reached the point of diminishing returns

(Bardach & Kaga 1982). For example, the U.S. Council on Environmental Quality (1979) estimated that water pollution control regulation would impose $18-$19 billion in annual compliance costs, while the benefit would be only $12.3 billion. As such, regulatory reform in this period aimed at "cost effectiveness" implying moderating the excessive regulation. To address this concern, reformers proposed market incentives as management tools that could offer increased flexibility to regulatory agencies and industry. Pollution permit trading and pollution taxes are the most familiar examples of this efficiency-oriented reform.

Have these two versions of reform strategies lived up to their promises? Can they be "effective" in regulating small firms? I think not.

The regulatory techniques of CAC regulation, the first version of reform, can be implemented in a straightforward manner: set a level of safety to protect human health; mandate the specific devices and processes to guarantee attainment of the safety level; deploy field inspectors and attorneys with sufficient sanctions and remedial power; and insulate the regulators from political pressures (Bardach & Kagan 1982). The problem of these techniques is that it is quite difficult to determine the levels of standards, enforcement, and sanctions. CAC regulation assumes a modest omniscience of regulatory agencies (Karkkainen et al. 2000). However, it is limited in its inability to gather information on complex and continuously changing industrial practices (Dorf and Sabel 1998). Contrary to the assumption that regulatory agencies can know the answer to pollution problems, they rarely have sufficient knowledge or information to deal with rapidly changing technical or managerial problems.

The problem is even greater when dealing with small firms. Under complex and changing conditions, "problems outside a regulated zone frequently become as significant as those within it" (Sabel et al. 2000). These problems cause too little regulation as well as overregulation because regulators must isolate discrete problems, drawing sharp demarcations between what is regulated and what is not (Karkkainen et al. 2000). In addition, technical problems are inherent in the CAC regime. Technology standards require all firms to install certain types of pollution abatement equipment. Agencies have to check whether the equipment is installed. In reality, however, agencies simply do not

have enough resources to monitor these firms. They do not even know how many small firms should be covered in their jurisdictions. Monitoring compliance is generally more difficult for process standards than for technology standards for the same reason (Blackman 2000).

Market-based regulation, a second reform, is by no means free from critiques despite its greater flexibility and relaxed assumption of regulatory omniscience. Setting aside a number of serious drawbacks such as inequitable distributions of pollution, it confronts similar fundamental problem of CAC, which is the problem of information acquisition. Markets are not natural: they are man-made institutions (Polanyi 1944). Creating markets requires vast amounts of detailed information. Before setting emission caps and allocating tradable pollution permits, for example, regulators "must know individual and aggregate emission levels, how much harm results from various levels of emissions, and what reductions are feasible" (Karkkainen et al. 2000). While it is more likely that markets for pollution permit trading among large-scale firms exist, there are no such things for small firms.

Pollution tax is also ineffective when applied to small firms. First of all, it is difficult to determine the appropriate level of tax. Second, when tax is imposed on harmful inputs rather than emissions directly, as is the case with tax on Perc in the dry cleaning industry, it does not create incentives for pollution control per se. Third, for taxes to be effective, there must be enough input substitutes at reasonable prices, and firms must have reliable information on input substitutes (Blackman 2000). This is less likely for small firms than for large firms. Without meeting these pre-requisites, the tax will simply increase production costs without changing actual behavior or will lead them to switch to dirtier inputs (Biller & Quientero 1995).

New Direction of Regulatory Reform

Effective regulatory programs require continual processes for acquiring updated information. But neither command-and-control nor market-based approaches are well suited to adaptation to new information and institutional learning (Karkkainen 2001, Karkkaine et al. 2000). Learning processes are needed to help actors achieve goals by

correcting errors, solving problems in new ways, and developing knowledge in dealing with internal processes and external stimuli (O'Rourke & Lee 2004).

Fiorino (2001) and Glasbergen (1996) propose three forms of learning as critical to improved environmental policy: technical learning, conceptual learning, and social learning. Technical learning involves the search for new policy instruments (such as the advent of pollution trading). Conceptual learning focuses on redefining policy goals, problem definitions, and strategies (such as the switch to pollution prevention from pollution control). Finally, social learning involves new interactions and relations between actors that help create an environment supportive of identifying solutions to policy problems.

Regulatory reform must be directed toward encouraging a process of social learning. In this way, relationships between regulators and the regulated can be transformed, implementation can occur not through control but through joint exploration and information sharing, and uncertainty can be acknowledged and accepted as the reality of problem solving (Fiorino 2001).

This new approach starts from questioning the taken-for-granted assumption of purely rational actors and the resulting individualistic approach to the regulatory process.

Regardless of whether it was through a CAC or market-inspired mechanism, previous regulatory reform began with the premise that firms and individuals are purely self-interested. As such, predominant regulatory institutions are designed to stimulate actions that maximize individual actors' self-interest. By doing so, they promise to produce socially superior outcomes. However, the view of individuals as self-interest maximizers and something primary is not natural. This view is simply the product of the 19th century philosophical heritage. The pursuit of self-interest may inevitably be bad for society as a whole. When institutions and policies are designed as if self-interest is the sole motivating factor, they not only justify this behavior, but also encourage and reproduce it (Schneider & Ingram 1997, Stevens 1993). Indeed, a number of empirical and experimental studies have revealed that a sole emphasis on self-interest to motivate socially desired behavior may actually result in the opposite consequence (Cardenas et al. 2000, Ostman 1998, Kunreuther & Eastering 1990, Titmus 1971). All too often, people do not abide by the principles that scientists expect them to follow.

It is worth noting here that questioning a self-interest assumption does not mean a denial of rationality. Obviously, human agent is both rational and *arational* simultaneously. Therefore, asking which assumption we should take is a wrong question. More productive is to explore under what conditions people are more versus less likely to be rational. Unfortunately, precedent regulatory reforms have been biased toward instrumental rationality while ignoring the other side. To help regulatory reform move forward, therefore, we need to pay particular attention to public spiritedness, solidarity and communal approaches. The soul of protective regulation should not be self-interest maximization. It must be to induce and promote social responsibility whereby actors realize the harmful effects resulting from their diverse activities. The latter part of the dissertation will show how the regulatory institution that inspires this moral component through social learning helped the Massachusetts drycleaners (as opposed to those of southern California) make a credible commitment to rule compliance.

Case Selection

To explore plausible answers to research questions, this dissertation examines the stories of dry cleaning communities in southern California and Massachusetts. These two cases provide a particularly interesting comparison that helps uncover the determinants of regulatory compliance. Let us first look into the shared features, and those that vary, between the cases.

The only observable meaningful difference between southern California and Massachusetts is their sharply contrasting compliance trends. Throughout the late 1990s, the southern California dry cleaning industry exhibited a decreasing trend in compliance, culminating in the low rate previously mentioned. Over the same period, the Massachusetts industry demonstrated a significant increase, consistently resulting in exceptionally high compliance rates.

Nevertheless, there are no significant variations in formal regulatory characteristics that would potentially explain the opposing trends. Although drycleaners in the two regions are subject to different regulations, de facto requirements are nearly identical, as both sets of regulations are based heavily upon EPA guidance.

The probability of detection is also more or less identical across the regions. Although southern California drycleaners outnumber their Massachusetts counterparts, the former region deploys a proportionally higher number of field inspectors. In addition, the severity of formal sanctions does not vary significantly between the two locales.

Fourth, research subjects' formal educational levels are almost identical in the two regions. In existing studies of environmental compliance and technological innovation, formal education is treated as a proxy for human capital (Blackman & Bannister 1998) and secondary socialization (Lin 1991), which increase awareness of the private health benefits associated with compliance. Thus, it has been believed that there is a positive correlation between compliance and formal education. In southern California, approximately 78% of Korean drycleaners are college graduates or higher, while the comparable figure in Massachusetts is 76%. The entire balance of both peer groups has completed high school.

Fifth, the overwhelming majority of target constituents – Korean immigrants that account for 60-70% of the dry cleaning industry in the two regions (and in other major U.S. urban areas) – share the same cultural background. This feature holds particularly important implications for the study of rule compliance.

Comparing such similar groups makes it possible to hold the cultural variable constant. Because it is reasonable to assume that these groups were influenced by the same culture and experienced similar socialization processes, they are expected to share similar social norms. This means that different compliance behaviors cannot here be attributed to cultural differences. Conversely, it implies that differential behaviors must result from other variables.

In addition, Korean immigrants' socio-economic and ethnic characteristics provide a vantage point through which to examine the dynamics of compliance behavior. As mentioned earlier, the dissertation's primary assumption about human nature is that actors are simultaneously rational and *a*rational. There is good reason to believe that Korean immigrants conform to this assumption. To help understand this, it must be noted that among Koreans who wished to emigrate to the U.S., only a small group of people who met required selection categories successfully navigated the legal barriers set up in

both countries. Although the categories are sometimes indistinct, the analytic distinction is important.

For much of the postwar period, U.S. immigration law showed clear preference for professionals with a considerable amount of money, and particularly favored relatives of U.S. citizens and permanent residents. This preference was even more pronounced for Asian immigrants. Unskilled workers were admitted only when preferred candidates had not exhausted the quota (Light & Bonacich 1988). Therefore, unlike pre-World War II Chinese and Japanese immigrants, Korean immigrants since the 1960s were highly-educated, urban, middle or upper-middle class professionals. The poverty-stricken were simply not permitted entrance into the U.S. (Kim 1981).

According to Light and Bonacich's (1988) study, the predominant purpose of the Koreans' emigration was economic gain, followed by educational opportunities for their children. And the percentage of self-employed Koreans exceeded that of all other immigrating ethnic groups. The higher percentage of Korean entrepreneurs may be attributable to class resources such as "bourgeois values, attitudes, knowledge, and skills transmitted intergenerationally in the course of primary socialization" (Light & Bonacich 1988, p.19). Therefore, through informal and formal training, Korean immigrants seem to be more inclined than other groups to rational business mind and consequently, self-interest maximization.

On the other hand, these immigrants were predisposed to obey formal laws. Korea's immigration law under successive military regimes contained a restrictive clause that prohibited a certain segment of the population from leaving the country. This category was made up of political dissidents who might injure the national reputation abroad (Light & Bonacich 1988). Those who filtered through this legal restriction are therefore considered to be highly conformable to existing legal doctrines.

Finally, many Koreans are strongly influenced by the Confucian doctrine equating the authority of the State with the authority of parents and teachers. Reinforced by official propaganda under military governments until the mid 1980s, this ethnic heritage contributes to Korean immigrants' deep-rooted propensity for obeying formal laws. This point will be addressed in greater detail in Chapter 5. In short, given their inherently

conflicting inclinations, we can test under what conditions actors will follow rational or normative behavior with respect to rule compliance.

Admittedly, a single study of drycleaners may not be sufficient to generalizable conclusion across the small firm sector. Nevertheless, the dissertation will be much more than a monograph on the dry cleaning industry. In addition to Korean immigrants' socio-economic and cultural traits, the dry cleaning industry entails several common features of U.S. industries comprising small firms. To employ Durkheim's vocabulary, this industry serves as "one well-made experiment": a detailed analysis of a single industry that reflects typical features of small firms. One example is their wide geographic sprawl. Dry cleaning facilities are ubiquitous in major urban areas and function as non-point source polluters. Another typical feature is a flat organizational structure, where a firm is totally controlled by owners/top managers. Third, the industry is overrepresented by a particular ethnic group, Korean immigrants. The literature on migrant workers in the U.S. shows that certain immigrant groups concentrate in identifiable industries that consist of small firms, as distinguished from large-scale firms (Piore 1990, Light & Bonacich 1988, Portes & Mozo 1985). The Korean dry cleaning industry is a good example of such an ethnic enclave. An exploration of the dry cleaning industry will reduce the existing gap between theories of small firm regulation and the paucity of empirical research.

Changing patterns of relations among the state, industry, and society have received much attention lately. This attention has highlighted interest in the social character of regulatory regimes that I propose to study and raised questions of how these characteristics affect institutional performance. Current debates about these relationships suffer from the lack of a detailed empirical base. With the two cases in the dry cleaning industry that naturally lend themselves to comparison, the dissertation will address this deficit directly.

Foreshadower of Main Arguments

The dynamics of rule compliance behavior entails some implications for more effective regulation. We will explore them in the following chapters, but it will be useful here to foreshadow the key elements of my central arguments.

First, I partially reject deterrent explanations and point out the limits of normative accounts in the small firm context. Instead, I argue that compliance behavior results from complicated webs of both economic and social factors. Existing theories overlook significant effects of interactions between the two, and consequently fail to yield the effective enforcement strategies they seek.

Second, the foundation for developing an alternative approach lies in a careful examination of the dynamic interactions of economic and social variables—how these play out both in the relationship among small firms and in the relationship between groups of small firms and regulators. The ideas are two: 1) Though concerns about compliance cost are important for rule compliance, they are even more socially constructed than the standard economic accounts suggest. Social construction of economic factors is epitomized in the discovery of the nurtured benefits of compliance that are invisible in expected utility function of the deterrence framework; and 2) Though actors follow recommended behavioral guidance, it is by no means blind conformity to social norms. Rather, non/compliance is a strategic response to two related sets of social relations, that is, reactions to formal regulatory enforcement and a selected means to strengthen social status and identity.

Third, it is cooperative regulatory relationships developed between active trade associations and responsive regulatory agencies that account ultimately for small firms' compliance behavior. I propose that the patterns of regulatory relations determine small firms' compliance by affecting their rule awareness, public spiritedness, perceptions on legitimacy and compliance costs/benefits, identities, and norms formation.

Methodology and Research Process

Admittedly, we still know very little about small firms' internal motivations for compliance and about effective strategies that help small firms formulate positive attitudes toward rule compliance. Recognizing that the previous studies do not provide satisfactory answers to the inquiries, my general research strategy starts from overcoming the limits of the research methods adopted by the previous studies.

Regardless of whether studies on this topic were grounded on deterrence theory or the theory of norms, most of them adopted statistical analysis (including regression,

factor analysis, and structural equation modeling) as a primary method. Because many independent variables regarding compliance behavior were non-quantifiable and incommensurable, some conclusions seemed to be an artifact of the model one set up and not the reality one was trying to explain. This does not mean that I summarily reject quantitative methods. All too often, however, the identical phenomenon is defined and interpreted in radically different ways in which statistical analysis turns to be inappropriate (or insufficient) to explain the hidden reasons. Ryle's popular example of contracting the eyelids has been cited to highlight this complicated aspect of interpretations. Neither a formal model nor a simple (or thin) transcription of what interviewees say is sufficient to identify linkages between actions chosen and underlying motivations that drive choices.

To move beyond a surface-level analysis, I aim at the "thick description" approach as a primary method to uncover true motivations underlying rule compliance behavior. Thick description amounts to a stratified hierarchy of meaningful structures. It is sorting out the structures of signification and determining their social ground and import (Geertz 1973). By peeling off multiple covers, I aim to draw core meanings from small facts and to assert the roles of economic and normative factors in the construction of rule compliance by engaging them with specifics. Thick description would allow me to explore the relation between *actions and context*, and from this to develop an ethnographic way of explaining compliance behavior.

To do this, the specific research methods comprise participant observation, in-depth interview (primary methods) and questionnaire-based survey (a secondary back-up method). Combination of these three methods is indispensable to catch the reality of observed phenomena. Although beliefs, values and behavior are assumed to be closely linked, they are sometimes inconsistent. As such, while in-depth interviews are conducted to elicit actors' beliefs and values, participant observation aims to systematically observe the *actual* behavior. These ethnographic methods will contribute to clarifying and interpreting puzzling findings in the specific socio-historical context by discerning the meaning of such facts to the people affected by them. On the other hand, statistics compiled through the survey will contribute to greater confidence in the generalizability of results (Jick 1979).

In so doing, the dissertation tells a narrative of the two dry cleaning communities. The narrative is a *story-out-of-stories*. It is two dimensional, not hierarchical but integral. The narrower, interior stories comprise research subjects' voices. Actors describe the certain phenomena in crafted stories with beginning, endings, plots, and stages (Kaplan 1986). While their stories deal with the same events, they begin and end at different moments (Mandelbaum 1991) and are framed in different ways that locate different actors in different worlds (Schon & Rein 1994). As a translator, I aim to transport these diverse stories to readers that are "thick" enough to allow them to judge what happened, how the storytellers defined the events that happened, how they reacted to the events, and how they described a desired world. In this way, a thick description will function as litmus paper with which readers test if my interpretation of their stories made sense.

The broader story comprises my own interpretation of interior stories, that is, analysis in the ordinary academic language. In my interpretation, storytellers' voices are paralleled with official data and survey results to decide whether and to what extent they are consistent. When telling the narrative, I do not mean to argue that one of these stories is more correct or accurate than others. What I do aim to show is *whether* and *how* groups of actors sustain diverse personal stories without undermining the integrity of the collective story and how the outcomes become varied as actors interpret or characterize their past and present, and project them into their upcoming future in different ways (Piore et al. 1994).

The sequence of the research was as follows: 1) to identify and examine in isolation economic and social factors that seemed to affect the drycleaners' environmental compliance behavior.; 2) to specify interrelationship among those factors; and 3) to characterize the whole system in a coherent story. In so doing, the dissertation shows that compliance is a surface expression of how the regulated entities characterize formal regulations and define their relationship with regulators. To test the idea and to ultimately answer the research question, the research proceeded in three phases.

Phase 1

Phase One was a preparation stage. First, I reviewed the regulatory codes of southern California and Massachusetts to confirm that there was no notable difference in

regulatory requirements. Then, I collected data on overall compliance rates for time periods preceding and following regulatory changes in the two regions. The post-regulatory change data in Massachusetts shows a significant increase in compliance, while in southern California, the same period shows a negative trend.

After obtaining the official data, I prepared interview protocols, created an eight-page survey questionnaire, and pre-tested its clarity. Interview questions were in two types: structured and open-ended. The former intended to provide interviewees with a clear sense of the research while the latter encourage them to tell the detailed stories necessary for in-depth, ethnographic analysis.

Questionnaires were based on the studies of Grasmick and Bursik (1990), Braithwaite and Makkai (1991) and Winter and May (2001), but modified to reflect typical features of the dry cleaning industry. The survey measured both dependent and independent variables. Drycleaners' compliance was the only dependent variable. Independent variables comprised those identified in previous studies and those revealed in my pilot research. They included economic variables (including the perceived probability of detection and punishment, the perceived severity of formal sanctions, and the perceived cost/benefit of compliance); normative variables (including a sense of moral duty; the perceived legitimacy of regulatory enforcement; and awareness of the health and environmental impacts of operation etc.); the nature of regulatory relations; and activities of trade associations. In addition, sex, age, education, and other traits are included as control variables.

Phase 2

Phase Two was a data collection and analysis stage to identify drycleaners' internal motives for compliance. I conducted interviews with 25 drycleaners in southern California and 38 in Massachusetts, along with 4 key informants and the regulatory agency in each region. Interviewees included good environmental performers, violators (as identified by state agencies' official reports) and retired drycleaners. Retirees were included because the questions of rule compliance were a very sensitive issue, it seemed that they would be less reluctant to reveal true reasons for "noncompliance." I examined whether responses from the three groups were convergent or divergent. Moreover, to

confirm the consistency of responses, several drycleaners were contacted more than 5 times. I continued to be in contact with the key informants for approximately one year and a half for the purpose of acquiring additional information on the one hand, and overcoming the limits of the interview method on the other.

The primary pitfall of the interview method lies in the possible unreliability of responses. This does not necessarily refer to intentional deception. But from my previous anthropological research, I know that many interviewees may respond with what they believe to be the "right" answer. To provide interviewees with settings that foster freer responses, many interviews were conducted in informal, social locations over a long period of time.

Participant observation and interview data laid the basis for an ethnographic interpretation of compliance. While useful, survey data alone are insufficient to identify a nature of relationship between actions taken and the underlying motivations that drive those actions. The difficulty is exemplified when competing theories explain a bandwagon effect of compliance in which compliance begets compliance with potentially explosive consequence. Normative theorists view the bandwagon effect as the result of a "norm of fairness" that tells us, "Do A if and only if other people do A." (Ullmann-Margalit 1977) But deterrence theorists consider the same phenomenon as the result of rational calculation: "When there are few violators, the risk of detection is higher and the penalty more severe. Therefore, people are more willing to comply when they recognize that others comply." (Elster 1989) We cannot tell the true reasons of actions until niches of contextual significance are identified (Geertz 1967). In-depth interview aimed to extract core meanings with the assistance of contextual analysis and to assert the roles of multiple variables in the construction of rule compliance.

As for the survey data, 107 and 103 surveys were collected in southern California and Massachusetts, respectively. To secure a high response rate and to minimize the misunderstanding of questionnaires, they were delivered and collected by the researcher's and the key informants' on-site visits. Collected survey data were compared with the ethnographic data. The two groups of the data were quite consistent with each other, and thus supported that the stories collected from interviews were not idiosyncratic, anecdotal stories but rather shared by many community members.

Phase 3

Phase Three was for cross-case analysis. Based on the findings in Phase Two, I examined whether the drycleaners in the two regions had similar motivations for rule compliance. In this phase, ethnographic analysis was conducted for the case comparison. In the Massachusetts case as opposed to the southern California case, for example, I showed in detail how drycleaners were at the table during regulatory negotiations and how this process altered drycleaners' perspective on rules and consequently perceptions of costs and incentives for compliance.

The economic and social characters of the two regulated communities in southern California and Massachusetts promise to provide a rich, consistent basis for comparing how regulatory practices engage organizations and individuals as complex social actors. The analysis will shed light on how these relationships can help us account for variations in outcomes in rule compliance. A careful comparison of the regulatory programs in the two regions should also yield specific insights that can inform us of how regulations can be better designed by acknowledging the regulated entities' internal motivations.

Structure of the Dissertation

The dissertation is organized into the following structure. Chapter Two clarifies the significance of the research in its relation to existing scholarship. This Chapter discusses basic notions of existing theories of rule compliance in a small firm context and evaluates their relative strengths and weaknesses. It then proceeds to refute the two leading positions (deterrence theory and the theory of norms) and suggests the relational theory as an alternative approach. Using social constructivism as an analytical framework, the relational theory develops a conceptual means to embrace both rationality and norms without subsuming one to the other. It aims to illuminate in concrete socio-historical contexts that compliance is a configuration of regulatory relationships.

The following three Chapters explicate how the relational approach obtains the greater validity over the existing theories by demonstrating the importance the contextual embeddedness of economic factors in the web of social settings. Chapter Three lists and compares formal regulatory conditions in Southern California and Massachusetts. Specifically, it describes and compares the two regions' rule making processes,

regulatory requirements, enforcement principles on the regulators' part, and compliance results. This Chapter is intended to show divergent compliance trends in the two regions, despite almost identical formal regulatory conditions.

Provided with empirical evidence, Chapter Four explores internal motivational factors for the regulated actors' rule compliance from an alternative perspective. By examining the impacts of three economic factors identified by deterrence theory on the one group and two normative factors derived from the theory of norms on the other, this Chapter aims for the good fit between observed phenomena and the interpretations of them. Specifically, this Chapter identifies surface reasons and deep reasons for compliance (and noncompliance) behavior. Surface reasons on the part of the regulated are more or less economic in nature. Those reasons are ascribable to the perceived cost and benefit of compliance apart from the perceived probability of detection and the severity of formal sanctions. The most important finding in this regard is that the economic facts themselves are indeterminate, and thus can be malleable according to interpretations of the ongoing practices and identities of the self and other actors. As such, this Chapter demonstrates that real reasons for compliance are essentially social.

Chapter Five is focused on how each case successfully or falsely incorporates drycleaners' underlying motivations into the design and implementation of a formal regulation. Starting with a brief historical contour of the two dry cleaning communities, this Chapter describes how individual drycleaners in each community are connected to one another and how different forms of linkages provide the dry cleaning communities with different channels of communication and representation to regulatory agencies. My overriding concern in this Chapter is focused on illustrating how these different relations between drycleaners and regulatory agencies lead to redefinition of identities, the understanding of given regulations, and thus strategic compliance choices in different ways.

Finally, Chapter Six reaffirms the central theme of the dissertation research and its findings, and draws on policy implications for building on the dynamics of rule compliance, aiming to offer clues to regulatory reform. Correspondingly, this Chapter mainly discusses what government can do to restructure social relations and channels of

information flows in cooperation with trade associations. It then concludes with cautions against over-enthusiasm for the relational approach.

CHAPTER 2

TWO LEADING THEORIES OF RULE COMPLIANCE AND AN ALTERNATIVE APPROACH

To understand variations of rule compliance among small firms, it is necessary to consider the theoretical underpinnings of the behavior. From a theoretical standpoint, there have been two competing visions of how human actions are to be interpreted. The first vision views actions as driven by rational calculation through which actors weigh costs and benefits of events to maximize self-interest. A second one views them as driven by norms or external social forces shaping internalized morality in which actors follow duties and obligations by matching actions to situations in ways that other actors in a society accept.

The distinction has had significant influences on formulation and development of two contending modern theories of rule compliance, that is, *deterrence theory* and *the theory of norms*. Not surprisingly, the two theories prescribe different regulatory enforcement strategies to promote rule compliance: One argues for centralized regulations by formal regulators armed with sufficient sanctioning powers; the other emphasizes strengthening the regulated entities' moral bases through education and persuasion. Both theories seem to have severely limited power in explaining small firms' behavior. Precisely for this reason, I seek alternative explanations.

Before I begin my argument, it will be useful to look briefly at the previous development of existing theories in order to explicate why I have felt it necessary to deviate from them. Therefore, this chapter first explores basic notions and underlying assumptions of these two leading compliance theories, and examines their strengths and weaknesses in relation to enforcement strategies accorded to each. It aims to elucidate their limited explanatory power in explaining the observed discrepancy in rule compliance between the two dry cleaning cases. In response to acknowledging their shortcomings, I suggest a new way of explaining compliance behavior in a small firm context. This chapter concludes by explaining five key conceptual pillars that buttress the dissertation's whole story.

Deterrence Theory

Influenced by the first vision of human actions, neoclassical economists analyze rule compliance behavior in terms of costs and benefits. They argue that only when the formal punishment outweighs compliance costs, people comply with given laws. Under the extreme view along this line, "the decision to become a criminal is in principle no different from the decision to become a brick layer.... The individual considers the net costs and benefits of each alternative and makes his decision on this basis", and thus "a change in behavior can be explained by changes in prices." (Rubin 1980, p.13). Let us examine the theory's core arguments and assumptions in a context of theoretical development.

Basic Notions

The seed of the modern deterrence theory was germinated in 18th and 19th century utilitarianism. Utilitarians viewed anti-social actions as stemming from the expectation that it would promote the actor's pleasure. Therefore, awareness that such action will ultimately bring pain to the actor will refrain from the impulse to commit any anti-social action, if the pain is certain and sufficiently severe:

> Pain (cost) and pleasure (benefit) are the great springs of human action. When a man perceives or supposes pain to be the consequence of an act, he is acted on in such a manner as tends with a certain force to withdraw him as it were from the commission of that act. If the apparent magnitude (of the pain) be greater than the magnitude of pleasure expected, he will be absolutely prevented from performing it (Bentham in *The Rational of Punishment.* p.396, Parentheses added)

It is worth noting here that the purpose of punishment is not to avenge but to make the violator's fate a warning sign to others:

> The principal end of punishment is *to prevent like offences*. The offence already committed concerns only a single individual; similar offences may affect all. In many cases it is impossible to redress the evil that is done; but it is always possible to take away the will to repeat it; for however great may be the advantage of the offence, the evil of the punishment may be made to outweigh it (Bentham in *Theory of Legislation.* p.272, Italic added)

This utilitarian ethics of punishment is important when discussing the *actual* deterrent effect. We will return to this point later.

Utilitarians would not deny that there are other factors that affect anti-social actions. Unemployment and changes in age composition of population are such examples. Nevertheless, they conclude that the punishment variable has the unique characteristic of being easy to change with government regulation (Tullock 1974). Therefore, they argue, "if it does have an effect, we should take advantage of that fact" (p.105).

This utilitarian logic was echoed by the 20th century neoclassical economists when they turned their attention to the problem of maintaining social order. The first theoretical deduction was performed by Gary Becker. In his path-breaking article, *Crime and Punishment*, Becker (1968) used economic analysis to develop optimal policies to deter illegal behavior (but paid little attention to actual policies). The essence of Becker's theory is that rule compliance is a function of the probability that violation will be detected, the probability of punishment when detected, and the severity of punishment[2]. In his orthodox deterrence theory which focuses attention on formal sanctions, actors are assumed to formulate perceptions on the certainty of sanctions and severity of such sanctions. The resulting perceived threat of formal sanctions is a cost factor in the expected utility of rule violation[3]. This perceived threat is important because if actors are rational, the certainty and the severity of formal sanctions will have a strong deterrent effect (Becker 1968). Becker's theory was supported and further developed by rational choice theorists such as Stigler (1970), Ehrlich (1972) and Tullock (1974), and became dominant in economic and legal analyses of rule compliance.

In the early stages of empirical testing of deterrence theory, researchers applied it to *individual* criminal behavior. Their conceptual replications of Becker's work came to

---

[2] His idea can be summarized in the following model: Compliance = $\alpha + \beta (P_D * P_P * S_P) + \varepsilon$ (where α is the constant, β is the coefficient, P_D is the probability of detection, P_P is the probability of punishment, S_P is the severity of punishment, and ε is the disturbance. Taken together, $P_D * P_P * S_P$ is hereafter called "deterrence threats").

[3] In the social psychology literature on rational decision making, it is controversial whether the effects of probability and severity of sanctions should be treated as additive or multiplicative (For further discussion, see Carroll 1982). Becker assumed, however, that rational actors multiply the probability of sanctions and the severity of such sanctions to arrive at a projected cost (Grasmick & Bursik 1990).

the conclusion that deterrence threats would promote compliance with criminal laws (Sjoquist 1973, Philips et al. 1972, Rottenberg 1979, Andreano & Siegfried 1980). However, these conclusions were far from unanimous. Some studies on tax evasion (Schwartz & Orleans 1967, Lewis 1982, Kinsey 1984, Klepper & Nagin 1989) and juvenile delinquency (Burkett & Jensen 1975, Kraut 1976) have shown that perceived "informal" punishment (e.g., peer pressure and family disapproval) had much stronger effects on compliance than formal punishment by authorities. Indeed, many empirical psychological studies have provided the evidence that deterrence threats failed to deter a large proportion of individual criminals because their actions are not based on rational calculation, but on impulses that they can neither understand nor control (Moberly 1968).

Facing challenges, scholars in Becker's tradition attempted to find arenas into which his theory would better fit and to modify the original version by adding potentially influential factors such as the direct cost of compliance (Piliavin et al. 1986). The thrust of their attempt was to theorize deterrence of organizational rather than individual actors. Braithwaite and Geis (1982) assert that deterrence effect is stronger with corporate behavior than with individual behavior because corporate violations are calculated risks taken by rational actors, rather than spontaneous or emotional risks by irrational actors. As such, "they [corporate violations] should be more amenable to control by policies based on utilitarian assumptions of the deterrence doctrine" (p.302).

However, both previous and new studies of organizational compliance have shown only partial support for deterrence theory. Some argue that deterrence threats would only work for firms whose managers lack a moral commitment to voluntary compliance (Kagan & Scholz 1984, Smith 1990). Others argue that firms whose managers are highly emotional would not be affected by deterrence threats (Zimring & Hawkins 1973). Galbraith (1969) claimed that deterrence threats would only be strong with firms whose managers are profit-maximizers.

These findings did not surprise scholars in non-neoclassical tradition. At the heart of deterrence theory for firms is the assumption that top managers are rational maximizers. Some influential studies (i.e., Simon 1959, Etzioni 1988) have shown that the neoclassical assumption underlying deterrence theory is misleadingly simple. Indeed, in a wide variety of contexts, managers might not be rational. They might act in

accordance with competing values, or be unaware of non-compliance at lower management levels (Braithwaite & Makkai 1991).

Realizing this problem of firm deterrence, many researchers attempted to identify an ideal context in which the assumption of rational maximizer should be maximally appropriate. Such a context would be a small firm with a flat structure where top managers exert total control over the organization (Braithwaite & Makkai 1991). This latest form of deterrence theory in a small firm context predicts the logarithmic functional relation between compliance rates and the formal threats[4]. In sum, the effect of changes in rule enforcement can be predicted by consideration of the effects of changes in the probabilities of detection and punishment, and the severity of punishment on incentives to enter illegal activities (Ehlrich 1972).

Evaluation of the Theory

The deterrence theory provides a clear-cut analytical framework within which legal and illegal activities are understood. It is a basic theorem of the economic approach that an increase in the cost of an activity results in a shift from that activity toward relatively cheaper activities. This theorem provides the analytical justification for expecting the deterrent effect to have generalizability. Gordon Tullock (1974) elucidates this logic with a simple, but powerful economic reasoning: "Demand curves slope downward. If you increase the cost of something, less will be consumed. Thus, if you increase the cost of committing a crime, there will be fewer crimes" (pp.104-105). Tullock, of course, knows that the elasticity of the demand curve might be low. Nevertheless, he insists, "....but there should be at least *some* effect." (p.105, Italic original).

It might be true that formal sanctions have *some* effect on violators. It remains unclear, however, whether formal sanctions are an obvious way to prevent potential illegal activities by sending an unmistakable warning signal to others who have not yet violated formal rules. In reality, what we are concerned about is not only the direction of response but also the "magnitude" of such response (Ehrlich 1972). Recall that the utilitarian purpose of imposing sanctions is not to revenge illegal activity already

[4] Proposing a logarithmic function rather than linear function makes sense because small firms are usually characterized by small operating margins and working capital difficulties. For example, $100,000 of fine is no different from $200,000 of fine. For small firms, both simply mean bankruptcy.

committed but to deter the same or similar future activities. For formal sanctions to have the sufficient deterrent effect, several strong assumptions must be sustained:

i) The actor is a purely rational self-interest maximizer.

ii) Preferences are exogenously given and they are separated from objective opportunities (costs and benefits).

iii) Legal and illegal activities are mutually exclusive in a given period.

iv) The actor knows the cost of compliance and probabilities of detection/ penalty imposition.

Each one of these assumptions is in fact controversial. Since they have been criticized widely in various contexts, this subsection discusses only as much of critiques as needed to create a backdrop for an alternative approach in connection with our cases.

First, the assumption of rational maximizer has been treated as axiomatic by the 20th century mainstream social science, that is, the pursuit of self-interest maximization is an uncontroversial proclivity of human agents. This assumption is inseparable from a utilitarian approach to an understanding of society. Utilitarians asserted that "society is a fictitious body, the sum of the several members who compose it" (Bentham, quoted in Culler 1986. p.85). For utilitarians, there is nothing real in society except the individual. The individual is the only tangible reality that the observer can attain. Indeed, the assumption that the individual acts in accordance with self-interest, composing a society, is the very foundation of utilitarianism.

I am challenging this taken-for-granted assumption (and my challenge is by no means new). Self-interest maximization is inappropriate to be a dominant factor underlying a choice and ultimately actions. It is simply one of many features that drive human actions. This entrenched assumption has been overemphasized as a sole motivator by utilitarians. Although the assumption seems valid as prescriptive guidance to ideal rational actions, it is problematic for explaining and predicting actual behavior. Presumably, the assumption is more appropriate for small firms than for individuals. Nevertheless, when related to rule compliance in my cases, as we will see later, the theory based on rational self-interest maximizer overlooks the fact that much of the variance in compliance remains unexplained because moral and other social factors are

ignored. It is true that this assumption provides analytical parsimony. Real world scenarios require, however, a more encompassing assumption to deal with the complexity of the reality as it is (Etzioni 1988). This point will be elaborated in greater detail in the following chapters by illuminating contextual embeddedness of self-interest under the light of the relational approach.

The second assumption is also problematic. Following a neoclassical doctrine, deterrence theorists assume that preferences are stable, externally given as the results of an unexplained and theoretically irrelevant process of individual development, known with adequate precision to make decisions unambiguous, and revealed in behavior (March 1978, Sabel 1992). By adopting this assumption, they avoid all questions of value formation. In this model, there is no need to study where preferences come from and how they are formulated and changed. As a result, deterrence theorists claim that changes in illegal behavior can be explained by changes in prices (penalties) *only*, because preferences are held constant.

However, individual preferences as well as group preferences (which are more subject to the problem of conflicting objectives representing diverse values of diverse participants) are all too often fuzzy and inconsistent (Pfeffer 1977, Olson 1965). Preferences change over time. While they are used to choose among actions as prescribed in orthodox rational choice theory, it is equally true that actions already taken and experiences with their consequences affect preferences (March 1978). Furthermore, preferences seem endogenous rather than exogenous because they are shaped by the certain social constraints (Elster 1983, Bowles 1998). If the above alternative views on preference are correct, then explanatory powers of deterrence theory are severely limited.

The third assumption plays a pivotal role in the economic theory of behavior under uncertainty. This general economic theory builds on a hypothesis that one would choose between two activities by comparing the expected utility associated with each, if and only if the two activities are mutually exclusive in a given period (Ehrlich 1972). A deterrence model of choice between legal and illegal activities is formulated within this framework. However, the decision to enter illegal activities is not entirely an either/or choice.[5] One may in practice combine legal and illegal actions in ways that maximize

[5] I am indebted to Prof. Archon Fung for this point.

expected utility and/or switch from one another in a given period without reference to rational calculation (Ehrlich 1972). In cases of small firms, many, if not all, owners/managers do not even know which activities are illegal due in large part to regulatory complexity.

The final assumption, the one the most congenial to deterrence theory, is barely held true in reality. Within this theoretical framework, an actor is capable of calculating the probability of detection, the probability of penalty imposition and the severity of penalty. Then, s/he compares their multiplication with the monetary cost of compliance. While calculating the monetary cost of compliance is not infeasible, it is extremely difficult for small firms to estimate values of the three deterrence factors. Even regulators have difficulty unequivocally presenting their estimation because deterrence factors are extremely contingent on political, social, and budget constraints.

Proceeding on the above four assumptions which are subject to question, deterrence theory's regulatory enforcement strategies have been oriented toward the calculated outcomes expected by regulated entities. Therefore, the principal conceptual innovation for regulatory policies was the articulation of expected utility by increasing the probabilities of detection and punishment, and the penalties for violations (Braithwaite & Makkai, 1991; Shavell, 1991).

Is there any concrete evidence that formal threats alter firms' behavior and that different firm sizes result in different responses to threats? Although I could not find empirical evidence that can answer the second part of the question, some studies argued for deterrence effects on firm behavior as threats increase. Lewis-Beck and Alford (1980) reported that the 1941 and 1969 coal mine safety legislations and their vigorous enforcement by the Bureau of Mines (BOM) resulted in statistically significant decrease in fatalities at workplace. Their time-series analysis of the coal mining fatality rate between 1932 and 1976 indicates that a coal miner in the 1930s was about twice and four times as likely to be killed on the job as a coal miner in 1948 and in 1976, respectively. Block at al. (1981)'s study also revealed that the U.S. Department of Justice's use of formal sanctions achieved general deterrence of potential price fixing in the bread industry. Specifically, they showed that "if a cartel's probability of detection increase

with its markup, then the cartel's optimal price is....an intermediate price that depends on the levels of antitrust enforcement efforts and penalties" (p.444).

Though plausible, the two studies' findings must be viewed with caution for the following reasons. In Lewis-Beck and Alford's study, what was used as a proxy for enforcement efforts was BOM's overall health and safety budget, which included not only inspections and sanctions but also research and rescues. Moreover, as the authors mentioned, the regulatory requirements were clear and posed "a single, narrow, measurable objective....not multiple, broad, or difficult to measure, as the goals of legislation sometimes are" (p.1980). Together with increased rescues, this aspect could contribute to reductions in mortal accidents by helping mine owners/managers become aware of the safety issue. Thus, we cannot decisively confirm the exclusive correlation between deterrence and compliance unless the independent effects of formal threats are explicated. Block et al.'s study is more convincing than Lewis-Beck and Alford's with respect to deterrence effects. However, their analysis showed that criminal sanctions (e.g., imprisonment or monetary penalties) did not guarantee a credible threat to colluding firms. Rather, the deterrence effect arose from the increased class-action suits, the increased likelihood of compensation to bread consumers and distributors. Because class actions are civil sanctions, we can hardly deny the effects of antitrust enforcement. Nevertheless, the reputation effect needs to be considered as a supplementary (informal) deterrence factor.

Arguably, Braithwaite and Makkai's (1991) study of small Australian nursing homes is the most congenial to deterrence doctrine. Their test of expected utility model based on surveys and interviews with 410 chief executives found partial support for deterrence effect of the probability of detection, but failed to prove the effects of the probability and severity of formal sanctions. The authors ended up suggesting that in certain contexts, deterrence threats can still be important.

Despite partial evidence validating deterrence theory, it is still unclear whether formal threats alone are sufficient to alter firm behavior. Nevertheless, current regulatory enforcement strategies seem to rely excessively on traditional deterrence strategy. For example, to ensure small firms' compliance with regulatory requirements, the 1990 CAA Amendment greatly strengthened and expanded its civil and criminal penalties. For civil

penalties, the EPA can now impose fines up to $25,000 per day for violations. In addition, the EPA can initiate a court proceeding without the involvement of the Department of Justice, which was previously required. For criminal sanctions, the 1990 Amendment converts the knowing violation of almost every requirement into a felony. Sanctions include fines of up to $25,000 for individuals and imprisonment for up to 5 years for a first conviction, with each day considered as a separate violation. Sanctions can double for subsequent convictions (Weiss & Gallagher 1993). However, no empirical study has confirmed significant effects on small firms' compliance resulting from these increased deterrence threats.

More critically, deterrence theory does not help to explain the observed discrepancy in compliance between the two dry cleaning communities introduced in the previous chapter. Probabilities (or certainty) of detection and punishment, and severity of punishment are the major factors identified by the theory that should explain different regulatory outcomes in the two regions. However, though compliance trends are in stark contrast, there is no noticeable difference between the two state programs in those factors.

The Theory of Norms

A vision of actors following internalized moral judgments of what is socially right or wrong dates back to ancient Greek philosophy and keeps manifesting itself in current discussions of the importance of rules in guiding human life (March & Olsen 2004). Although this vision of human action have not been considered explicitly by its own protagonists as relevant to the field of compliance study, it is obvious that a modern theory competing with deterrence theory builds on it. It naturally provides accounts on compliance behavior which are quite different from deterrence explanations. Unlike deterrence theory stemming from mathematical deduction, this competing theory results from empirical induction grounded upon many scattered studies in a variety of academic disciplines, and thus lacks a uniformly agreed-upon name. As such, for the convenience of discussion, I call this competing theory the "theory of norms"[6]. I draw this name, I think correctly, from a common denominator of the scattered findings.

[6] I am indebted to Prof. David Laws for the suggestion of this term.

Basic Notions

The theory of norms rejects the mechanical psychology of a utility maximizing cost-benefit analysis. Instead, it argues that human action is triggered by internalized prescriptions of appropriate or exemplary behavior, including cognitive and normative components (March & Olsen 2004). March and Olsen (2004, 1989) call this perspective on human action the "logic of appropriateness" to contrast their point to the utilitarian logic of consequentiality. Actors behave according to distinctive social norms[7] that prescribe which action is appropriate. The criteria actors use to act appropriately are based on tacit, mutual understandings of "what is true, reasonable, natural, right, and good" (2004. p.3) rather than on the expected utility. So to speak, actors follow rules when rules are viewed as natural, rightful, and legitimate:

> Actors seek to fulfill the obligations encapsulated in an identity, a membership in a political community or group, and the ethos and practices of its institutions. They do what they see as appropriate for themselves in a specific type of situation (March & Olsen 2004. p.2)

Echoes of the logic of appropriateness resonate either explicitly or implicitly in the diverse compliance literature. It suggests that motivations for compliance result from regulated entities' combined sense of moral obligation and implicit agreement with the importance of a given regulatory policy, namely, legitimacy (Winter & May 2001).

A group of studies focusing on moral duty was first conducted in an arena of individual income tax because this arena provides the clear contrast between self-interest and normative obligations (McGraw & Scholz 1991). The studies in the tax arena revealed that the emphasis on moral reasoning about norms and principles related to a perceived legal obligation resulted in a significant increase in compliance.

In *On Legal Sanctions*, a classic counterpart of Becker's *Crime and Punishment*, Schwartz and Orleans (1967) found that moral obligations to obey the law had a greater

---

[7] March and Olsen's original term is "rules". By rules, they mean the routines, procedures, conventions, and roles, etc. around which action is constructed. In the mean time, I use the term rules to refer to formal regulations or laws. To avoid confusion and maintain consistency, I replaced March and Olsen's "rules" with "norms".

impact on tax compliance than did formal deterrence threats. Because their study is generally viewed as a landmark, the section describes this work in a little bit more detail.

Their experimental study was conducted a month before the tax filing in 1961. The study involved three treatment groups: control group, normative group, and deterrence group. A control group was asked to answer the basic questions. A normative group was asked additional normative questions designed to invoke normative motives for taxpaying ranging from self-imposed guilty at violation to a patriotic desire to support government in its valued activities. A deterrence group was asked deterrence questions emphasizing the formal sanctions associated with violation. Provided with IRS data, Schwartz and Orleans examined both aggregate pre- and post-survey tax return data for each group and the effects of the different question formats on actual tax paying behavior. The study revealed that the normative group demonstrated a significant increase in reported income in comparison to the control group and a significant increase in taxes actually paid in comparison to both the control and deterrence groups. Correspondingly, Schwartz and Orleans reached a conclusion that the normative questions resulted in an increase in tax compliance by stimulating actors' normative motives.

Schwartz and Orleans' work has been conceptually replicated by many socio-legal scholars. Although every study did not succeed in replicating the greater impact of normative appeals on compliant behavior found in the Schwartz and Orleans' work, the degree of divergence was moderate. McGraw and Scholz (1991) found that appeals to civic virtue had as a great impact as formal deterrence threats. Grasmick et al. (1991) reported that the fear of shame stemming from a sense of moral obligation inhibited noncompliance. Perceptions on trust (Scholz & Lubell 1998, Murphy 2004) and duty heuristic (Scholz & Pinney 1995) were reported to contribute to higher tax compliance by providing a valuable strategy that gains "the advantages of social cooperation which cannot be obtained through more explicit calculating strategies" (Scholz & Pinney 1995, p.509). In addition, many researchers confirmed the validity of the Schwartz and Orleans' findings (Lewis 1982, Kinsey 1984, Klepper & Nagin 1989, Cialdini 1989, Grasmick & Bursik 1990).

An emphasis on legitimacy, a second component of the theory of norms, is found in Max Weber's *Economy and Society*. Weber associated legitimacy with stability and viewed social actions as guided by the belief in the existent of a legitimate order. As such, obedience or compliance results from the belief in legality which is formally correct and have been made in the accustomed manner (Weber 1968). He called this belief legal-rational legitimacy. However, Weber's position leaves no room for uncovering the regulated entities' different reactions to legality which is imposed by accepted legal institutions (Hyde 1983).

Another important study on legitimacy is Tom Tyler's *Why People Obey the Law?* (1990). To examine which factors have an independent effect on compliance behavior and to compare the relative strengths of different influences, Tyler used a sociological approach as a framework to understand the attitudinal antecedents of compliance behavior. He conducted extensive telephone interviews with 1,575 respondents who had previous contacts with legal authorities such as the police and the courts. His primary finding was that the legitimacy of policy was directly related to compliance. Procedural justice perceived by people had significant influence on their reactions to authorities and people think of justice in non-instrumental terms. He emphasized that people have capacity to judge whether or not a particular procedure of regulatory policy is fair. The way people are treated by authorities is viewed as an indication of procedural justice and of the likelihood that people will receive help when they have problems in the future. His view on compliance is summarized as a "perceived obligation to obey the law" that constitutes legitimacy.

To summarize socio-legal works on compliance, credible commitment to rule compliance is based more on the internalized values of regulated entities than on expected utility. They are determined by two related sets of considerations: a sense of civic duty to obey laws and a more specific evaluation of the appropriateness of a given regulation. The former appeals to moral obligation or conscience by putting shame on violators as a self-imposed deterrent while the latter is comprised of the reasonableness of the rule resulting from the manner in which the rule is enacted, the fairness of the authorities in enforcing the rule, and the extent to which other people comply (Tyler 1990).

The above discussion is based upon individuals' perception. What is the relevancy of this discussion to the behavior of small and large firms? Unlike deterrence theorists, the proponents of the theory of norms do not make it explicit whether this theory is more applicable to a small firm context. Nevertheless, I infer from the notion of "social proof" that small firms are more likely than large firms to be influenced by norms in general and the perceived legitimacy in particular.

Social proof provides clues about what is the best course of action although there are no formal sanctions (Axelrod 1986). It is an important mechanism in the support of social norms. As Cialdini (1984, p.117, Quoted in Axelrod 1986) claims:

> We view a behavior as more correct in a given situation to the degree that we see others performing it. Whether the question is what to do with an empty popcorn box in a movie theater, how fast to drive on a certain stretch of highway, or how to eat chicken at a dinner party, the actions of those around us will be important in defining the answer.

In general, large firms have the capacity to act alone. They employ experts such as lawyers, environmental specialists, and lobbyists to interpret a particular situation and decide future actions. Small firms lack the capacity to behave the same way as large firms do. Therefore, their interpretation of and reactions to a given regulation may depend on those of other actors facing the same situation. Especially when they are new to a given situation, others' perceptions of the situation offer valuable information about what action is proper for them, although they do not know the reasons (Asch 1956).

Indeed, recent studies of small firm behavior confirm the above conjecture. Much of the research focuses on compliance with environmental regulations ranging from medium-sized firms (Burby & Paterson 1993) to small agricultural industries (Winter & May 2001, Lubell 2003) and to small firms (Patton & Worthington 2003, Blackman 2000, Cardenas et al. 2000). Although the conclusions vary somewhat from one study to another, the core ideas converge at the same point: Compliance behavior is determined by the actor's sense of duties formulated through the process of *socialization* and its resulting *internalization* of norms.

Evaluation of the Theory

As an antithesis of deterrence theory, the theory of norms makes an important contribution that there are alternatives to the focus on economic outcomes. Indeed, human actions are motivated by a variety of factors including both economic and normative components. The theory of norms expanded the scope of our knowledge of rule compliance behavior by dragging the role of norms out of its marginal status and putting it at the core of debate. Yet, despite its significant contribution to an understanding of compliance behavior, this theory is permeable to critiques. Let us examine in detail the theory's porousness from theoretical and empirical viewpoints.

In contrast to deterrence theory, the theory of norms builds on a notion of *homo sociologicus* (Elster 1989). According to this concept, individuals are not separate atomized actors, acting solely on independent rational calculation. Rather, they are *social* beings influenced heavily by other actors and guided by the prescribed behavior. They act in certain ways just because "to do so is customary, or an obligation, or the natural....or right and proper, or just and fair" (Phelps-Brown 1977, p.17). What is wrong with the theory of norms arguing for the aforementioned norms-guided behavior?

One of the major critiques is derived from the theory's vagueness in dealing with the origin of norms. People often display coordinated behavior that helps to comply with a certain social standard. When this behavior occurs without central authorities, we attribute it to the existence of norms. To make this appeal to norms powerful, we need a comprehensive theory of norms explaining altogether how norms emerge, how they are sustained, and how a particular norm replaces another (Axelrod 1986).

Outside the field of compliance study, this issue has been explicitly discussed. Arguably, the most influential and widely cited literature on the issue is Robert Axelrod's work whose original aspiration was to contribute to preventing nuclear arm race. In *The Evolution of Cooperation* (1984), Axelrod investigates how cooperative norms arise in a world of selfishness. The essence of his explanation is that cooperation emerges out of tit-for-tat-based reciprocity, rather than efficient allocation of resources. In his iterated prisoners' dilemma game, actors adapt their behavior against other actors who continually change as they learn. Under this type of co-evolution, although defecting strategies can spread out initially, their fitness declines as the defectors become numerous

and their potential victims decrease in number. In turn, conditional cooperators displace the defectors.

In his later work, Axelrod clarifies two conditions under which certain behaviors turn into social norms: dominance (Ullman-Margalit 1997) and reputation.[8] Although his computer simulations have been criticized for taking too low-brow an approach to an essentially technical game-theoretic problem and thus leading to exaggerated claims (Binmore 1998, Quoted in Hoffman 2000), a theoretical generalization has been supported by many social scientists and evolutionary biologists (Hoffman 2000).

However, his intellectual assets rarely appear in the modern literature of the theory of norms. The socio-legal scholars in this tradition are strangely silent on where such norms come from. At best, they end up discussing what mechanisms sustain norms that are already established. Just as preferences are exogenous for deterrence theorists, so norms are externally given for normative theorists, at least in the field the dissertation investigate. It has been said that the salience of the theory of norms lies in its escape from the Benthamite individualist approach. It does so by bringing society back in. Ironically, individual actors' internalization of exogenous norms pulls such redemption back to *asocial* individualism. This is so because while putting a heavy emphasis on internalized behavioral patterns sticking to universal norms externally given and fixed, the theory overlooks changing, on-going relations[9] in particular social contexts which affect the formation and modification of norms. No theorists articulate this point better than Granovetter (1985) in his dealing with the problem of social embeddedness of economic action:

> ....despite the apparent contrasts between under- and oversocialized views, we should note an irony of great theoretical importance: both have in common a conception of action and decision carried out by atomized actors. In the undersocialized account, atomization results from narrow utilitarian pursuit of self-interest; in the oversocialized one, from the fact that behavioral patterns have been internalized and ongoing social relations thus have only peripheral effects on behavior. That the internalized ..... behavior are social in origin does not differentiate this argument decisively from a utilitarian one, in which the source of utility function is left open, leaving room for behavior guided entirely by

[8] For a fuller account, see Axelrod (1986).
[9] I am indebted to my dissertation committee members for suggestions to consider this point.

> consensually determined norms and values – as in the oversocialized view. (Granovetter 1985, p.485).

To support the assumption of fixed, exogenous norms, one may argue that norms have inertial forces (Gambetta 1987) due particularly to deeply held values such as moral obligation (Rokeach 1973) and to habitual routines (Carroll 1989) that are forged through socialization over a long period of time. According to this argument, norms are inherently stable and changes in norms are resisted. As we will see later, however, the Massachusetts case demonstrates that a new norm-like attitude abruptly emerged in the mid 1990s without conflicts with the previous one. The Massachusetts drycleaners association played a decisive role in formulating and dispersing it, but there is no room for the role of trade association within the assumption of exogenous norms.

In addition, a notion of "internalization" raises a critical empirical issue. In order for this theory to replace deterrence accounts, we must be convinced that internalization of norms strictly prevents the actor from violating norms. In other words, actors never do things that they believe are wrong (Grasmick & Bursik 1990). To what degree is it true? Does a sense of moral obligation always shape behavior? Isn't it the other way around? Consider the following instance: A group of South Korean lawmakers of the ruling party recently announced, "We firmly believe that the war against Iraq is morally wrong. Nevertheless, we decided to send our troops to Iraq for our nation's interest and for strengthening an alliance with the U.S." And they, as politicians, never forgot to say, "We believe that our action will ultimately help Iraqi people recover their economy and democracy."

One may argue that the second statement is a true belief underlying the ruling party's action. However, anyone who knows about East Asia's political and military topography will recognize that it is only a lip-service. If the second statement is a true belief, it serves as evidence that action can create a moral sense at another level to justify itself. Neither interpretation is compatible with the basic notion of the theory of norms. Although the example is not about rule compliance, it provides an important lesson: The theory of norms ignores the reality where a sense of moral obligation is not always synonymous to actual behavior.

Related to the above point, there is another empirical issue that must be addressed. Internalization of universal norms implies that good-doers always do well regardless. As such, we are compelled to infer that good environmental performers never cheat on tax payment, never violate traffic rules, etc. However, my fieldwork revealed that while most drycleaners were willing to answer environmental compliance questions, they were extremely reluctant to revealing annual incomes, implying that their tax reports might not be as honest as environmental reports. Obviously, the actor acts according to different normative principles in different action domains. Why then particular norms instead of others in certain situations? Presumably, the theory can account for why people comply, but it cannot explain why people do not comply unless the above question is answered. In this sense, unlike deterrence theory, the theory of norms is at best a theory of right action, not a theory of action.

Another problem arises when this theory is applied in a firm context. While deterrence theory explains compliance as if there were no society or social norms, the theory of norms treat it as if there were no economy. Consider that no matter how small they are, small firm owners are businesspeople. Is it reasonable to say that businesspeople are not concerned about the economic factors at all? The theory of norms argues that the procedures, ideology, and substantive decisions of regulatory institutions measurably shape popular beliefs in the legitimacy of government regulation and the sense of obligation. For firms regardless of the size, however, there is little reason to think that particular norms of conduct gain any particular acceptance upon being pronounced by regulatory institutions without economic considerations[10].

Lastly, let us engage the theory of norms in our specific cases to examine whether it can explain the observed difference in rule compliance. According to the core argument of this theory, different regulatory outcomes in the two regions must have resulted from different norms constraining each group's behavior. How then did the two groups of drycleaners come to have different norms? One possibility is found in Bowles and Gintis' (1975) study of the consequences of education, showing that differences in the education result in different cognitive process. Such a position implies that different education levels contribute to the different norms formation, and thus make differences in

[10] I draw this critique from Hyde (1983).

compliance trends. This occurrence is unlikely because the educational levels of the two groups are almost identical. Approximately 78% and 76% of them in southern California and in Massachusetts, respectively, are college graduates. The remaining portions comprise high school graduates.

An alternative possibility is that informal socialization and acculturation rather than formal education brought about different norms. This explanation also seems unlikely because a majority of both groups, being Korean immigrants, share the same ethnicity and cultural background. In addition, there is little reason to think that Korean drycleaners' origins of socio-economic class before immigration are significantly different because all of the research subjects identified themselves as middle or upper-middle class in origin.

Regulatory enforcement strategy accorded to this theory has been cooperative enforcement relying on mutual understandings between formal regulators and the regulated. This strategy is subject to at least three practical limitations unless backed by substantial benefits to the regulated or appropriate sanctions (Ostrom 1990). First, regulators who become solely concerned with cooperative relationships can lose sight of regulatory goals outlined by Sabatier (1975) in his discussion of clientele capture. Second, regulators may attempt to manipulate conditions of perceived fairness rather than to actually solve problems or provide needed benefits (Tyler et al. 1986) by using symbols of justice (Edelman 1964). Third, cooperative techniques may work only with firms that care about moral obligation, admit the importance of given regulations, and subscribe to social responsibility. Where these traits are absent, the use of deterrence threats may be deemed necessary (Burby & Paterson 1993).

A Third Way of Explaining Compliance: The Relational Approach

Deterrence theory has ignored any impact of social structure and social relations on compliance behavior. It seems to be at fault not in its reasoning but in the oversimplified assumptions of human nature. In the meantime, the theory of norms has addressed the problems of deterrence accounts and provided alternative views, but its theoretical pendulum has swung too far and has reached an "oversocialized" conception of human action (Wrong 1961). According to this view, actors are "overwhelmingly sensitive to the

opinions of others and hence obedient to the dictates of .... systems of norms and values, internalized through socialization, so that obedience is not perceived as a burden" (Granovetter 1985, p.483). If obedience is not perceived as a burden at all, then why do people disobey?

The tension between rational calculation and norms-based approach has traditionally been pitched as a struggle to decide which of the two is always correct (Tyler et al. 1986). As noted in Chapter 1, this tension is unproductive and posed by the wrong question. Obviously, each view is either correct or wrong depending on situations. What is necessary is a thorough understanding of the extent to which compliance behavior reflects or is independent of the potentially determinative factors proposed by each theory.

Recognizing the false tension, some scholars have made the efforts to overcome the conflict between the two extreme views and to develop a single framework into which different motivations for action are compatible. However, none of them seems satisfactory. Outside the compliance literature, most efforts have been made to rationalize normative values (Harsanyi 1968, Kurz 1978, Axelord 1980). For example, Harsanyi claimed that what is explained by social norms can be explained through the theory of games taking as its primitives only the self-interests of the individual players (Ullmann-Margalit 1977).

Although some norms are used to dress up self-interest in more acceptable garb (Elster 1989), I reject a general rationalization of norms. The reason is that within this framework, every human action, whatever it is, inescapably falls into the rational. For example, this framework would explain an act to save a drowning child's life at the expense of yours as an act to increase your subjective pleasure to be altruistic. If every human action is predestined to be rational, why do we study it? From the outset, the rationality claim is designed not to be falsified, so that it is impossible to distinguish other aspects of human action from the rational. Rationalization of norms suffers from the lack of a differentiating power.

Within the compliance literature, models of moral reasoning (Rest 1984) and rational compliance choice (Margolis 1982) have been developed to compromise between self-interest and normative values. A model of moral reasoning claims that when the legal

system is viewed as unfair and when consequences of compliance are considered as a burden, moral obligation is less likely to affect action. A formal model of rational compliance finds a determining factor in individual differences in the proclivity to weigh moral obligations or self-interest more heavily. While the two models show that there is a trade-off between moral obligations and economic outcomes, neither model delves into the patterns of interactions that could possibly change the trade-offs.

To overcome the limits of existing theories, I develop a new approach, which is called the "relational approach".[11] It is premised on social constructivism, a way of explaining human action in interpretive approaches. Social constructivism as an analytical framework helps the relational approach grasp a conceptual means to embrace both rationality and norms without subsuming one to the other. The actor in the social constructivist world is still rational in a sense that s/he has goals and makes choices accordingly (Lee 2003). Unlike the rationalist actor, the constructivist actor's making of choices does not rely on disembedded economic factors. Rather, the actor's reasoning about what to want in the first place and what to choose to meet the wants depends on a variety of social factors surrounding her/him (Berger & Luckmann 1967). Put differently, the actor "learns" how to order preferences and make choices from a socially established stock of knowledge in her/his interactions with other actors.[12] The actor assimilates socially coded ways of acting.

Using the constructivist notion of socially mediated learning as a springboard, the relational approach proceeds one step further. In the relationist world, the actor's learning is not a passive development shaped solely by socially prescribed ways of acting. The actors are capable of contributing to changing the existing stock of knowledge by reinterpreting and creating meanings in a particular situation where they are located. In this vein, social situations or social relations are examined in concrete socio-historical contexts rather than in stereotypified abstraction (Grenovetter 1985). For the relationist, the analysis is based upon practical engagement with the real world, rather than pre-established models. In this way, the relationist actor escapes a trap of oversocialization.

---

[11] I am indebted to Prof. Martin Rein and Prof. David Laws for helping to develop the idea and for proposing this term.

[12] The phrase "socially established stock of knowledge" is a derivative of Berger & Luckmann's social stock of knowledge.

As we will see in the empirical chapters, this view helps to capture the circumstances under which socialized actors oppose socially agreed-upon patterns of behavior (like compliance in the dissertation) by illuminating the patterns of interrelationship between individuality and sociability.

The relationist actor's reasoning starts from the characterization of a situation in its relation to the external world. Once the situation is characterized in a certain way over others, the actor draws from this situational characterization for rightful action choices. Social relations play a key role in characterizing the situation. They do so by helping the actor self-reflect where s/he is in the world (that is, defining identity), and thus providing a basis to interpret social events and to find (or create) meanings associated with each event. As such, the relationist making of choices inherently grows out of social relations, providing the actor with a meaningful understanding of unfolding events and of other actors' "motives, interests, probable actions, attitudes, and roles in any given contexts" (Lee 2003). In this sense, the relationist actor is not instrumentally but reflexively rational. Concrete examples of the relationist reasoning will be presented in Chapter 4 and 5.

Undoubtedly, the relational approach builds on the assets of the multiple existing theories, but it is never identical to any: Like both deterrence theory and the theory of norms, the new approach starts from a clear conceptual demarcation between self-interest (or rationality) and normative values. Unlike either, it does not ignore one in favor of the other for analytical parsimony; Like deterrence theory, the relational approach admits a pivotal role of economic factors. However, it argues that these economic factors are even more socially constructed than deterrence theory suggests; Like the theory of norms, the new approach emphasizes the importance of legitimacy. However, it is not a Weberian legal legitimacy but an "operational legitimacy" (Cooper 1992), which is about how regulators' contingent use of discretionary power, technical knowledge, and political influence can be made responsive to the judgments of the regulated entity; As in the rationalization of norms, the new approach attempts to resolve the conflict between self-interest and normative values. However, it does not subsume normative concerns as a special case of rationality, but rather admits the uniqueness of norms; Like models of moral reasoning and rational compliance choice, the new approach aims to show that

there are significant interactions between self-interest and normative concerns. Beyond the proof of a mere existence of the interactions, it focuses the attention on how self-interest and normative concerns support or counteract each other, how the interactions alter the structure of the trade-offs between the two, and what changes in regulation can induce changes in the patterns of the interactions.

It must be emphasized that my approach to understanding the interaction between self-interest and normative values is different significantly from a traditional analytical approach that attempts to explain what is going on in terms of cause and effect. The relational approach is based upon hermeneutics, viewing human behavior as an ongoing process that occurs in a historical horizon (Piore 1995). As *social* beings, humans inevitably formulate relations with others. These relations existent in any situation provide bases for explaining the rules, performance and roles that characterize governance systems (Lejano 2006 forthcoming). The relational approach focuses on the very actions in this web of the working and reworking of social relations over time. By doing so, the relational approach concomitantly shows how the conceptual line of traditional analytic demarcation between self-interest and normative values becomes blurry in reality and how meanings emerge out of their interactions.

Even developed this way, one may say that the above points are insufficient to demonstrate the relational approach's salience and that it simply is a slight twist of the theory of norms, not an alternative. I admit that at first glance, the new approach resembles the theory of norms. However, it has a special distinctiveness that makes it advantageous in a small firm context over the existing theories. It is the differentiation between moral obligations at individual level and group norms. Although they are related phenomena, they all too often conflict with each other in particular contexts. Let us consider the following hypothetical scenario: In a baseball game, a batter of the Red Sox is hit by a pitch of an opponent team's pitcher. Given the situation, the Red Sox pitchers are left with two choices. One is to follow moral obligation to fair-play or sportsmanship. It is a norm, internalized and individualized. The other is to commit to a norm of retaliation by hitting intentionally the opponent team's batter in the next inning. It is a group norm that members of the group are expected to follow to maintain their solidarity and identity. The Red Sox pitchers' choice for action between the two is affected heavily

by a concrete context. If the opponent team were the Yankees, the likelihood that the Red Sox pitchers commit to a norm of retaliation would increase. Such instance may be the case for small firms. While an individual small firm owner may have its own sense of moral obligation, it can conflict not only with self- interest but also with group norms induced by trade associations. Small firms' choice for action is also affected heavily by their relations to the opponent, namely, formal regulators.

By distinguishing moral obligations operating at the individual level from norms operating at the group level, the relational approach leaves a legitimate room for the role of groups, that is, trade associations. As we will see later, trade associations provide a vantage point through which to recognize general problems of both deterrence theory and the theory of norms. Examining the role played by trade associations helps us understand how particular norms emerge and become *shared.* Furthermore, the distinction helps us recognize the important contribution of socio-historical contexts in which regulatory relations are manifested in a form of compliance.

Indeed, the theory of norms' ultimate reduction to *asocial* individualism resulted from the confusion of an individualized sense of moral obligations with socialized group norms. Its analyzed set of actors was abstracted independent of particular social context, and thus the theory failed to eliminate the atomization and only to transfer it to another level of analysis (Granovetter 1985). In other words, instead of having atomized individual, the theory of norms has atomized groups of people, and thus tends toward the very pitfall it is intended to avoid.

The relational approach overcomes this limit and shows that compliance behavior is contextually embedded in on-going systems of social relations among the regulated entities, and between regulators and the regulated as a group. As implied in the term "on-going", these social relations must be understood in a particular historical context, a relation of time processes. It must be so because the social relations are not a fossilized phenomenon at one point in time, but rather either evolve or devolve incessantly over time. The term "relational approach" is derived directly from this set of social relations.

In sum, the new approach's focus is on an understanding of the twofold regulatory relationship in its socio-historical contexts. It aims to illuminate that compliance is a surface expression of regulatory relationships. The following three chapters will explicate

how the relational approach obtains the greater validity over the existing theories by showing the contextual embeddedness of choices and the resulting actions in the web of social settings.

Conceptual Palette

Before moving on to the empirical chapters, this section explains meanings of key concepts around which the story told in this dissertation is revolved. They are implicitly mentioned throughout the dissertation, but it will be useful here to clarify what I mean by those vocabularies, so that there would be no confusion later on. I hope that this section serves like a depiction of *dramatis personae* in a literary work.

First, "compliance" is a sole dependent variable in my analysis. It is the most important concept among other things since different definitions of compliance result in different analytic outcomes in spite of the identical data. Compliance is a somewhat ambiguous term. Depending on the degree of meeting regulatory requirements, it can be categorized into two groups, that is, partial compliance and full compliance. Within the first category, pollution sources are considered to be in compliance when they meet several requirements, if not all. Full compliance is a much more rigorous concept. As implied in an adjective "full", pollution sources, within this category, are forced to meet all requirements to be in compliance. Otherwise, they are regarded as violators.

Depending on the timing of meeting the requirements, compliance may mean either initial compliance or continuous compliance. Initial compliance refers to installing the pollution abatement equipment that enables regulatory requirements to be met. For example, drycleaners are prohibited from operating transfer machines and forced to install dry-to-dry machines with vapor recovery systems. Once drycleaners purchase required machines, they are thought to be in initial compliance. Continuous compliance attempts to force pollution sources to keep emission and/or discharge within regulatory limits over time. Obviously, what determines environmental quality is continuous compliance (Harrington 1988). Henceforth, compliance in this dissertation refers strictly to "continuous", "full" compliance.

Second, "deterrence" refers exclusively to formal deterrence accompanied by legal sanctions. Depending on sanctioners, this term can be interpreted as either formal

deterrence or informal deterrence. The former is the inhibition of illegal behavior by fear of legal punishment imposed by government authorities. On the contrary, the latter does not result from legal punishment, but rather from self-imposed shame/feelings of guilty and contempt on the part of violators and/or disapproval of significant others. Informal deterrence falls into the domain of norms as explained below.

Third, by "norms" I mean "social" norms and this notion is intended to serve as an antithesis of (formal) deterrence. That is, norms are another conceivable independent variable that can possibly replace a deterrence account of compliance behavior. Sociologists and rational choice theorists have classified norms at various levels according to the scope of influence and whether or not they are outcome-oriented.[13] By restructuring existing classifications (since their original forms step out of the line of our discussion), I re-categorize norms into three groups: personal norms, membership norms and social norms.

Personal norms are self-imposed rules that individuals establish to control their own behavior. In many cases, they are an attempt to overcome weakness of will, such as 'Do not smoke at home.' Personal norms are not outcome-oriented and sustained by anxiety to achieve psychological comforts. They are not sustained by the approval or disapproval of others because this kind of norm is not shared with others (Elster 1996). 'Never shave the day before exams' is a good example of non-outcome-oriented personal norms.

Membership (or group) norms are shared by relatively small number of people in a larger society. They are constructed to strengthen solidarity among group members and sustained by informal sanctions such as estrangement or ostracism. Examples of membership norms are different table manners between different socio-economic classes and particular codes of behavior witnessed in sports clubs. They can either conflict or be compatible with personal norms and social norms.

Social norms are prescribed guides for conduct which are generally accepted by all members of a society. Elster (1989b) defines them as injunctions to behavior that are non-consequential, apply to others as well as to oneself, and are sustained by *internalized emotions* (e.g., a feeling of guilty) as well as by the sanctions of others. It must be noted

[13] For richer accounts, see Elster (1989a, 1989b) and Ullmann-Margalit (1977).

here that sanctions do matter not because they raise the cost of certain behavior but because they are "vehicles for the expression of feelings of anger, disgust, and contempt" (Elster 1996, p.1390). On this account, the nature of sanctions in the domain of norms is different from those in deterrence.

Social norms are considered important precisely because "they are believed to be necessary to the maintenance of social life or some highly prized feature of it" (Ullmann-Margalit 1977). This notion is what advocates of the theory of norms have in mind when accounting for compliance behavior. Unless indicated otherwise, the term norms in the dissertation is confined to social norms.

A fourth key concept I would like to explain is "relation". Although this term was introduced in the previous section, its notion needs to be spelled out to avoid confusion with relativism. At first glance, the relational approach and relativism look similar in that they equally claim that knowledge is held to be relevant to particular theoretical standpoints. In both approaches, the choice between standpoints is viewed as a matter of values rather than external truth independent of cognitive judgments (Scott 1998). However, there is a fundamental difference between the two. Where relativism holds that all theoretical standpoints and intellectual positions are equally illusory (Feyerabend 1975, Scott 1988), the relational approach, following Karl Mannheim (1929), argues that they are partially true though limited.

To comprehend their difference, consider the following example. You ask Jane and Tom to characterize John's personality. Jane says, 'John is so sweet and considerate.' But Tom responds, 'He is a selfish brute.' For relativists, Jane's and Tom's knowledge of John is illusion, and thus would keep their knowledge away from evaluation: 'anything goes' (Feyerabend 1975). Even in the case that Jane and Tom have a new experience of John, relativists only rearrange the new experience so that it conforms to what they already know, leaving their cognitive status quo intact. In a relativist framework, "each thinker is a prisoner inside his definable cognitive scheme" (Douglas & Wildavsky 1982, p.192). It lacks a theory of how a cognitive scheme ever gets its initial boundaries (Douglas & Wildavsky 1982).

On the contrary, relationists view that Jane's and Tom's knowledge of John has a relational truth. In other words, different knowledge of John is constructed by Jane's and

Tom's relation to John; John is nice to Jane, but harsh to Tom. These relations are always subject to changes, and so their definitions are to be reformulated, rejecting the relativist assumption of cognitive prison. Knowledge is a product of social relations. What matters in understanding the nature of knowledge is the continuing conversation with new definitions and solutions arising from changing relations to hold meanings being tried (Douglas & Wildavsky 1982). Therefore, relationists are prompted to explore the origins and the development of different values underlying different relations and explain their consequences. This implies that from the relationist perspective, values are not amorphous, abstract entities but social facts that can be understood by actor's social relations.

On this account, I would like to make it explicit that the relational approach does not totally deny either deterrence theory or the theory of norms because both accounts convey a relational truth. Thus, what the relational approach pursues is to synthesize these two conflicting theories, not finding a middle-ground. To do so, the relational approach seeks to explain under what circumstances and how actors are more inclined to be rational versus normative. Chapter 4 and 5 illustrate the above points with real world examples.

Once we admit the relational approach's theoretical advantage, the significance of "frames" becomes obvious. Framing is defined as "a particular way of representing knowledge, and as the reliance on (and development of) interpretive schemas that bound and order a chaotic situation, facilitate interpretation and provide *a guide for doing and acting*." (Laws & Rein 2003, p.173. Italics added). To emulate Max Weber's expression, frame is a finite segment of the meaningless infinity in the relativist world, and thus provides the basis for making the world meaningful. This definition is important to the ensuing discussion because social actions and social relations involve the mutual interpretation and imputation of meanings. Given that social relations are recognized not only objectively but also subjectively, frames are an indispensable concept to capture the reality because they provide actors with bases for perceiving how the self and others are related.

In a policy arena, controversies arise from frame conflicts, which are essentially *value* conflicts (Rein & Gamson 1999). I emphasize the term value because the objects

comprising our knowledge are necessarily value-laden (Scott 1998). When we perceive something as significant, we do so because that something "reveals relationships which are important to us due to their connection with our values" (Weber 1904, p.76).

Then, how can we reconcile their conflicts? This question entails not only methodological but also epistemological issues in that it aims eventually to reach a more comprehensive truth. I reject the mechanical solution viewing that finding a mid-point on a continuum of conflicting frames is more objective and neutral. Frames cannot be ranked or traded-off. Instead of adjudicating different standpoints, this dissertation assesses their partial truth and reconciles them in a broad picture that must be tested through its contextual relevance (May 1997, quoted in Scott 1998). This idea comes from the recognition that reality can be viewed various ways and it is by piecing together different depictions of the reality to gain a better understanding of what the reality is like (Mannheim 1929). In so doing, the dissertation shows that when actors define a certain situation through different frames, their definitions result in different paths of the development of the situation, and thus different policy outcomes.

CHAPTER 3

RULE COMPLIANCE IN THE DRY CLEANING INDUSTRY

The previous chapter was devoted in large part to explaining why it is necessary to escape the grasp of the dominant theories of small firms' rule compliance and to replace them with an alternative approach. Yet despite some analogous examples, the alternative might seem too abstract without offering some exemplary cases. In order to provide examples that buttress the validity of the relational approach in a small firm context, this chapter tells a narrative of rule compliance in the dry cleaning industries in southern California and Massachusetts.

Though they overlap and deal with the same events, the stories told by members of these local industries begin and end at different points in time and are framed in different ways. As a translator, I aim to present these diverse (sometimes conflicting) stories to readers in ways that allow them to draw their own conclusions about what happened, how the storytellers defined the events that took place, how they reacted to the events, and how they described a desired world.

This chapter consists of three sections. The first section describes in brief the general contours and crisis of the dry cleaning industry as it confronted a series of scientific studies that revealed both chronic and acute health impacts of Perchloroethylene (Perc), and the resulting regulations by the EPA. The latter part of this section draws heavily on Robert Gottlieb (2001), the EPA's official documents, and *Chemical Week* (the chemical industry's leading magazine) published between the late 1950s and the late 1980s. It pieces together several anecdotal stories chronologically to draw a far-reaching picture of nationwide regulatory trends targeting Perc and the dry cleaning industry. This section aims to provide background knowledge about how and why drycleaners' general attitudes toward the current regulation were formed.

The following two sections give examples of actions taken by state regulatory agencies and the dry cleaning industries' responses, and compare compliance outcomes. The first of the two examines the case of southern California, a region known for its stringent environmental policies and aggressive enforcement. The southern California

case is an unhappy reminder that even with greater formal threats, it is still unclear whether regulatory requirements would be met. The third section offers a success story of Massachusetts. It highlights what the state environmental agency and the drycleaners did to promote compliance.

Trends in the Dry Cleaning Industry

Profile of Dry Cleaning Operations

The origin of dry cleaning dates back to the Roman Empire. The ruins of Pompeii provide a record of a highly developed trade of professional garment cleaners known as fullers. Lye and ammonia were used in early dry cleaning, and a type of clay known as fuller's earth was used to degrease and absorb soils from clothing too delicate for laundering (International Fabric Care Institute. www.ifi.org).

Modern dry cleaning started in France in 1825 after a worker in a dye and cleaning factory accidentally spilled camphene, a fuel for oil lamps, on a soiled tablecloth. When the table cloth dried, the spots were gone (IARC 1995). Petroleum-based solvents quickly became popular and soon dominated the commercial garment care industry. Despite its name, dry cleaning is not a completely dry process. Fluids have always been used in the dry cleaning process. Garment scourers discovered that several fluids could be used as cleaning solvents, including camphene, turpentine, and kerosene in early days, and later benzene and gasoline (NIOSH 1997). These fluids are all dangerously combustible (Wentz 1995). Accordingly, petroleum-based solvents were prohibited in urban areas and dry cleaning operations tended to be centralized plants located in industrial zones or on the edge of urban areas (Sinsheimer et al. 2002) until non-combustible solvents were developed.

Near the turn of the 20th century, synthetic chlorinated hydrocarbons were developed and mass-produced. During the early 20th century, carbon tetrachloride was popular for dry cleaning. However, because of its toxicity and aggressiveness to metals, textiles and dyes, it was outlawed and gradually replaced by perchloroethylene (Wentz 1995). Percholoroethylene (Perc) was first introduced to the U.S. in 1934 as an alternative to petroleum-based solvents. Perc's superior cleaning ability combined with petroleum shortages caused by the Second World War and local fire codes brought about

a surge in its use. Because Perc is a nonflammable, synthetic solvent, professional cleaners using Perc were allowed to locate in residential and commercial areas of cities (Campbell & Low 2002). With this change, small neighborhood drycleaners began to dominate the industry. This trend continues today[14] (see Table 1).

Table 1. Quantity of U.S. Drycleaners and Number of Employees

Number of Employees	Number of Facilities	Percentage of Total Facilities	Minimum Total Employees	Maximum Total Employees
1-4	**33,853**	**70**	**33,853**	**135,412**
5-9	**8,252**	**17**	**41,260**	**74,268**
10-19	3,482	7	34,820	66,158
20-49	1,095	2	21,900	53,655
50-99	175	0.3	8,750	17,325
100-249	62	0.1	6,200	15,438
250-499	6	0.01	1,500	2,994
500-999	1	0.01	500	999
UNKNOWN	1,161	2	1,161	1,161
TOTAL	48,087	100	149,944	367,410

Source: American Business Information (1994)

According to the South Coast Air Quality Management District (SCAQMD) of California, the majority of dry cleaning facilities within its jurisdiction are located 25 meters or less from the nearest residence, school, daycare center or business. In more densely populated cities, such as New York and San Francisco, residences are often cited

[14] Unlike the OSHA list of employees, which does not include non-salaried owners, the American Business Information includes owners on site as employees since many of these firms are family operated. The U.S. Environmental Protection Agency (EPA) recently estimated that there were 30,000 commercial dry cleaning facilities and approximately 244,000 employees. The National Occupational Exposure Survey estimated that in 1982-83 there were over one-half million employees in more than 40,000 facilities (NIOSH 1997).

right above dry cleaning facilities (Campbell & Low 2002). In urban areas, dry cleaning is an extremely dispersed industry made up of small facilities, few of which practice health and safety training or have environmental personnel (EPA 1995).

Today, approximately 85 – 90 % of U.S. drycleaners use Perc as a cleaning solvent (NIOSH 1997). Annual Perc air emissions from the dry cleaning industry were estimated at approximately 46,000 tons (more than 100 million pounds) in the early 1990s (Garetano & Gochfeld 2000)[15]. More recent numbers have pegged current use by the dry cleaning industry at less than 100 million pounds in 2000. However, it has been estimated that approximately 70% of Perc used by drycleaners is released directly into the environment, excluding the emissions from offsite disposal (DeRosa 2001).

Nationwide Regulatory Trends

Although some studies in the 1960s revealed that exposure to Perc could cause serious health problems, such as impaired respiratory and liver functions, its carcinogenic effect was not yet widely recognized. During the 1950s and 1960s, Perc largely escaped the regulatory attention its competitors received. Robert Gottlieb (2001) identifies three possible reasons for this absence of concern: insufficient evidence of Perc's health effects; the absence of Perc emissions monitoring; and regulatory attention focused elsewhere. In addition, careful review of *Chemical Week* published between the late 1950s and 1960s, suggests that it was at least partially due to the Perc manufacturers' lobbying. As of 1958, drycleaners accounted for 88% of Perc sales market in the U.S. (*Oil, Paint and Drug Reporter*, September 11, 1967) spending $85 million on the chemical annually (*Chemical Week*, August 30, 1958). By the late 1960s, approximately 50% of coin-operated laundry facilities had added Perc machines. Perc manufacturers such as Vulcan, PPG, and Dow Chemical expected this trend to continue, forecasting future market expansion for their products. Accordingly, Perc manufacturers were active in defending Perc and drycleaners, the single largest user of Perc. The leading chemical industry magazine preposterously claimed that "the experience of small dry cleaning

[15] The EPA's Toxics Release Inventory (TRI) reported that in 1994 only 10 million pounds of Perc were released into the U.S. air, water and land. This quantity meant that Perc was the sixth ranking pollutant in the U.S. However, the TRI report underestimated the actual release of Perc because TRI only tabulates estimates of pollutants released from companies with a certain level of emissions and number of employees (mostly 10 or more). Most drycleaners do not make the cut (DeRosa 2001).

shops situated in business districts and using perchloroethylene demonstrated the safety of this solvent" (*Chemical Week,* quoted in Gottlieb 2001).

Despite the chemical industry's claims, a series of episodes in the mid 1960s drew attention to hazards associated with Perc use. One dry cleaning employee in Stockton, California died of Perc fumes and some drycleaners were found unconscious in their facilities. Facing these tragic incidents, regulators attempted to establish warnings to avoid excessive exposure to Perc. However, even these modest efforts met strong opposition from drycleaners (Gottlieb 2001). Dow Chemical supported drycleaners by arguing that there was "no medical demonstration of damage to the liver or any other organ from exposure to perchloroethylene." (*Chemical Week*, February 1966).

In the 1970s, a series of studies conducted by reliable research institutes revealed Perc's hazardous effects. Studies by the National Cancer Institute (NCI) and the National Toxicology Program (NTP) demonstrated that exposure to Perc causes liver cancer in mice, and leukemia and kidney cancer in rats (Brown & Kaplan 1987). Other epidemiological studies have also shown a correlation between exposure to Perc and increased rates of several types of cancer and other non-cancer health effects[16], including damage to the central nervous system, reproductive system, dizziness, and nausea to name a few. In response, government regulators such as the Consumer Product Safety Commission (CPSC) sought to include Perc in a cancer policy being developed by the Carter administration at that time. Again, Perc manufacturers blocked the CPSC's efforts through legal action, seeking to embrace the dry cleaning industry as a dependent downstream source that would be most threatened by the CPSC policy (Gottlieb 2001).

Mounting evidence of Perc's hazardous effects reported in the 1980s made a new regulatory round appear imminent. In 1985, the International Agency for Research on Cancer (IARC), part of the World Health Organization, classified Perc as a probable human carcinogen. The National Institute for Occupational Safety and Health (NIOSH) observed the effects of Perc on 1,708 dry cleaning employees. The study revealed a statistically significant correlation between exposure to Perc and higher probability of

[16] As for non-cancer risks, acute exposure to Perc has been reported to cause irritation of the skin, eyes, nose and throat; nausea, fainting, and impaired judgment; central nervous system intoxication, etc. (New Jersey Department of Health and Senior Services 2002). Chronic exposure causes neurotoxicity, development toxicity, reproductive disorders and infertility, respiratory disease, impaired liver and kidney functioning, impaired visual-information processing, etc. (Schreiber et al. 2002).

cancer. NIOSH recommended that Perc be classified as a potential human carcinogen (Ruder, A. et al. 2001). Though these findings were opposed by Perc manufacturers and there were hot debates over the interpretation of those studies, legislators and regulatory agencies could no longer delay the regulation of Perc use. With a Democratic Congress raising pressure through new legislation, Perc users were forced to comply with Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). HSWA required that dry cleaners dispose their used solvent and that the muck and filters from solvent recovery be sent to hazardous waste management facilities for recycling or incineration (Gottlieb 2001, EPA 1999).

With elevated public concern over Perc's health effects, regulatory battles intensified in the late 1980s. At that time, the centerpiece of debates was not whether but how to regulate the dry cleaning industry. In fact, the EPA had attempted to regulate Perc emissions from the dry cleaning industry as early as 1980 in order to fulfill the requirement of the 1977 Clean Air Act Amendment. The 1977 Amendment required that each state report to the EPA the status of compliance with National Ambient Air Quality Standards (NAAQS). However, previous state regulations pertaining to organic solvents had always exempted Perc from emission limitations due in part to regulatory agencies' sympathy for small businesses and in part to Perc's exclusion from the list of "criteria pollutants."[17] Provided with the NCI's and NTP's studies of Perc's health effects, the EPA attempted at this time to require all states to submit a State Implementation Plan (SIP) reflecting Reasonably Achievable Control Technology (RACT) for Perc dry cleaning systems that had not previously been regulated (Harvey & Spessard 1980).

This initial attempt was blocked by the Halogenated Solvents Industry Alliance (HSIA). HSIA was formed in 1980 by a group of executives in the chlorinated solvents industry to meet the growing challenges of government regulation. Regarding regulatory affairs, its mission was "to monitor international, federal, state, and local legislative and regulatory activities; to provide information and comment to legislative bodies and regulatory agencies; and to represent the industry in challenges to regulations where appropriate" (www.hsia.org/about.htm). To counter the NCI's and NTC's laboratory

[17] "Criteria pollutants" refers to six major air pollutants identified by NAAQS. They include ozone, carbon monoxide, particulate matter, sulfur dioxide, nitrogen oxide, and lead.

animal studies, Dow Chemical, a key member of HSIA, conducted its own animal study of Perc's carcinogenic effect. The Dow study showed no significant difference between the control and exposed rats. After reviewing several laboratory studies, the EPA's Science Advisory Board (SAB) concluded in 1987 that there was no reliable scientific basis for associating leukemia or kidney tumors observed in rats with exposure to Perc. The SAB stated that "the mechanism responsible for the marginal increase in kidney tumors appears to be unique to male rats and probably not operative in humans" (HSIA 1999).

EPA's reluctance to make further regulatory efforts was challenged by an Oregon-based community group. This group demanded a safety standard for Perc use in dry cleaning and filed a law suit against the EPA's inaction. Negotiations to settle the suit led to a 1990 Consent Decree agreement requiring that the EPA propose such a standard within a year of the agreement (Gottlieb 2001). During this time, the Occupational Safety and Health Administration (OSHA) lowered permissible exposure limits (PEL) for Perc from 100 ppm down to 25 ppm while classifying Perc as a potential human carcinogen. Paul Cammer, president of HSIA, stated that "the classification of perchloroethylene as a potential human carcinogen is without scientific basis" and warned that drycleaners would be most hard-hit by the new regulation (*Chemical Week*, February 15, 1989). Due probably to continuous challenges, this OSHA action was overturned by a federal court and the PEL for Perc reverted to the previous limit.

In response to both anti-toxic groups' campaigns and the growing body of scientific evidence, the 1990 Clean Air Act (CAA) Amendment finally stipulated that the EPA had to set a national emission standard for Perc along with 188 other hazardous air pollutants (HAPs), suspected to cause health and environmental impacts at low concentrations but not regulated as "criteria pollutants". The 1990 Amendment considered as primary sources any "group of stationary sources" located within a contiguous area, which had previously been considered as minor facilities. Under this stringent definition, the dry cleaning industry as a group became classified as a primary HAP source. On December the 9th, 1991, under section 112 of the 1990 CAA Amendment, the EPA proposed the National Emission Standard for Hazardous Air Pollutants (NESHAP) to limit Perc emissions from both new (constructed on or after

December the 9th, 1991) and existing (constructed before December the 9th, 1991) dry cleaning facilities (EPA 1993). The final rule was promulgated on September the 22nd, 1993 (*Federal Register* Vol.58, No.182).

However, the interpretation of what constituted an "acceptable risk" or "adequate margin of safety", which established the threshold for permissible exposure, was controversial. Indeed, small drycleaners could not possibly meet an emission standard set by the EPA that forced them to measure air quality down to parts per billion (DeRosa 2001). Because of this and/or under the pressure from HSIA, the EPA opted for a less stringent regulatory protocol known as a technology-based standard, one that required drycleaners to use only EPA-approved "best available control technology (BACT)". In addition, the Perc NESHAP was subsequently revised to extend the deadlines for drycleaners to submit initial compliance reports by six months (*Federal Register* Vol.58, No.242). Despite relaxed requirements, the dry cleaning industry furiously complained, "many drycleaners will require changes costing from $35,000 to $50,000, a capital investment that some small businesses cannot afford."

Regarding the passage of Perc regulations under the 1990 CAA Amendment in general and the NESHAP in particular, two interesting questions arise. First, why did the HSIA not challenge the EPA on this front? Second, the 1990 CAA Amendment provided the dry cleaning industry with available pollution prevention technologies as a method of compliance, but these alternative technologies were paid scant attention. What are the reasons for this? Although I was unable to find decisive evidence, one possible reason can be inferred from HSIA's response to the issue. At this time, blocking regulatory efforts appeared impossible because a series of chemical accidents in Seveso, Love Canal, Bhopal and West Virginia which occurred between the mid 1970s and 1980s were still on the mind of the public. It was likely that any visible proactive opposition to government action at the outset would bring about backfire. The chemical industry and HSIA in particular already knew that they were confronting fierce public criticism. Peter Savage, a chief editor of *Chemical Week*, warned the industry that:

> The idea of chemical companies as irresponsible organizations with a devil-may-care attitude to the environment grew among the general public during the 1960s and 1970s and now has a strong constituency, backed by entrenched but rather flimsy anecdotal

> evidence..... Whether you like it or not, the industry's image is generally little better than that of the much-maligned nuclear power business, many studies have shown..... (*Chemical Week*, December 14, 1988).

Unlike in the 1960s and 1970s, HSIA recognized that the enactment of new regulations was unavoidable. Instead of attempting to prevent the creation of new regulations through lobbying, HSIA pushed attention to Perc emission mitigation add-on equipment, simultaneously pulling the attention away from alternative technologies that could accelerate the phase-out of Perc. They emphasized an entrenched belief of American regulatory agencies: American technological genius should be brought to bear on the pollution problems. In fact, the HSIA's lobbyist in the push for this technology-based standard was a former EPA scientist who conducted Perc risk assessment in the 1980s (Lavelle 1996). Control devices were expected to reduce spills, leaks, and various types of fugitive emissions. Although such devices would conceivably reduce Perc sales, the costs of equipments would be passed onto drycleaners, not onto Perc manufacturers (Gottlieb 2001). Furthermore, it was believed that the control devices might not actually reduce the quantity of Perc used in dry cleaning facilities unless they were operated properly.

Since the 1980s, the dry cleaning industry has been affected by several environmental laws, including the Water Pollution Control Act (commonly known as the Clean Water Act), the Comprehensive Environmental Response, Compensation and Liability Act (commonly known as Superfund), the Resource Conservation and Recovery Act (RCRA), the Emergency Planning and Community Right-to-Know Act (EPCRA), the Safe Drinking Water Act (SDWA), the Toxic Substances Control Act (TSCA), and the Clean Air Act (CAA). However, it was not Perc manufacturers but drycleaners that would be forced to bear the burden imposed by these environmental laws. Among them, the 1990 CAA Amendment created the most significant and the most onerous pressures on the dry cleaning industry. Indeed, most drycleaners tend to equate Perc regulation with this air regulation. The new regulation required time-consuming activities and investment in expensive control and recovery systems to reduce leaks and emissions. This is one of the main reasons that most drycleaners believe that the current Perc regulation is unrealistically costly and unfair.

Another is found in drycleaners interpretation of the timing of regulatory agency's decision. Many drycleaners cynically comment that "when the chemical industry stood against Perc regulation, government did not make any actions. As soon as they [the chemical industry] set back and we stood alone, the regulation was enacted. Government simply ignored our concern. Why? Because we are not like Dow and Vulcan. We are powerless." These stories will be described in greater detail in Chapter 4 and 5.

The Southern California Case

Since 1980, the dry cleaning industry in the South Coast Air Basin in California has been regulated by the South Coast Air Quality Management District (SCAQMD). Its jurisdiction covers Los Angeles County, Orange County, San Bernardino County and Riverside County which together account for approximately 50% of California's population. Rule 1102.1 (Perchloroethylene Dry Cleaning System), which regulated Perc emission from dry cleaning facilities, was first adopted on June 6th, 1980 and amended four times in 1981, 1982, 1987 and 1990. Specified provisions of the Rule remained unchanged through the revisions: minimizing leaks, equipment operation and maintenance, waste residue handling and storage, and recordkeeping.

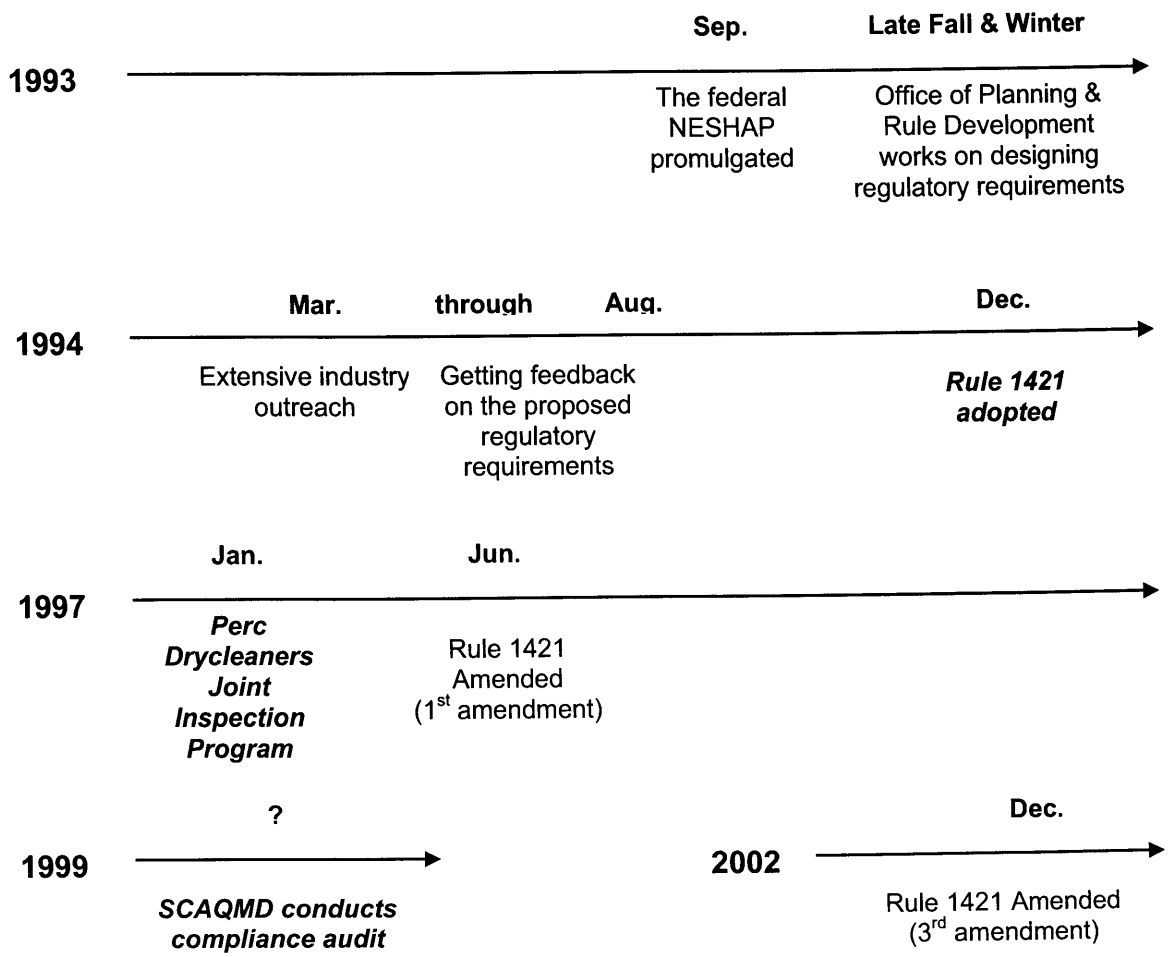
Since its inception, Rule 1102.1 seems to have been neither strictly enforced by regulators nor adhered to by drycleaners during the 1980s, judging from the following evidence. First, the SCAQMD does not have any compliance-related records of the dry cleaning industry before 1993. One anonymous staff member of the SCAQMD said, "Nobody had paid attention to dry cleaning facilities until the 1993 federal NESHAP promulgated by the 1990 CAA Amendment." Similarly, many long-time drycleaners in the region commented, "There was no such thing as Perc regulation before the mid 1990s". Some drycleaners said, "There were some environmental laws targeting drycleaners in the 1980s, but we did not know what to do." In response to the interviewer's question about Perc disposal, most interviewees said, "I used to dump it in a toilet. Most people did the same."

Rule 1102.1 was replaced by Rule 1421 (Control of Perchloroethylene Emissions from Dry Cleaning Systems) on December the 9th, 1994 because Rule 1102.1 differed significantly from the federal NESHAP promulgated in September 1993 and the state

Airborne Toxic Control Measure (ATCM) adopted in October 1993 (effective in December 1994). In other words, Rule 1102.1 was much less stringent than the federal NESHAP and the state ATCM, so that it could not meet requirements from both NESHAP and ATCM. Although some maintenance and inspection requirements remained the same, Rule 1421 (21 pages in length) was much more stringent than Rule 1102.1 (3 pages in length).

Because Rule 1421 is one that is compared with the Massachusetts Environmental Results Program (ERP) with regard to rule preparations, regulatory requirements, enforcement efforts and trends in compliance, this section describes Rule 1421 in greater detail. The following figure is a brief chronology of Rule 1421.

Figure 1. Rule 1421 Chronology



Preparation of Rule 1421

Since the 1990 CAA Amendment, the EPA has emphasized and encouraged stakeholder involvement in rule-making processes. During the Rule 1421 preparation period, the SCAQMD took steps consistent with the EPA's proposal. In an effort to obtain input from people whose interests were at stake, the SCAQMD consulted with drycleaners' associations, Perc and equipment manufacturers, and suppliers.

The SCAQMD staff presented an overview of Rule 1421 in industry association meetings. They met with the Greater Los Angeles Dry Cleaners Association (GLADCA) on March 15th, 1994; the Harbor/South Bay Dry Cleaners Association (HSBDCA) on March 16th, 1994; the Korean Drycleaners and Laundry Association (KDLA) on July 14th, 1994; and the Orange County dry cleaners on June 30th, 1994 (the Orange county meeting was sponsored by the Environmental Health Division within the Orange County Health Care Agency). In addition to the open meetings, the staff met with the leaders of each association twice. For the first meeting on June 23rd, 1994, representatives of KDLA, the Federation of Korean Dry Cleaners (FKDC), HSBDCA, and the California Fabricate Institute (CFI) were present. In attendance for the second meeting on July the 20th, 1994 were representatives of FKDC, GLADCA, CFI, and Wayne Freeland and Associates. According to the SCAQMD staff report (1994), "the association membership and leadership were generally supportive of a consolidated AQMD rule." Between the two meetings with association leaders, the SCAQMD invited all individual drycleaners to hold a workshop on the proposed Rule on June 28th, 2004. The public notice was mailed directly to drycleaners and was posted in four local newspapers in each county of the District. The official record indicates that there were only 15 attendees in the workshop, mostly environmental consultants and other regulatory agencies' personnel. The SCAQMD viewed the low turnout as a result of "the previous extensive industry outreach efforts." However, Steve Han of KDLA who attended the June 23 meeting expressed a different opinion:

> From our perspective, the proposed Rule was very harsh. We just agreed with the general purpose that our business activities must not harm the environment and human health. Who could object? But we raised several critical issues such as recordkeeping and equipment requirements, which appeared unnecessary and too burdensome. For example, the proposed Rule required us to

> maintain and report a vast amount of records. Was it really necessary? Is the SCAQMD currently using them in productive ways? (Personal Communication with Steve Han of KDLA)

In the meantime, to prevent potential conflicts among various regulations required by different agencies, the SCAQMD met with the Sanitation District of Los Angeles on May 4th, the Sanitation District of Orange County on June 7thh, 1994, and the City of Los Angeles Bureau of Sanitation. These three agencies were about to ban a direct discharge of Perc containing wastewater. No agency raised objections to the proposed Rule. Their only concern was that "the equipment and operating requirements for wastewater elimination should not be too complex and prohibitive for the small drycleaner." (SCAQMD 1994).

The SCAQMD also met with local equipment manufacturers and suppliers to confirm that compliant equipment was available and that the equipment specifications could be attained. Eight local companies were contacted between March and August, 1994: Kelleher Equipment on March 1st and May 10th, 1994; Air Quality Laboratories on May 10th, 1994; Beyerlein's Sales and Service on May 26th, 1994; WTW Industries on June 14th, 1994; VaPure Company on June 14th, 2004; Environmental Emissions Systems on July 5th and 12th, 2004; Arthur Kajiwara Equipment on July 12th, 2004; and Allrec International on August 24th, 2004. They commented that the provisions for evaporators and separators were not suitable for all forms of wastewater elimination, but a Perc detector was available, though expensive.

After a six-month industry outreach and commentary period, the SCAQMD modified the proposed Rule 1421 based upon inputs received in many meetings and the workshop. The SCAQMD concluded that the final version of Rule 1421 would not result in significant socioeconomic impacts on drycleaners.

Regulatory Requirements

Broadly speaking, Rule 1421 includes four key elements[18]: 1) equipment requirements (*Rule 1421 section d*); 2) good operating practices (*Rule 1421 section e & f*); 3)

[18] Based on SCAQMD staff report (1994) and an environmental code book, I categorized all requirements into four groups. The categorization reflects the distinctive nature of regulatory requirements.

recordkeeping and reporting provisions (*Rule 1421 section g, h & i*); and 4) training requirements (*Rule 1421 section e-3*).

"Equipment requirements" stipulated that on or after December 9th, 1994, drycleaners were required to install a factory original dry-to-dry, closed loop machine equipped with integral secondary control. In this type of machine, washing, extraction, and drying are all performed in one single unit (*Rule 1421* (c)-3) minimizing fugitive Perc emission and consumption. This requirement reflected the standard BACT approach.

"Good operating practice requirements" dealt with self-monitoring and wastewater disposal. The Rule required weekly testing of control devices prescribed by the federal NESHAP to detect Perc leak and emission. However, it streamlined this monitoring requirement by offering a technological incentive for those who installed a computerized Perc monitor. Drycleaners who installed a Perc monitor were not required to undergo weekly testing and corresponding recordkeeping activities because a Perc monitor is more effective than a prescribed maintenance or replacement schedule since it provides continuous and real time Perc concentration measurements (SCAQMD 1994).

Regarding wastewater treatment, the Rule did not intend to regulate the disposal of the wastewater containing Perc, which goes beyond the SCAQMD authority. However, the SCAQMD was concerned with any method of wastewater treatment that might affect air quality. In the early 1990s, the EPA and the State and Regional Water Quality Boards (SRWQBD) started investigating groundwater Perc contamination. The City of Los Angeles Bureau of Sanitation and the Sanitation Districts of Los Angeles County and Orange County no longer allowed drycleaners to discharge Perc-containing wastewater into the sewer system. However, the EPA and the California Department of Toxic Substances Control did not require permits from drycleaners that treated wastewater onsite. These regulatory actions taken by diverse agencies tended to encourage drycleaners to treat wastewater onsite.

In an effort to prevent releases of high concentrations of Perc into the air from wastewater, the Rule proposed performance standards to ensure proper liquid separation and safe water elimination. The standard for liquid separation was set at a level of 150 ppm, which is Perc's solubility limit in water. A standard for water elimination was established at the level of 25 ppm, which was the California PEL for Perc. The Rule also

stated that Perc-contaminated wastewater could be disposed by permitted offsite waste management companies (Rule 1421, SCAQMD 1994).

"Recordkeeping provisions" intended to help drycleaners evaluate their performance and to facilitate the SCAQMD's systematic oversight of the industry in the District. The Rule required drycleaners to keep daily, weekly, and annual records for five years. On a daily basis, drycleaners were required to record the pounds of clothes and the quantity of Perc used. On a weekly basis, they had to document the results of the self-inspection of Perc machines and the testing of control devices. On an annual basis, the quantity of Perc purchased over the previous twelve months was to be recorded. Finally, drycleaners were required to keep a log of maintenance and repair to machines as well as operator and employee training. For the first two years, the records had to be retained onsite. For the remaining three years, records could be stored in another location as long as they could be delivered to SCAQMD within two days of the request (SCAQMD 1994).

The Rule also required that three types of reports be submitted to the SCAQMD: an initial report, a compliance report, and an annual report. The initial report aimed to establish an inventory of the dry cleaning equipment and corresponding control technologies installed at each facility. For existing facilities (constructed before December 9th, 1994), this report was completed by SCAQMD's field inspectors and submitted to both the EPA and the California Air Resources Board (CARB) to meet the initial report and initial notification requirements, respectively, of the NESHAP (or the 1990 CAA Amendment) and ATCM. For new facilities (constructed on or after December 9th, 2004), it was required as part of the permit application. The compliance report was intended to provide the status of changes that had occurred, or were planned to occur in order to comply with the Rule. For example, the Rule required drycleaners with transfer or vented machines to either convert or replace them. Drycleaners also had to document their intentions in this report. The annual report is a performance evaluation providing useful information such as the facility mileage[19], which might also serve as a proxy of efficient dry cleaning operation. As noted above, drycleaners were required to

[19] The facility mileage is calculated as follows: the total of the pounds of materials cleaned per load divided by the total of the gallons of Perc used (*Rule 1421* section h-3).

calculate annual Perc purchases. This calculation had to be reported to the SCAQMD one year after the compliance report was submitted and every year thereafter. If the SCAQMD could obtain information from other sources than an individual facility, the facility could be relieved of reporting and recordkeeping requirements.

Finally, "training requirements" aimed to increase overall awareness of good operating practices and other regulatory requirements. The rule specified that each facility must have at least one trained operator. A trained operator was defined as either the owner or a responsible employee who completes the CARB-approved initial environmental training program and a refresher course every three years. In an effort to ensure that all employees are aware of the regulation, the Rule required the trained operator to educate other employees (*Rule 1421* section e-3).

As noted above, when Rule 1421 was first proposed by SCAQMD, drycleaners and equipment manufacturers raised some issues regarding recordkeeping and reporting, Perc monitor options, and the environmental training program (Personal Communication with SCAQMD staff and Korean Drycleaners-Laundry Association, February 2004).

First, drycleaners objected to the five-year recordkeeping and reporting requirements. They claimed that the requirements were psychologically burdensome, costly, and impractical for small firms for the following reasons: The information required by the Rule is not likely to change from month to month or from year to year; many facilities could choose to misrepresent the records and reports by generating data anticipated by the SCAQMD; many facilities could choose to ignore the recordkeeping and reporting and gamble on not being detected (Personal Communication with KDLA members); the overwhelming amount of documents are not likely to reviewed or used by the SCAQMD; there are other ways for the SCAQMD to obtain the required information (i.e., Perc purchase records can be comprehensively collected from Perc suppliers); and the annual Perc balance sheet is too difficult to quantify because hazardous waste drums may be filled with varying amounts of still bottoms, spent carbon and filters that each contain highly variable percentages of residual Perc (Comments from Katy Wolf at Institute for Research and Technology Assistance, quoted in the SCAQMD staff report). In response, the SCAQMD relaxed these requirements for businesses that could show the data required were holding constant or could be obtained through other means.

Second, the dry cleaning industry complained that a Perc monitor which activates an automatic door lock whenever the Perc concentrations are high is too expensive (ranging from $10,000 to 150,000) and is not locally available. This then state-of-the-art monitor was manufactured by only one company in Italy. During the Rule preparation stage, this requirement was attacked in several written comments which stated that the costs of Perc monitors might keep drycleaners from adding the properly outfitted separator. To respond to this concern, the SCAQMD proposed portable Perc detectors that had been locally available since the 1980s. The cost of these portable detectors ranged from $300 to $600.

A third concern arose from the dry cleaning industry's suspicion of the SCAQMD's ability to conduct the environmental training programs. In fact, the SCAQMD could not provide the proper program due to limited resources. In response, the SCAQMD relied on the CARB, trade associations, and individual consultants to provide sufficient programs to help the industry comply with the Rule.

Overall, the SCAQMD attempted to address the concerns raised by drycleaners, and the Rule 1421 consolidated several existing regulations affecting the dry cleaning industry (i.e , the federal NESHAP under the 1990 CAA Amendment and the California ATCM). One SCAQMD staff commented:

> How would you feel if you were required to submit income information to the Department of Treasury, dependents information to the Bureau of the Census, information for mortgage interest deductions to another government agency, etc.?[20] You would go crazy, wouldn't you? We knew that, so we consolidated the diverse environmental requirements of various agencies and established a streamlined set of requirements, standards, and forms of recordkeeping and reporting. They were designed to help drycleaners comply. Once you meet all requirements of Rule 1421, you do not have to worry about other federal and state laws (Personal Communication with the SCAQMD staff).

Enforcement Efforts

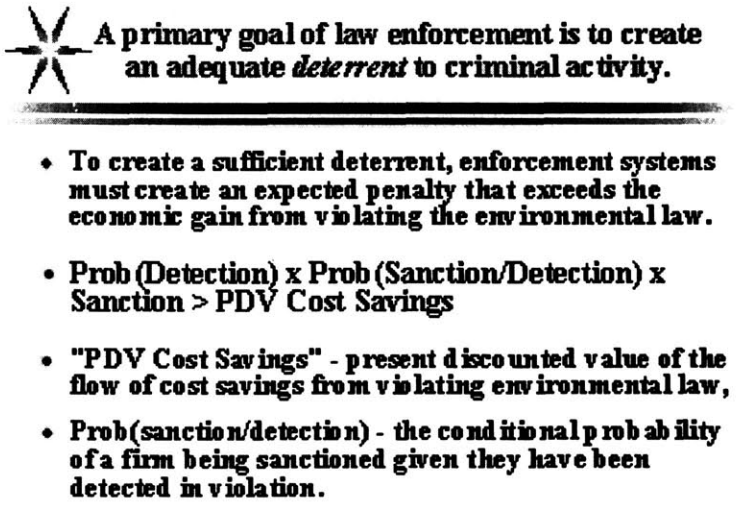
The 1990 CAA Amendment, the beginning of stringent Perc regulations, greatly strengthened its civil and criminal penalties and proposed new enforcement provisions such as operator liability. For civil penalties, the EPA could impose fines of up to

[20] This is a popular example used to highlight regulatory complexities.

$25,000 per day for violations, with a maximum monetary penalty of $200,000. The EPA could initiate court proceedings without the Department of Justice, whose involvement had previously been required. For criminal penalties, the 1990 Amendment converted the cognizant violation of almost every requirement into a felony. Penalties included fines of up to $25,000 for individuals and imprisonment for up to 5 years for a first conviction, with each day considered a separate violation. The maximum penalty that could be imposed was $500,000. Penalties could double for subsequent convictions. In addition, the 1990 Amendment intended to impose legal liability not only on owners and senior management personnel but also on employees whenever they knowingly endangered others (Weiss & Gallagher 1993). The U.S. Congress authorized awards of up to $10,000 to citizens who provided information leading to criminal convictions or civil penalties for violation.

Alongside the EPA prescription, the SCAQMD's primary enforcement tool to promote industry compliance was based explicitly on deterrence strategy (see Figure 2).

Figure 2. Primary Enforcement Principle



Source: Excerpt from the SCAQMD Presentation Slides

In fact, California's proposed sanctions were equal to or severer than the EPA's: Under the California Clean Air Act, one of the higher-level laws on which Rule 1421 was grounded, an emission that caused death or serious bodily injury could result in a 15-year

imprisonment and a fine of up to $1 million; The California Hazardous Waste Control Act stipulated that violations that contributed to increases in bodily injury or a substantial probability of death could result in a three-year imprisonment and a fine of up to $25,000 per day of violation; and the California Hazardous Substances Account Act intended to impose two-year imprisonment and a fine of up to $50,000 per day of violation.

More than 50 inspectors conducted periodical random and targeted inspections to ensure that approximately 3,800 dry cleaning facilities in the District were meeting emission limits and permit operating conditions. Field inspectors also responded to complaints reported by the public. When inspectors detected violations, they wrote either a Notice-of-Violation (NOV), which involved penalties or a Notice-to-Comply (NOC), which did not necessarily impose penalties as long as facilities made corrections in a timely manner.[21] When dealing with violations, if a facility had a good history of compliance and other requirements were met, the violation could be resolved under the Supplemental Environmental Project (SEP) penalties, which refers to alternative measures that can create either direct or indirect environmental benefits, instead of monetary penalties. The SEP penalties typically involve changes in process, material, and equipment, etc. Note that the SEP penalties are not an exemption from penalties but another form of civil penalties. They often require costs that exceed typical monetary penalties to reach compliance. Facilities that self-reported violations could be granted reduced penalties under Self-Auditing Penalty Policy (however, none of my 25 interviewees and 107 survey respondents self-reported their violations).

Although the SCAQMD has rarely taken enforcement actions equivalent to the maximum civil and criminal penalties for drycleaners, it has started paying more attention to the industry since the Rule of 1994 and increased onsite inspection rates and penalties. For example, more than 60 field inspectors were sent to approximately 3,500

---

[21] A Notice to Comply is an enforcement tool used by AQMD inspectors to document minor violations of AQMD rules. Minor violations are violations that are administrative or procedural in nature, or which involve a minimal amount of emissions increases. Minor violations that are corrected in the presence of the inspector will not result in issuance of a Notice to Comply unless they are repeated minor violations. In such cases, a Notice of Violation, which is a more serious enforcement action, could result in penalties (http://www.aqmd.gov/nov/disclaimer.htm).

dry cleaning facilities at least once per year to ensure compliance; the Notice-to-Comply (NTC) and the Notice-of-Violation (NOV) were issued to many dry cleaning facilities.

Together with increased formal deterrence threats, the SCAQMD provided drycleaners with both technical and administrative assistance, so that they could comply with all applicable requirements. The assistance was offered through two routes. To help initial compliance, field inspectors visited individual facilities to complete the initial report. Onsite visits aimed to minimize confusion, to reduce the number of tardy, incomplete submittals and to respond to inquiries immediately. In addition, the SCAQMD contacted all Perc machine manufacturers and dealers to inform them of the agency's equipment certification program. Under this program, machine manufacturers could obtain equipment certification ensuring that their machines were capable of meeting equipment requirements. By purchasing the SCAQMD-certified machines, drycleaners could avoid time-consuming engineering review and obtain operation permits within three working days at a reduced permit processing fee.

The SCAQMD further encouraged compliance by providing alternative technologies through a university research institute and a Los Angeles-based community group. The Occidental college-based Pollution Prevention Education and Research Center (PPERC), one of the leading research institutes on pollution prevention issues in the garment care industry launched in 1995 the Garment Care Research and Education program. PPERC initiated the analysis of the viability of a pollution prevention technology in comparison to the chemical-based process. Their research demonstrated technical feasibility and economic viability of professional wet cleaning (PPERC 1997). Sponsored by the SCAQMD, PPERC helped the establishment of the first wet cleaning demonstration facility in California and educated Perc drycleaners. PPERC expanded their efforts to technically assist eight drycleaners who had interest in switching from Perc to wet cleaning (Personal Communication with Peter Sinsheimer at PPERC). Having seen PPERC's program as a form technical assistance for of small business, Korean Youth and Community Center (KYCC) became involved in order to reach Korean immigrant drycleaners.

Trends in Rule Compliance

It was in 1996 that all dry cleaning facilities were required to comply fully with the Rule. To examine compliance with Rule 1421, the SCAQMD in cooperation with the CARB randomly selected 208 dry cleaning facilities from the official list of permitted facilities in the District and inspected them in January 1997. The result of this Perc Drycleaner Joint Inspection Program (PDJIP) is summarized below (see Table 2).

Table 2. SCAQMD Compliance Audit in 1997

Number of Facilities Inspected	208 facilities
Overall Violation Rate	**90%**
Percentage of Facilities with Violations based on excess Perc Emission	22%
Percentage of Facilities with Perc Vapor or Liquid Leaks from Dry Cleaning Equipment	17%
Percentage of Facilities in Violation of Recordkeeping Requirements	83%
Percentage of Facilities in Violation of Perc Detector Requirement	20%

Source: The California Air Resources Board (1997).

The PDJIP discovered that all requirements were being violated. The overall violation rate was 90%. Although the majority of these facilities were found to be in violation of administrative and recordkeeping requirements, 22% (46) of the facilities inspected were emitting Perc in excess of legal limits. These emissions commonly emanated from air-drying of Perc waste, open waste barrels, open lint/muck containers, etc. The inspection team noted that "the figure of 22% refers only to direct Perc emission evidenced during the inspections and does not include recordkeeping violations which could possibly be emissions related" (CARB 1997). For instance, the inspection team detected 156 facilities (75%) that did not conduct the weekly leak check requirements. If a Perc leak occurred at one of these facilities, it could have existed for an extended time period before the excess emissions were detected. The fourth row of Table 2 shows that 17% (35 facilities) had equipment with excess liquid or vapor Perc leaks. This figure did not include the

additional vapor leaks detected by a halogenated hydrocarbon detector. Approximately 30% of the facilities did not even equip the leak detector.

The weakest area was recordkeeping requirements (83% of violation rate). For the most part, records were nonexistent. In addition, approximately 20% of the facilities did not meet the environmental training requirement which required all facilities to have at least one operator who attended ABR-approved environmental training programs. 28% of the facilities did not post operation permits and an aditional 7% of the facilities had invalid permits (CARB 1997).

For the SCAQMD, which had aimed for a 95% of compliance rate, the result was shocking. When 50 inspectors were sent to 3319 facilities in 1994 (during the Rule 1421 preparation period), approximately 15% of facilities were found to be in violation of Rule 1102.1 (*Cleaners News*, April 20, 1994). Even allowing for the fact that Rule 1421 is stricter with regards to operating and recordkeeping requirements, this high rate of violation was an unpleasant surprise. The SCAQMD ascribed the high noncompliance rate to insufficiently harsh penalties and too few onsite inspections (Malloy & Sinsheimer 2001). The CARB Joint Inspection Team agreed with the SCAQMD's diagnosis:

> There appears to be a decline in the compliance rate among the facilities when compared to the results reported in the District's October 1995 study on Perc dry cleaning facilities. The new rule is admittedly complex. Hence, acceptable compliance rates will be achieved for this industry only through a combination of more frequent inspections, public outreach, and appropriate penalties for sources found in violation (CARB 1997).

Correspondingly, the SCAQMD decided to conduct follow-up inspections with appropriate penalties for facilities in violation, and a thorough inspection for all facilities to ensure that the compliance rate would reach a level of 95% or higher.

In 1999, the SCAQMD inspection team conducted inspections of 340 dry cleaning facilities. The result of the 1999 compliance audit is summarized in Table 3.

Table 3. SCAQMD Compliance Audit in 1999

Number of Facilities Inspected	340 facilities
Overall violation Rate	**95%**
Percentage of Facilities with Violations based on excess Perc Emission	35%
Percentage of Facilities with Perc Vapor or Liquid Leaks from Dry Cleaning Equipment	9%
Percentage of Facilities in Violation of Recordkeeping Requirements	50%
Percentage of Facilities in Violation of Perc Detector Requirement	33%

Source: SCAQMD (1999).

The 1999 compliance audit discovered that the overall violation rate was 95%, as opposed to 90% in the 1997 audit. The percentage of facilities in violation of allowable Perc emission levels (the most serious violation) also increased from 22% to 35%. In addition, approximately 33% of the facilities inspected were not equipped with the required Perc detector, as opposed to 20% in 1997. The areas in which we see improvements are recordkeeping requirements and a direct Perc leak from equipment. Can the higher compliance with these two areas be explained by increases in deterrence threats, as the SCAQMD intended? My answer is "unlikely".

Rule 1421, which governed the dry cleaning industry during the PDJIP in January, 1997 was amended on June the 13th, 1997.[22] The amended Rule required drycleaners to maintain records for only two years (Amended Rule 1421 section i-1), as opposed to five- year recordkeeping required by the previous Rule. In addition, the 1997 amendment of Rule 1421 removed several requirements in the areas of wastewater elimination, employee training, self-monitoring, and applicable control equipment for replacement of existing and new equipment (SCAQMD 1997).

[22] Rule 1421 was amended again on December the 6th, 2002. The essence of the second amendment was a total ban of Perc use in all dry cleaning facilities in the District. This dissertation does not deal with the second amendment because both enforcement and compliance data are unavailable. In Chapter 4, however, some episodes surrounding the approval of the amendment are introduced in brief to explain tensions between the dry cleaning industry and the SCAQMD.

The decrease in Perc leaks from equipment can be explained by the replacement of old machines with new ones. Since the amended rule, approximately 685 older transfer and vented machines have been phased out (SCAQMD 1999).[23] This explanation is supported by the fact that the number of violations of the Perc detector requirement increased. One drycleaner complained that "When I purchased a new machine in 1998, a salesman said 'you will not need a portable Perc detector'. So, I did not order a Perc detector. But I ended up with getting a $500 ticket."

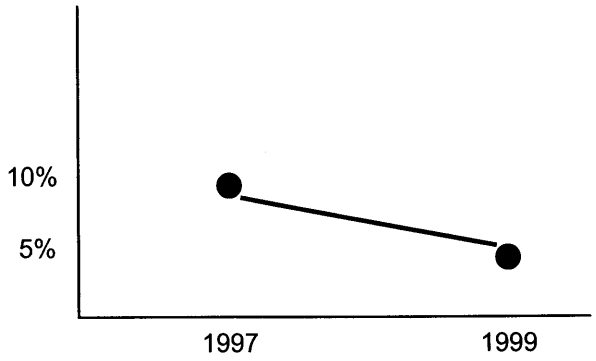
To summarize a compliance trend in its relations to both regulatory requirements and enforcement between 1997 and 1999:

- Regulatory requirements were relaxed
- Actual formal threats have increased (Perceived threats will be discussed later)
- Nevertheless, the overall compliance rates decreased

Here we should examine how the SCAQMD decided which drycleaners would be inspected. The sampling method is critical in judging whether or not compliance rates were underestimated. For instance, if the SCAQMD had primarily inspected facilities for which they received complaints, it is reasonable to assume that the compliance rate for those facilities would be lower than the compliance rate for the entire population of facilities. In the southern California case, the two compliance audits were based on random inspections. As such, there is no reason to believe that the violation rates were overestimated.

[23] Transfer and vented machines are commonly known as the first and second generation machines, respectively. Compared to new, non-vented machines, they emit higher levels of Perc.

Figure 3. Overall Compliance Rates of the Southern California Dry Cleaning Industry Between 1997 and 1999



Source: CARB (1997) & SCAQMD (1999)

A trend in rule compliance is a proxy of the regulatory effectiveness and provides a snapshot of how the industry responded to the formal regulation. This trend will be compared with the Massachusetts experience.

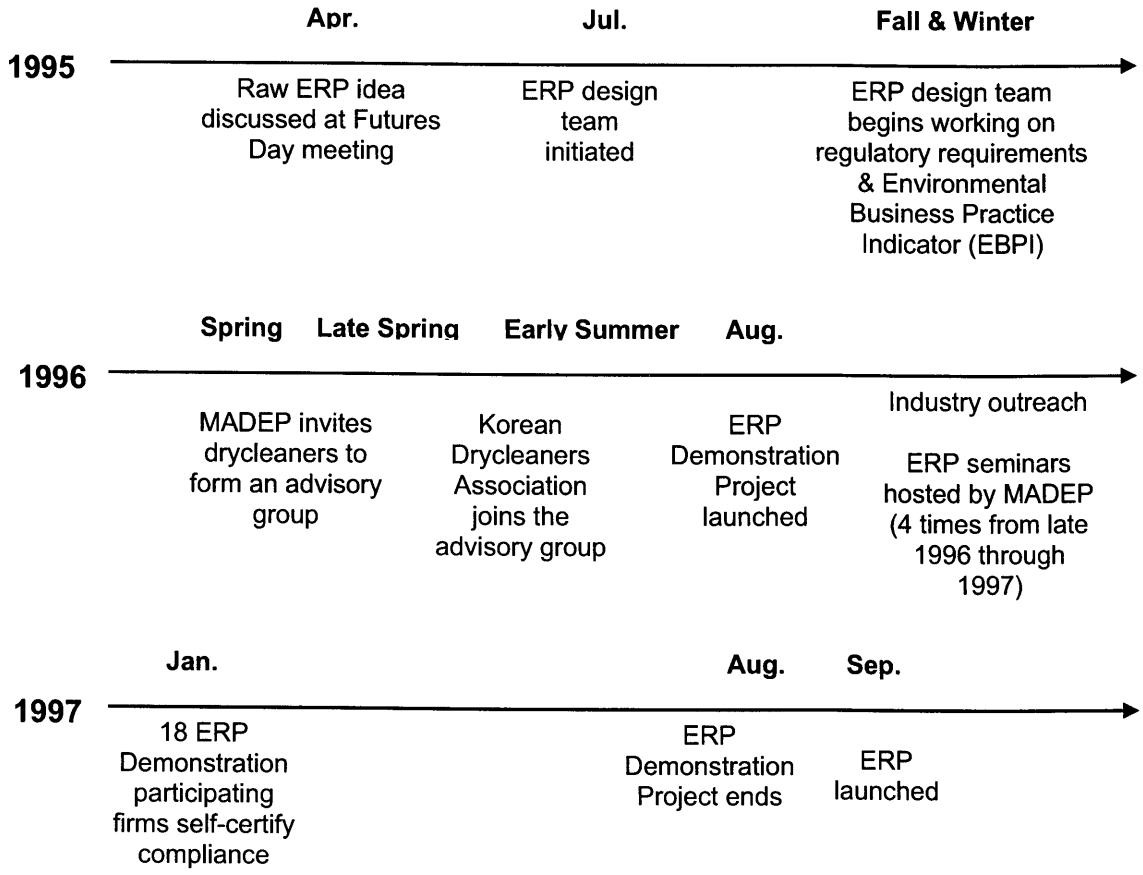
The Massachusetts Case

In 1997, the Massachusetts Department of Environmental Protection (MADEP) launched the Environmental Results Program (ERP) targeting small businesses including drycleaners, photo processors and printers. The ERP is a compliance-assurance system that uses annual self-certification requirements to shift the compliance assurance burden onto facilities. It incorporated onsite inspections and industry-specific performance measurement to ensure that self-certifications were accurate and environmental performance improved. After reviewing approximately 50 regulatory innovations on which it had partnered with states, industry, and communities, the EPA concluded in late 2000 that the ERP was one of the best programs in use, suitable for small businesses (Golledge et al. 2003). Encouraged by the remarkable success in Massachusetts, four other states (Rhode Island, Delaware, Tennessee, and Florida) recently initiated ERP-type regulations and Wisconsin is currently planning a pilot program.

This section describes how the MADEP created the final version of the ERP, what the ERP requires small firms to do, and what the program has accomplished. This section focuses primarily on the dry cleaning industry among the three ERP sectors for a

coherent comparison with the southern California case, but stories of printers and photo processors are included where necessary. The following figure summarizes the ERP development process.

Figure 4. ERP Dry Cleaning Sector Chronology



Preparation of the Environmental Results Program[24]

The seed idea for the Environmental Results Program (ERP) originated in a conversation between Mr. James Gomes of the Environmental League of Massachusetts (ELM) and Mr. James Coull of the Massachusetts High Technology Council (MHTC). The two were meeting at the Futures Day of April 1995, an annual event hosted by the MADEP at which environmental NGOs, industry, and local governments discuss and share ideas

[24] The first and fourth paragraphs of this subsection draw heavily on April & Greiner (2000).

about environmental protection in Massachusetts. They agreed that it would be better to have performance standards rather than technology standards.[25] The difficult issue was how to certify performance standards and shift resources from bureaucratic permitting processes to enforcement and compliance assurance. The biggest concern of Gomes was how to form a link between those standards and more inspectors whereas Coull of MHTC was more interested in ensuring flexibility to allow industry to make its own compliance decisions. Nevertheless, their views converged at one point: Neither saw much value in the permitting bureaucracy (April & Greiner 2000).

As of 1995, the MADEP was spending significant regulatory resources issuing air permits to approximately 4,400 facilities, of which two-thirds were small and medium-sized firms. Despite extensive permitting processes, the MADEP estimated that at least two-thirds of small and medium-sized firms in the state were in violation of some existing requirements (MADEP 1997a). Tara Velazquez, the ERP general manager, recalled:

> In Massachusetts, a number of businesses were not regulated, particularly very small businesses. These facilities were off our radar screen because of our limited resources (Personal Communication with Tara Velazquez).

In fact, most of the 6,000 state superfund sites were formerly permitted facilities, evidence that permit-by-permit control was no longer working, and instead, only wasting the regulatory resources. It could not respond quickly enough to meet the needs of businesses. In addition, time spent securing permits increased unnecessary transaction costs (MADEP 1997c).

The conversation between Gomes and Coull was overheard by Pat Stanton of MADEP. He brought up the ideas to Allen Bedwell, a Deputy Commissioner of Strategic Priorities and Environmental Results (SPER) and MADEP Commissioner David Struhs. Shortly thereafter (in the summer 1995), Struhs initiated an ERP design team. The ERP team aimed for increased industry flexibility, permit elimination and reduced bureaucracy.

---

[25] Both performance standards and technology standards start with the identification of sector-specific environmental insults, and then set protective limits. Unlike technology standards, however, performance standards do not prescribe specific technologies but leave it up to individual firms to meet those limits.

Not long after the ERP team was created, the MADEP risked alienating the environmental community and was having to confront a deepening skepticism within the agency. The ELM felt betrayed by Governor Weld's "less government" public spin on the ERP. Other environmental groups feared that the ERP might be the prelude to permit elimination for large firms. In line with this concern, the Massachusetts Public Interest Research Group (MassPIRG) worried that the ERP might result in less environmental protection, and thus insisted that the MADEP not jeopardize the environment and public health by promoting an unproven regulatory system for large firms (April & Greiner 2000).

Given that the ERP was a top-down effort, there was resistance from line staff. The majority of them were extremely skeptical of a Republican state government's will to protect the environment. On the surface, they thought, the ERP looked like an environmental protection scale-back:

> Skepticism of the ERP was not so much external. It came from traditionalists within DEP. Their thinking was that "you go out, find violations and punish them." Advocates thought inspectors needed to "go out, measure performance, monitor it over time, and understand how a facility is performing. That is a success." Two different schools of thought were debating internally (Personal Communication with Tara Velazquez and Paul Reily, ERP dry cleaning sector manager).

Indeed, many staff within the MADEP worried that the ERP might carry the risk of letting go of the government's control over polluting sources. The greatest challenge for the advocates was to convince opponents that the ERP was an innovative way of regulating small pollution sources, not a hidden agenda to slice up the status quo.

The MADEP selected the dry cleaning and photo processing industries as the first ERP targets for various reasons. First, under the 1993 federal NESHAP, MADEP urgently needed to set forth a specific regulatory plan for the dry cleaning industry. On the other hand, the photo processing industry was permitted only by states, thus avoiding conflicts between states and the EPA over issues like federal air pollution permit requirements (April & Greiner 2000). Finally, the MADEP expected high potential gains from working with cooperative trade associations (Personal Communication with Tara Velazquez).

The design team invited drycleaners to provide their input for the regulatory framework and specific requirements. Note that the team could have made a big mistake at this stage. Mr. Myeong Ho Lowe, a drycleaner in Arlington, tells us an interesting story:

> One day, my sister who worked at the Ways and Means Committee called me. She asked if I knew about a new regulation targeting drycleaners. I told her I had never heard of it. As a president of the Korean Drycleaners Association, I was prompted to call the DEP to ask what was going on. They explained in brief what they were doing, with whom and for what purpose. They also said that I was most welcome to join.
>
> I visited the DEP several days later. The development of the program was almost complete. They showed the near-final version of the rule. Shit! I was surprised. I could hardly understand what the program required of me as a drycleaner.

Mr. Lowe, an architect-turned drycleaner, immigrated to the U.S. at the age of thirteen and was in his mid-forties at the time of the interview. Dry cleaning is his family business, started by his father. He is a college graduate and speaks English fluently. In addition, he has worked with the Toxics Use Reduction Institute (TURI) at the University of Massachusetts, Lowell, on a project concerning reduction of Perc use and development of alternative technologies for garment cleaning. In 1996, he was recognized by TURI for successfully demonstrating his wet cleaning operations to the public (he treats approximately 65-70% of garments through wet cleaning. The remaining portions are processed by Perc). He hosted several open houses where other drycleaners and the public examined his cleaning process and asked questions about his experiences with it. He knew well the existing federal and state environmental regulations as well as dry cleaning operations *per se*. Yet even to his eyes, the original version of the ERP was too complicated to understand:

> I wondered how they came up with those complicated requirements, given that drycleaners participated. For me, the requirements were not only complex but also redundant. They asked the same questions in different forms using different language. Do you know who advised the DEP staff? They were managers of Anton's and of Dependable. For them, the proposed compliance questions were not difficult to understand, I presume. But I was sure that the majority of small drycleaners could not understand what they were supposed to do to comply. No doubt.

Anton's Cleaners is a huge chain store with 40 retail locations in 34 cities of Massachusetts and 2 in New Hampshire. Dependable Cleaners is a three generation family-run company whose annual income exceeds $20 million. The company has 17 branches in Boston and the South Shore. Both companies had their own environmental staff who managed companywide environmental and safety issues.

To create dossiers for individual dry cleaning facilities and prepare a comprehensive compliance log form, the ERP design team pursued detailed information of varying degrees of complexity in dry cleaning operation. Correspondingly, they required vast amounts of facility-specific information and asked participating drycleaners whether they could provide those kinds of information. The response from the managers of Anton's and Dependable was "yes". The MADEP falsely assumed that other drycleaners, too, were capable of understanding the proposed requirements and compliance questions.

To discuss the impending issue, Lowe called upon governing board members of the Korean Drycleaners Association (KDA) and Mr. Harry Cho of Peabody, former president of KDA from 1992 to 1994. Prior to his time with KDA, Cho worked as a mechanical engineer at a missile manufacturing company. In his first year as KDA president, he hosted a large seminar to inform drycleaners about how Perc increased ground-level ozone levels and how individual facilities could reduce Perc emissions.

The board members and Cho talked to the MADEP about their negative evaluation of the proposed compliance questions and suggested starting anew with preparation of requirements and compliance questions.

> I heard from Mr. Lowe about a new program and read a draft. We were afraid that most small drycleaners could not meet proposed requirements. So, Myeong-Ho Lowe and I visited the DEP to deliver the association's concern. The DEP staff said, 'Why is that? The proposed requirements were the product of long conversations among drycleaners, the environmental community, environmental consulting firms, the EPA, and us. In fact, other drycleaners of the advisory group seem to have no problem with the requirements.'
>
> I was frustrated..... I knew that Mr. Charles Anton and a manager of Dependable were in an advisory group..... Lowe and

> I were trying to convince them [the staff] how significantly different from them we were. I told the staff, 'I am not only the owner but also a 7-to-7 worker. I handle all the chores day and night. I don't think I have time to read all this material in order to understand and meet your requirements.... My shop is in Peabody. To meet with you, I gave up today's business. There is no one who can operate dry cleaning machine but me. Why do you think I am doing this?'
>
> They looked serious about my appeal. (Personal Communication with Harry Cho)

Lowe accompanied by Cho stated:

> We did not mean to ask for exemptions from a new regulation or anything. Nor did we aim to relax regulatory requirements. How could we? Rather, we genuinely supported the idea of the environmental protection. We wanted to do the right thing. To do that, we needed to know how. The proposed requirements were simply too complicated to understand. To convince them, I said, 'Ask Ms. Heather Tenney at TURI who I am.' (Personal Communication with Myeong-Ho Lowe)

I asked Cho and Lowe how the MADEP responded:

> First of all, they wanted to know if our comments really represent the general opinion of the Korean dry cleaning community. We promised that we already talked to other members about what has been going on and showed them proposed requirements. We also clarified that we came there as representatives of KDA, not as individuals.
>
> Then, they asked us what we wanted. Lowe suggested that the agency restart it from the beginning and promised to help the staff as much as we could (Personal communication with Harry Cho)

KDA's suggestion meant the ERP team's months of work would be rendered meaningless. Certainly, it would be difficult for any public agency to accept this kind of request given their limited time and monetary resources.

> The staff we spoke to said that he was not in a position to decide whether to accept our suggestion. But he promised he would consult the commissioner and other staff to come up with a program agreeable to all of us.....

> On the other hand, he emphasized they had invested too much to completely revoke the plan at that point. Of course, we knew it. Nevertheless, we kept asking to remind him of the goal of a new regulation. I asked him, 'Do you guys simply want to enact a new regulation? Or do you want to make sure that we will comply? As we already told you, we will be ready to help you if you understand the reality of small drycleaners.' (Personal Communication with Myeong-Ho Lowe)

Lowe continued, "Even though we told them our genuine opinion, we really did not expect that they would accept our suggestion. Surprisingly, however, DEP decided to go back to the first step and re-open the conversation."

Tara Velazquez at the MADEP remembered this episode:

> I was not a general manager of the ERP in those days, but I clearly remember when the manager told us what the Korean drycleaners suggested. Some staff suspected hidden agendas on the part of the Korean drycleaners. Some of us thought they might attempt to abort or delay the ERP like a group of gas station owners did, but most of the team members took it seriously. Even if we did not know the exact number of Korean drycleaners, we came to realize they accounted for the majority of the state's dry cleaning industry.....
>
> You know there were internal conflicts between the ERP advocates and their opponents. We needed a promising regulatory framework to prove the validity of our own philosophy and theory of the ERP approach, as opposed to the opponents' alternative. It seemed obvious that without their cooperation, the ERP would not succeed. In addition, my manager sensed good faith within them. So, we decided to restart.

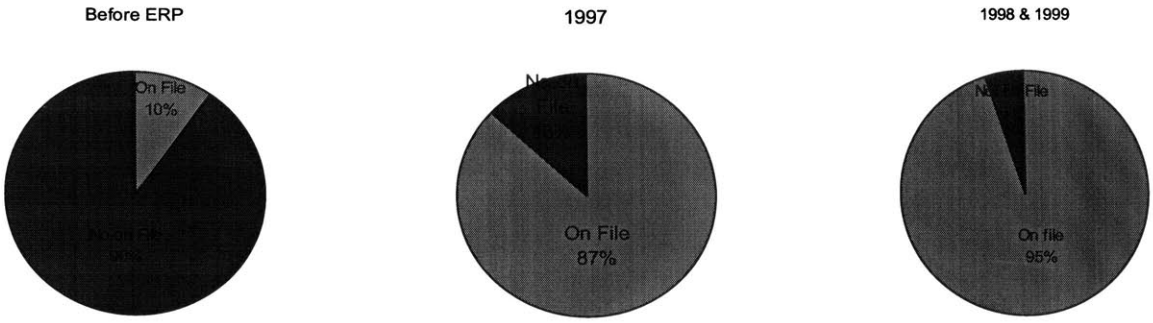
At this time, small drycleaners as well as large ones began working together with the MADEP and EPA staff to reinvent comprehensive sets of regulatory requirements without undermining the spirit of the ERP and without conflicting with the EPA's baseline requirements. The first task of this partnership was to explain to the large chain drycleaners why they had to rewrite the proposal. At the MADEP headquarters on Winter Street in Boston, Lowe and Cho met with other advisory group members. Fortunately, Anton's and Dependable were quick to understand the Korean drycleaners' business environment and agreed to revise the original version of the ERP requirements. The

MADEP clarified that the purpose of the revision was to increase the rule's clarity, not to relax its requirements.

The next task was to identify the number and locations of dry cleaning facilities in the state since the main environmental benefits of the ERP would result from stepping-up oversight of previously un-scrutinized firms. Prior to implementation of the ERP, only 10% of drycleaners were in the state regulatory database. With help from the trade association, the MADEP raised the percentage of drycleaners under their oversight to 95% (approximately 765 facilities)[26] in 1998 (see figure 5).[27] Identification of the regulated entities not only facilitated industry-wide compliance gains but also leveled the playing field within the industry, which was a crucial issue for drycleaners complying with the regulatory requirements (April & Greiner 2000).

Figure 5. Percentage of Drycleaners in the ERP System

Source: MADEP (2000)



[26] Of 765 facilities, more than 400 facilities are owned by Korean immigrants.

[27] April & Greiner's study (2000) shows different statistics on the ERP universe identification as in the table below.

Industry	Identified Number of firms before ERP	Identified Number of firms after ERP
Dry cleaning	30	600
Photo Processing	100	500
Printing	250	1100
Total	380	2200

Regardless of the exact figures, MADEP should have the capability to track environmental performance for 80-90% of firms, as opposed to 17% prior to the ERP.

During this period, drycleaners and the MADEP staff had met almost once every two weeks. Lowe and Cho periodically delivered proposed regulatory requirements to Korean drycleaners to test their clarity and to get feedback. One drycleaner in Cambridge who observed this process says:

> DEP and our representative working together? It was a surprise to us. We are not white but minority, and we are all small businessmen. If the government ignored us, I would not be surprised, though a little bit angry. My friends (other drycleaners) and I asked ourselves, "what did our association do?" It was a pleasant surprise.....
>
> In the past, I didn't pay the annual membership fee. Since then, however, I have paid $100 every year because I became convinced that our association was doing something good for us.

After 15 months of conversation and negotiations, the groups finally reached an agreement and formed an easy-to-understand set of 22 compliance questions. They also developed a 56-page workbook explaining in plain English what each regulatory requirement meant and what drycleaners needed to do to meet each requirement.

To bring as many drycleaners as possible into the system, the group published workbooks in Korean since native Korean speakers account for more than 50% of the state's dry cleaning industry. KDA members and a Korean graduate student at UMass Lowell, majoring in environmental policy, were involved in translation for approximately three months (Personal Communication with Harry Cho). In addition, the ERP design team developed 16 Environmental Business Practice Indicators (EBPIs) for the dry cleaning industry that aimed to provide a snapshot of a facility's environmental performance and to identify industry-wide problems.[28] The EBPIs included both traditional compliance measures and some that went beyond simple compliance (see Appendix A).

During the program development period in 1996, the MADEP initiated the ERP Demonstration Project to test whether the ERP really could work. They invited 23 small firms that would ultimately be subjected to the ERP to participate. Of 23 firms, three were dry cleaning facilities; one was Anton's Cleaners and the other two were small facilities. Prior to the Demonstration Project startup, MADEP conducted baseline

[28] The printing industry and photo processing industry has 26 and 8 EBPIs, respectively.

inspections at participating firms in order to make comparisons between overall environmental performance before and after the Project was implemented. While laying this groundwork, the MADEP suspended two firms. One was rejected because of serious environmental violations discovered in the baseline inspection and the other for failure to correct pre-project violations in a timely manner. The MADEP explained, "because participating facilities were granted a limited enforcement forbearance for minor violations, DEP suspended any firm with serious violations or inadequate return to compliance to avoid abuse of amnesty" (MADEP 1997a). Three more firms left the Demonstration Project for other reasons. One firm moved its facility to another state. Another company's participation was put on hold because of an unresolved MADEP policy question. The third facility voluntarily ceased participation because it felt the cost of participating would outweigh the benefits (MADEP 1997a). Excluding these 5 firms, the remaining firms' compliance rate was 33% (6 out of 18).

After the first self-certifications by the 18 participating firms in January 1997, the MADEP conducted follow-up inspections to measure changes in environmental performance. The post-certification compliance rate was increased to 78% (14 out of 18) (MADEP 1977a). Tara Velazquez reported, "skepticism within DEP decreased with the ERP performance measurement that the ERP team has been able to report." Encouraged by the success of a pilot program, the MADEP decided to roll out the program to the entire Massachusetts dry cleaning and photo processing industry, officially stating that all drycleaners and photo processors were required to report their compliance/noncompliance status by September 15th, 1997 and every year thereafter.[29]

Regulatory Requirements

The official ERP requirements for the dry cleaning industry can be categorized into four groups: 1) control requirements for dry cleaning system (*310 CMR 7.26 section-12*); 2) operation and maintenance requirements (*310 CMR 7.26 section-13*); 3) recordkeeping and reporting requirements (*310 CMR 7.26 section-14*); and 4) compliance self-certification requirements (*310 CMR 70.00*)[30]. The first three groups of requirements are

[29] The printing industry was officially subject to the ERP in 1998.
[30] CMR stands for Code of Massachusetts Regulations.

more or less equivalent to those used in Southern California: 1) equipment requirements (*Rule 1421 section d*); 2) good operating practices (*Rule 1421 section e & f*); and 3) recordkeeping and reporting provisions (*Rule 1421 section g, h & i*), respectively. Unlike Rule 1421, the ERP lacks mandatory environmental training requirements. Instead, it required drycleaners to self-certify their compliance status, which shifted the burden of compliance assurance from the regulatory agency onto the drycleaners themselves.

Regarding "control requirements", the ERP prohibited installation of transfer machines (the oldest type of dry cleaning machine) under Title 40, Part 63 of the Code of Federal Regulation, Subpart M. For existing machines, the ERP required primary and secondary control devices such as a refrigerated condenser, carbon absorber, or an equivalent device. These devices are vapor recovery systems into which a Perc gas-vapor stream is routed, preventing or minimizing Perc emissions.

The main components of "operation and maintenance requirements" were weekly leak and emission checks using the MADEP-approved detectors (*310 CMR 7.26, section 13-i & j*), safe storage of Perc-related materials (*310 CMR 7.26, section 13-g & h*), and wastewater disposal (*310 CMR 72.00*). The MADEP's original method for leak and emission detection was the same as the EPA's prescription, that is, olfactory appraisal. Perhaps surprisingly, the drycleaners advisory group objected to this "primitive" method and suggested, instead, computerized detectors:

> Drycleaners helped us develop the requirements and told us how we could be more stringent. For example, before the program was rolled out, our requirement was an olfactory test. However, drycleaners informed us that technology was available which could detect leaks on a weekly basis. So, their suggestion was incorporated. (Personal Communication with Tara Velazquez, ERP general manager).

Harry Cho made a comment consistent with the ERP staff's:

> The olfactory tests did not make sense to me. What if I have nose congestion? Halogenated-hydrocarbon detectors, air sampling pumps, colorimetric tubes, and portable gas analyzers were already available. We were willing to persuade our members to purchase one of these pieces of equipment. In return, we requested a 3-year recordkeeping period, as opposed to the DEP's original 5-year requirement (Personal Communication with Harry Cho).

To meet Massachusetts General Law Chapter 21E (Massachusetts Oil and Hazardous Material Release Prevention and Response Act), the ERP required drycleaners to drain all cartridge filters in sealed containers for a minimum of 24 hours (or treat them in an equivalent manner) before removal from facilities. Also, drycleaners were required to store all Perc and Perc-containing wastes in solvent tanks or leak-proof containers with warning labels. The ERP's wastewater disposal requirement, subject to 310 CMR 72.00 (Industrial Wastewater Standard for Drycleaners), is more stringent than that of Rule 1421. In general, drycleaners were prohibited from discharging any kind of wastewater as well as Perc-containing water into the ground, a septic system, or other onsite systems (*310 CMR 72.04, section 1 & 3-a*) such as toilets. Evaporation of wastewater containing Perc was also strictly prohibited, except for separator water. Furthermore, drycleaners using tanks to store any kind of industrial wastewater[31] were required to have: "a containment structure with 110% of the total volume of all above-ground tanks" (*310 CMR 72.04, section 5-a-1*); and "a bell and light alarm in a conspicuous location for remotely/automatically filled tanks." "The alarm must activate when the level of wastewater reaches 75% capacity of the tank and alarm signal must be transmitted to a staffed location" (*310 CMR 72.04, section 5-a-2*).

"Recordkeeping requirements and reporting" of the ERP is equivalent to or more stringent than that of Rule 1421. Section 15-a of 310 CMR 7.26 required drycleaners to notify the MADEP by November, 2nd, 1997 to provide the name and address of the owner/operator, the address of the facility, and information on the dry cleaning system and ancillary equipment. This requirement is identical to the initial report requirement under Rule 1421. Section 15-d required drycleaners to keep receipts of Perc purchases, record the volume of Perc purchased each month, calculate annual Perc consumption, as well as keep the dates and results of self-monitoring, the dates of repair and records of orders for repair parts, the date and temperature sensor monitoring results, a copy of design specifications and operating manuals of all equipment, and a workbook. In addition, 310 CMR 72.00 required that sufficient information on industrial wastewater disposal be retained, including, but not limited to, transporter name and address, the dates

[31] 310 CMR 72:00 defines "industrial wastewater" as wastewater resulting from any process of industry, trade or business, regardless of volume or pollutant content.

of shipment, the amounts shipped, and destination. It also required filing a report with the MADEP and local Board of Health within 24 hours of any Perc spills. Industrial wastewater information was required to be retained onsite for at least 3 years, while other data must be kept onsite at least one year and in another location for at least 3 years, as opposed to 2 years under the 1997 amendment of Rule 1421.

Finally, "compliance self-certification requirements", which are absent in Rule 1421, are subject to both 310 CMR 70.00 and 310 CMR 7.26. To meet these requirements, all dry cleaning facilities must submit to the MADEP a certification statement signed by a responsible person. The compliance certification is comprised of three sections. The first section (Facility information) identifies the name and address of the facility and a person whom the MADEP can contact if questions arise about the certification. It also includes the facility's federal employer identification number (FEI) from state and federal income tax forms, and a facility identification number that has been assigned by the MADEP. The second section (Compliance questions) covers air pollution control, industrial wastewater management, and hazardous waste management requirements. Compliance questions aim to provide the MADEP with background information on the facility and about whether the facility has met the standards and applicable requirements. This second section also indicates where in the Workbook drycleaners can find information on the regulatory requirements referred to in each question. The third section (Certification statement) attests under the penalties of perjury that all information provided in the form is correct. The statement can only be signed by the owner or responsible personnel listed in the form. The person who signs the statement is legally responsible for false information submittal.

If a facility is not in compliance with a particular requirement, the firm must complete the Return-to-Compliance (RTC) plan. In the RTC plan, the owner/operator must identify the date, type, and reporting date of any violations. The RTC plan forces non-complying companies to address what they plan to change in order to comply and when they will do so. Facilities are required to comply with all of the standards and requirements by the time the certification is completed; the RTC plan is required only in cases in which the facility cannot correct the problems prior to certification. For example, if required pollution control equipment malfunctioned and the facility could not make

repairs by the certification date, or if required equipment that the facility planned to install was not delivered on schedule, the RTC plan would be submitted to the MADEP. If a spill or release occurred, the facility would attach a Spill or Release Report Summary to its compliance certification.

Unlike rule 1421, the ERP did not require mandatory environmental training for owners/operators. Instead, the MADEP held seminars prior to the ERP implementation to help drycleaners increase their familiarity with the ERP rules, but participation was not mandatory. Here, it would be helpful to summarize and compare the two rules (Rule 1421 and the ERP) to show that the regulatory requirements are comparable (see Table 4). And my assessment of compliance costs associated with each category of regulatory requirements will ground the basis for recognizing the importance of the perceived cost of compliance in Chapter 4.

Table 4. Comparison of Regulatory Requirements and Assessment of Compliance Costs

Category of Requirements	*Rule 1421 (Southern California)*	*ERP (Massachusetts)*	Annual Compliance Cost Estimates
Equipment	Original dry-to-dry, closed loop machine	Equivalent	***$1,100 (Refrigerated condenser only)****
Operating Practices	• Weekly leak & emission check • Wastewater treatment	Equivalent (or more stringent)	***$ 1,046 – 1,474*** **
Recordkeeping & Reporting	• 2-year recordkeeping (since 1997) • The initial, compliance & annual reports	Equivalent (or more stringent)	***Not Measured***
Mandatory Training	Required	Not Required	***Southern CA: $150**** (plus, annual operating fee $168)***
Compliance Self-Certification	Not required	Required	***MA: $200 (as of 2003)***

* This includes the annualized cost of purchasing a refrigerated condenser and the annual operation and maintenance costs associate with the refrigerated condenser (EPA Date Unknown).

** The range of equipment age, types of machines and amount of Perc used result in variations in compliance costs. Neighborhood Cleaners Association International (1998) assessed that for average drycleaners, hazardous waste disposal would cost $4,567. Meanwhile the Pollution Prevention Education and Research Center's (PPERC) estimate was $1,010. My estimation is based on drycleaners' comments.

Perc waste disposal: 70~100 gallons X $6.94/gallon = $485.8~$694
Drum disposal: 6~8drums X $85/drum = $510~$680
Filter disposal: 2~4 filters X $25/filter = $50~$100

*** PPERC estimated that mandatory training course taken every three years incurs $150 annually (Gottlieb et al. 1997).

Although the ERP covers most state and federal air, water, and hazardous waste regulations, some major local, state, and federal laws are not covered. These include the Massachusetts Toxics Use Reduction Act, groundwater withdrawal regulations, wetlands and waterways regulations, and hazardous waste site cleanup requirements (MADEP 2003). The state dry cleaning industry still must comply with these regulations. However, most drycleaners are not subject to them due to their narrow scope of business activities and limited use of chemicals. Indeed, the ERP was designed to target firms that have traditionally been exempted from those requirements.

It is worth noting here that the ERP's environmental requirements and standards are scattered across diverse codes of regulations. For example, most performance and technology-based standards for the dry cleaning industry are listed in 310 CMR 7.26 (10)-(16). However, industrial wastewater standards are included in 310 CMR 72.00, and 310 CMR 72.00 requires a performance-based facility-wide compliance certification in accordance with 310 CMR 70.00. The problems of this complicated rule structure have been, to a significant extent, resolved by a drycleaner's workbook, which is the result of extensive collaboration among the dry cleaning industry, the MADEP, environmental groups, the state attorney general, and the EPA. The workbook classifies all standards and requirements according to dry cleaning processes, with which drycleaners are quite familiar. The workbook must be retained on site at all times.

Enforcement Efforts

The MADEP's efforts to assure drycleaners' complied with the ERP were a combination of traditional deterrent strategies and technical assistance, but they relied more heavily on the latter. Regarding traditional deterrence, the MADEP was authorized under Section 16 of Massachusetts General Law chapter 21A (M.G.L. c21A §16: Administrative Penalties Statute) to issue penalties of up to $25,000 per day for violations of the major environmental statutes and regulations that they implement. M.G.L. c21A §16, M.G.L. c111 §142A (Pollution or contamination of atmosphere, prevention, regulations, violation, enforcement) authorized the MADEP to fine violators up to $ 25,000, imprison them for up to one year or both, for each violation. Each day that such a violation occurred or continued was considered a separate violation.

Like in Southern California, MADEP set out to detect violations through both random and targeted inspections. Two types of inspections were conducted for a variety of reasons. The targeted inspections were used as the program's standard assessment of the industry, as program specific follow-ups at facilities that were the subject of previous multi-media inspections, to ensure compliance with performance standards, and as investigations in response to citizen complaints. Random inspections relied on traditional compliance measures, such as levels of compliance with equipment, recordkeeping, labeling, and self-monitoring, etc. The MADEP selected a certain number of dry cleaning facilities from those within the ERP universe and sent field inspectors to sites without pre-notification.

Due to limited regulatory resources, the MADEP did not intend to inspect every facility at random. The MADEP had only 8 full-time inspectors to cover approximately 756 facilities. Thus, they focused scarce resources on targeted inspections:

> Skeptics within and outside DEP were afraid that the ERP might result in less oversight, but this was not the case. Our goal was to increase strategic oversight (Personal Communication with Tara Velazquez).

For focused inspections, the MADEP targeted those drycleaners that were the subject of complaints reported by the public, that did neither self-certify nor respond to agency

mailings and telephone calls and that provided suspicious information on their compliance status (April & Greiner 2000).

The MADEP took two steps to analyze self-certifications. First, they examined each compliance certification and RTC plan for completeness. When a form was not complete, the MADEP requested the facility provide the missing information within a certain time period. Second, once a certification was deemed complete, the staff checked internal consistency of responses to compliance questions. If the responses were inconsistent or technically deficient, MADEP conducted inspections. In addition, failure to file the reports could result in enforcement actions without a field inspection (Personal Communication with Paul Reily, ERP dry cleaning sector manager).

In the event that field inspectors detected violations, they issued either Notice-of-Noncompliance (NON, equivalent to the Notice-to-Comply in California) or took Higher Level Enforcement (HLE, equivalent to the Notice-of-Violation in California) actions, depending on the severity of violations. The NON was generally used to require correction of minor problems, provide notice that an existing practice was unacceptable and/or take the first formal step before issuing administrative orders and penalties. It did not involve penalties if violations were insignificant and a facility agreed to come into compliance promptly. Meanwhile, the HLE, including a range of separate or combined enforcement actions, imposed civil administrative penalties on detected facilities. Any violators detected through random and targeted inspections were subject to potential penalties.

However, inspections accounted for just a portion of the compliance activities that the MADEP conducted. Compliance assistance (also known as technical assistance) was an important enforcement tool. It promoted compliance by encouraging self-audits and self-disclosure of violations and incorporating supplemental environmental projects in administrative settlements. The Interim Policy on Compliance Incentives for Small Business (Policy ENF-97.002) reflected the MADEP's decision to extend incentives and compliance benefits to small businesses. Furthermore, it relieved formal penalties for violations by small businesses[32]. Established in June, 1997, immediately before the ERP

[32] ENF-97.002 defines a small business as "a person, corporation, partnership, or other entity employing fewer than ten persons (measured as full time employee equivalents on an annual basis) to manufacture a

roll-out, this policy established how the MADEP would exercise its enforcement discretion at ground-level in terms of deciding upon an appropriate enforcement responses and according penalties:

> Many small businesses experience difficulty in complying with environmental requirements as a result of limited access to information concerning requirements and limited financial resources..... In recognition of the particular difficulties typically experienced by small business, this interim policy intended to: 1) promote environmental compliance among small businesses by providing them with incentives to seek onsite compliance assistance, or to conduct environmental audits; and 2) achieve statewide consistency in responding to noncompliance of small businesses by providing guidance to DEP staff on how to exercise enforcement discretion in such cases (MADEP 1997d).

This official statement did not mean that small firms could be exempted from regulatory requirements. Despite the difficulties experienced by small firms, they were required to comply fully with all environmental regulations administered by the MADEP. The MADEP did not mitigate or waive penalties simply because the regulated entities were small. Relief of penalty was only considered under three conditions: 1) There was evidence that a facility did not have ample access to information concerning compliance; 2) There was evidence that noncompliance was an isolated instance, not part of chronic violations; and the owner demonstrated good faith to correct errors within a reasonable period of time and to maintain future compliance with all applicable requirements; and 3) The facility demonstrated financial constraints that prevented compliance or claimed an inability to pay a penalty. In this case, the burden was on the facility to prove why such constraints impeded its ability to comply or perform a remedial measure, and resulted in inability to pay full penalty (MADEP 1997d).

Whether a facility met one of the three conditions above was completely at inspectors' discretion. In the event that inspectors decided to mitigate or waive penalties, they offered the facility technical assistance. However, because the MADEP did not have sufficient resources to provide onsite assistance to all drycleaners that sought it, the

---

product or to provide a service" that is neither a large quantity generator of hazardous waste nor branch offices, divisions, or subsidiaries of a business that in the aggregate employs ten persons or more, nor a location franchised by a parent corporation, nor a government owned/operated facility.

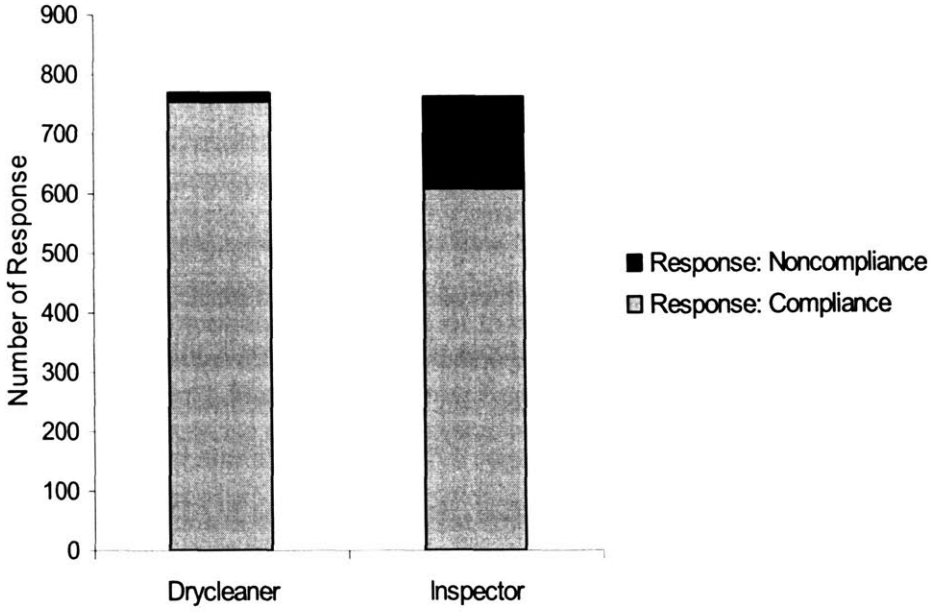
organization referred some facilities to other private and public sources of assistance. Drycleaners were most frequently referred to trade associations.

Trends in Rule Compliance

I was unable to locate official pre-ERP Massachusetts dry cleaning compliance data. The MADEP's website indicates 33% of Massachusetts facilities complied in 1996, before the ERP was instituted. However, this figure does not well represent the dry cleaning industry's compliance record, not only because it includes printers and photo processors in addition to drycleaners, but also because the sample size was too small; the number of drycleaners participating in the ERP Demonstration was only three. Meanwhile, one document discovered in the SCAQMD library shows a 6% compliance rate in Massachusetts in 1996, but the source is unidentified. According to the MADEP staff and Mr. Dong In Choi, an incumbent president of KDA, it must be "pretty low, maybe lower than 10%." In the mid 1990s, the dry cleaning industry's compliance rates were 2% in New York, 14% for Sacramento, 21% in the San Francisco Bay area, and 10% in 1997 and 5% in 1999 for Southern California, as noted above (Sinsheimer at al. 2002). Based on these statistics and the testimony of aforementioned witness, I presume that Massachusetts drycleaners' overall compliance rate must not have been significantly different from those in other major cities.

The first systematic compliance measure was used in late 1997. The MADEP measured the accuracy of compliance reports submitted by 765 drycleaners (see Figure 6-1).

Figure 6-1. Self-certification Overall Aggregate in 1997

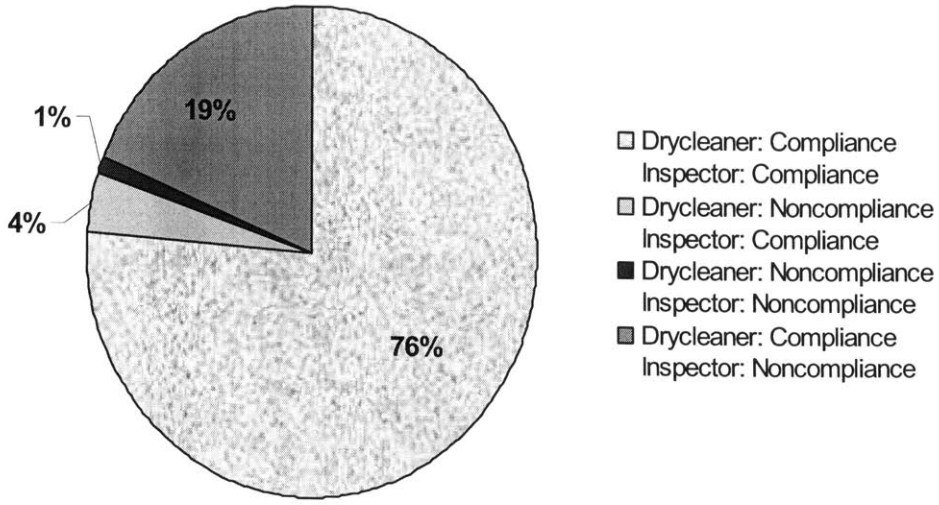


Source: Unofficial Internal Document Provided by the MADEP

The MADEP conducted a correlation analysis on the data, which they explained in the following manner: "We took inspectors' results from random inspections and correlated the findings to the facilities' answers on the certification forms and examined how often field inspectors and drycleaners agreed."

As shown in the figure, frequency of noncompliance as determined by MADEP was higher than that reported by drycleaners. Whether or not it was intentional, 23% of drycleaners misrepresented their compliance status. This figure did not surprise the MADEP: "We know that there are always things that go on behind our back. That is why we are doing this." The following analysis reveals even more interesting results (see Figure 6-2).

Figure 6-2. Drycleaner Accuracy Analysis: Self-certifications vs. Inspections

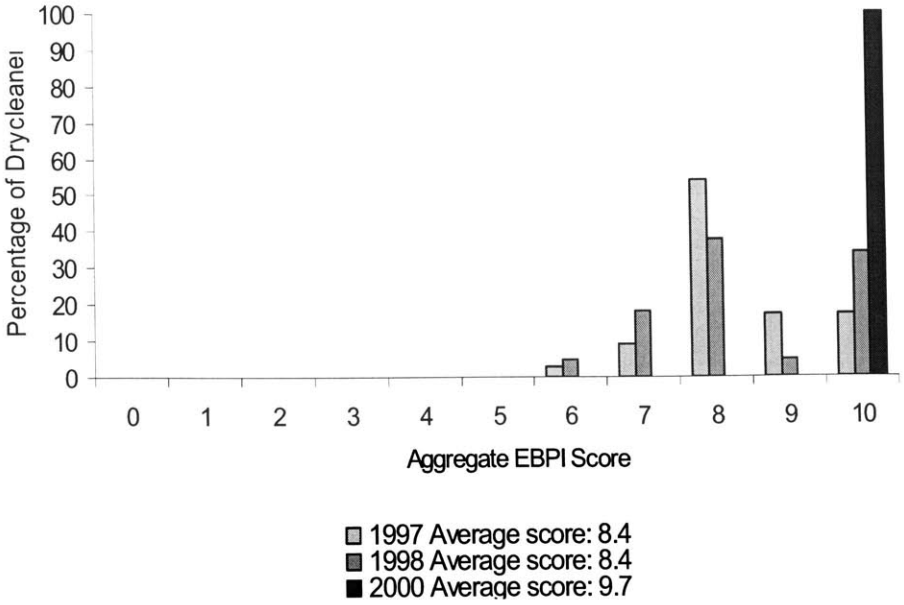


Source: Internal Document Provided by the MADEP

Approximately 76% of the universe reported that they were in compliance with all applicable requirements and inspectors verified it. Only 1% of drycleaners reported violations of some requirements that were confirmed by inspectors. Interestingly, 4% of drycleaners admitted violations, only to have inspectors discover they were actually in compliance. This finding seems illogical, but two possible explanations can be inferred. First, these drycleaners might have misunderstood the compliance questions. The more compelling possibility is that they were in violation at the time of self-certification, but promptly returned to compliance. Inspectors then visited these sites after they had corrected their noncompliant operations. The problem was the remaining 19% of cases where drycleaners reported compliance where inspectors did not. This is where the MADEP's attention was focused and where strategic oversight was deemed necessary.

This strategic oversight seems to have been effective. In 2001, the MADEP analyzed trends in EBPI performance between 1997 and 2000. The result was impressive (see Figure 7).

Figure 7. EBPI Performance Trends: 1997-2000



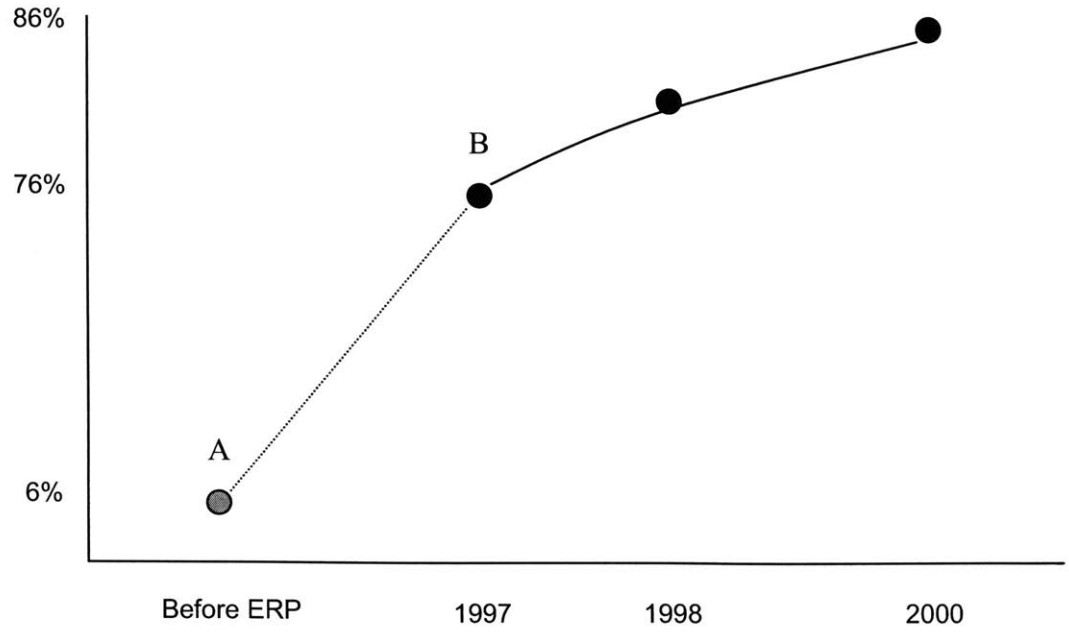
Source: Internal Document Provided by the MADEP

Full EBPI credit received a score of 10. However, a lower score should not be equated with noncompliance because some EBPIs are "beyond-compliance" measures. Trends in EBPI performance show that many drycleaners improved their environmental performance between 1997 and 2000. Although there was no change between 1997 and 1998 in terms of the aggregate average score, we see more 10s in 1998. In 1998, 34% of drycleaners scored a 9 or 10, as opposed to 17% in 1997. In 2000, this figure jumped to 100%, and the average score reached 9.7. Again, this does not mean that the overall compliance rate in 2000 was 100%. Nevertheless, this data shows that behavior has been shifting in the right direction.

The MADEP's unique performance measure makes it difficult to directly compare the Massachusetts compliance rate with Southern California's. Thus, the EBPI-based measure needs to be translated into a traditional compliance score. The method of converting to traditional compliance measure is as follows: the number of drycleaners who self-reported compliance inspectors confirm divided by the number of drycleaners who self-reported and scrutinized by inspectors (see an explanation of Figure 6-2 for a fuller account). This method is almost the same as the traditional way of measuring

compliance rates: the number of drycleaners in compliance inspectors confirm divided by the number of drycleaners inspected. My translation resulted in 76%, 81.4%, and 86% compliance rates in 1997, 1998, and 2000, respectively (see Figure 8).

Figure 8. Overall Compliance Rates of the Massachusetts Dry Cleaning Industry : Pre-ERP to 2000



Source: MADEP

In the southern California case, comparing pre-1421 (Rule 1102.1) compliance rates with post-1421 rates does not provide interesting connotations because Rule 1421 is more stringent than Rule 1102.1, which could cause an apparent decrease in compliance. By contrast, the up-shift from A to B (Figure 8) in the Massachusetts case is quite counterintuitive given that the ERP is more stringent than its predecessor. Compelling explanations on this leap in compliance have yet to be provided. More importantly, high compliance in Massachusetts is not a point-in-time phenomenon but a trend that continued throughout the late 1990s. If this phenomenon is not to be taken for granted, it must be explained. The following two chapters deal directly with this concern by interpreting the impacts of multiple economic and social factors on drycleaners' compliance choices.

CHAPTER 4

EXPLORATION OF CRITICAL FACTORS AFFECTING RULE COMPLIANCE

Chapter 3 was devoted to describing characteristics of the regulatory regimes in Southern California and Massachusetts. Their similarities and differences are summarized as follows:

1) Regulatory requirements are more or less similar between the two regions.
2) Southern California has harsher penalty policies than does Massachusetts, but the difference seems insignificant.
3) Actual inspection rate is slightly higher in Southern California than in Massachusetts.
4) The rule-making process was more cooperative in Massachusetts than in Southern California.
5) Compliance trends in the two regions contrast starkly.

Missing in the above comparison are drycleaners' attitudes toward formal regulations, though they were implicitly mentioned when discussing the rule-making processes. Omitting normative factors was deliberate because the previous chapter aimed to focus mainly on the "formal" characteristics of the regulations. An explicit discussion of drycleaners' sense of moral obligations (duty to comply) and perceived legitimacy was reserved for this chapter.

My overriding concern here is focused on the fit between observed phenomena and the interpretations of them on the part of the storytellers (interviewees). I examine this fit by identifying groups of potentially influential factors, splitting them up into their constituent parts, and examining each in turn. For this purpose, my two-case study adopts as preliminary analytical method J.S. Mill's *method of difference* comparing "two instances resembling one another in every other respect, but differing in the presence or absence of the phenomenon we wish to study" (Mill 1980, 8th edition, p.280).

Specifically, the analysis takes compliance as a sole dependent variable. To explain its occurrence/non-occurrence, I first examine the impacts of two groups of

independent variables. They comprise 'the probabilities of detection and penalty imposition, the severity of penalty, and compliance costs' on the one group, and 'moral obligations to obey the laws and the perceived legitimacy' on the other. Each group of independent variables is derived from deterrence theory and the theory of norms, respectively. The analytical structure can be summarized as below.

Table 5. Analytical Structure of the Method of Difference

Case	Dependent Variable	Independent Variables					
		Economic in Nature				Normative in Nature	
Southern CA	Compliance Trend	Probability of Detection	Probability of Penalty Imposition	Severity of Penalty	Compliance Costs	Moral Obligation	Legitimacy
MA							

Students of public policy may be familiar with this analytical approach, but my intention to conduct this type of analysis may sound odd to them. Far from being it the case, as traditional analytical mind seems to believe, that thorough examinations of each *part* reveals the nature of the *whole*, and thus their causal relations, I use this analytical method only to discover which independent variables differ between the two cases and to show that each component does rarely provide meaningful accounts of observed phenomena apart from the other components of the whole in question. The question of 'why they differ' will be explored through the thick description method. This second method reflects the belief that the whole is not identical with an arithmetic sum of the parts. Rather, "the parts and the whole grow out of each other through a continual cycling back and forth in which meaning gradually emerges and evolves over time." (Piore 1995, p.130).

This chapter aims to ground the relational approach's empirical validity in a small firm context by criticizing the two dominant theories and their analytical methods. However, the criticism is not a complete refutation of these theories. It is rather an attempt to specify the action domains that they do and do not cover. In this way, we can make good use of their true contributions to the study of rule compliance and incorporate them into a more comprehensive explanation. In so doing, new concepts are suggested to capture the theoretical links between them. Specifically, this chapter first examines the

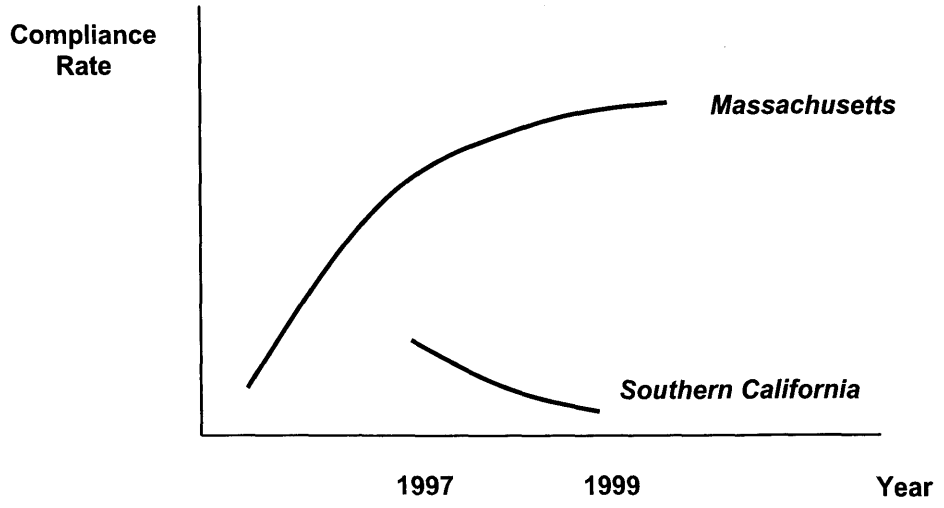
divergent compliance choices between the two regions which resulted in contrasting regulatory outcomes. It then delves into the patterns of the interactions between diverse economic and social factors in order to trace the root of different action choices.

For this purpose, I have created my own interpretation of what I heard and what I observed. In my interpretation, the stories I gathered are cross-referenced with official data and survey results to decide whether and to what extent they are compatible. Never do I argue that one of these stories is more correct or accurate than others. It is not my intention to claim that one way of acting is always better than others. What this chapter does aim to investigate is *whether* and *how* groups of actors sustain diverse personal stories without undermining the integrity of the collective story.

Do Threats Deter?

Examining a compliance rate at one point in time is rarely helpful in elucidating the effects of deterrence on behavior; more relevant are trends over time. Let us start by re-examining compliance trends in the two regions (see Figure 9).

Figure 9. Comparison of Rule Compliance Trends



In order for deterrence theory to provide sufficient explanations of the above trends, at least one of the following statements must be true.

- The perceived severity and certainty of formal sanctions are higher in Massachusetts than in southern California.
- The perceived probability of detection is higher in Massachusetts than in southern California.
- The cost of compliance is lower in Massachusetts than in southern California.

Based upon official data, as well as interview and survey responses, this section refutes the first two statements while partially holding the validity of the third in its relation to the perceived benefit of compliance, which I call nurtured benefits.

Impacts of the severity and certainty of formal sanctions

Maximum penalty policies prescribed in the rule books are similar in the two regions. What about the severity of penalties *actually* imposed on violators? In southern California, the range of actual civil penalties falls between $500 and $2,000. Massachusetts imposed relatively more severe fines. In several instances, violators in Massachusetts were fined more than $20,000. In October 2003, for example, the MADEP issued a $26,250 ticket to LaFluer Drycleaners in Holyoke for their failure to cleanup a former dry cleaning facility. One month prior to Lafluer, Lynch's Laundromat and Carwash in Hanson was forced to pay for the cleanup of a site where past activities (dry cleaning and truck washing) left contamination. The former owners were forced to pay $130,000, the current owner $10,000.

Deterrence theorists must be tempted to use these facts as strong evidence accounting for the observed difference between the contrasting compliance trends: "These frightening experiences must be cemented in the consciousness of violators and become transmitted to other drycleaners. Through the transmitting process, individual experience becomes shared by people in the Massachusetts industry and recognized as relevant to them. That is how Massachusetts could increase compliance rates, as opposed to southern California. Heavy penalties work as a strong warning signal."

At first glance, this argument seems to be plausible. However, it seems to me that this deterrence account results from what Bourdieu called the scholastic bias, a mere projection of a scholastic mind into the minds of laypeople it observes, to construct artifacts of theories. How can we prove my rejection to the deterrence account? First,

increasing trends in compliance in Massachusetts started from 1997 and have continued until today, while Higher Level Enforcement (HLE) actions were taken in 2003. Imposition of heavy penalties in Massachusetts is not *ex ante* but *ex post,* occurring as an effort to correct recalcitrant violations.

Second and more importantly, a close look at how drycleaners interpreted the events leads to a totally different explanation. One day in November 2003, 18 board members of the Massachusetts KDA discussed ways to promote member participation and collection of membership fees. The discussion was focused on what kind of information should be provided for the individual drycleaners. One person who was not a drycleaner but a publisher of the monthly drycleaners' news letter suggested, "DEP has recently imposed a $100,000 fine on an Indian drycleaner in Northborough. Why don't you inform the people of this kind of news?" A drycleaner from Malden responded, "Well.... To be totally candid with you, I do not think that people are interested in that information. Who cares? What do you guys think?" Most attendants agreed with him.

When I attended a southern California drycleaners meeting in January 2004, they were discussing the same issue. I gave them a trick suggestion: "Several drycleaners in Massachusetts and New York recently received $100,000 to $150,000 fines. Don't you think your members are interested in a horror story of heavy penalty?" One drycleaner from Fullerton responded, "No offense, but you don't understand. We are not really interested in others' misfortune. Of course, we feel sorry for them. But so what? What can we do with that information? People want more helpful information that directly benefits them." Another drycleaner added, "Thanks to them, the others in MA and NY would be safer at least for the next couple of years." People laughed and nodded as a sign of agreement. They seemed to think of those violators as scapegoats.

Even regulatory staff was skeptical of the effect of formal sanctions on the drycleaners' compliance. Mr. Edwin Pupka, a senior enforcement manager in the Division of Engineering and Compliance of the SCAQMD replied to my straightforward question as follows:

Interviewer: Based on your 20 years of experience, do you believe that penalty threats will promote compliance rates?

Mr. Pupka: Probably, but only in the short term. (He continued), *Drycleaners' compliance rates have increased slightly in recent years. We believe that this change resulted from our cultural approach training provided for field inspectors.*

If we accept the trade associations' interpretation as representing the dry cleaning community as a whole, it seems clear that the severity of formal sanctions has little, if any, direct impact on compliant behavior. How about the *certainty* of formal sanctions? Does it exert a significant influence? Let us examine the effects of both the *actual* rate and *perceived* certainty of penalty when detected. The following two tables inform us of the level of enforcement action in each region.

Table 6. Rule 1421 Compliance Summary from 1990 through 2003

Year	Notice-to-Comply Issued	Notice-of-Violation Issued
1990-1995	No Records	No Records
1996	22	No Records
1997	**213**	**31**
1998	**53**	**21**
1999	**648**	**419**
2000	**628**	**400**
2001	**409**	**240**
2002	552	324
2003	409	239

Source: SCAQMD Information Management Public Records Unit

Table 7. Summary of ERP Enforcement Action from 1997 through 2001

ERP Sector	Notice-of-Noncompliance Issued	Cases Resolved	Penalty Assessment Notice Issued	Cases Resolve	Sent to Collection
Dry Cleaning	**121**	101	20	12	**8**
Photo Processing	39	32	7	6	1
Printing	146	128	18	6	12

Source: MADEP 2002

Using data from the two tables, we can measure the actual rate of penalty imposition as seen in the following table.

Table 8. Comparison of the Level of Penalty Imposition : Southern California vs. Massachusetts from 1997 through 2001

	Low Level Action (LLA)	High Level Action (HLA)	HLA / LLA
Southern California	1951	1111	**0.57**
Massachusetts	121	8	**0.07**

The estimated rates of penalty imposition were 57% for southern California and 7% for Massachusetts. These figures are quite counterintuitive from the perspective of deterrence theory.

One might argue that we should look not at the actual rate but the *perceived* certainty of sanctions when detected. This argument is legitimate. In response, let us examine the perceived certainty by using survey data. To measure the level of the perceived certainty, I asked the following questions:

- *QS1: When inspectors detect your violation, what are the chances that agencies will impose monetary penalties? Please, indicate from 1 (0%) to 7 (100%) certain.*
- *QS2: When inspectors detect your violation, what are the chances that agencies will terminate your business license? Please, indicate from 1 (0%) to 7 (100%) certain.*

Responses from 103 drycleaners in Massachusetts and 107 in southern California are summarized in Table 9-1 and Table 9-2 below.

Table 9-1. Perceived Certainty of Monetary Penalty Imposition (Response to QS1)

	Average Score of Total Respondents	Average Score of Rule-abiders	Average Score of Violators
Southern California	5.43 (n=107)	4.78 (n=37)	5.77 (n=70)
Massachusetts	2.43 (n=103)	2.03 (n=87)	4.56 (n=16)

* See Appendix for ANOVA results

Table 9-2. Perceived Certainty of License Withdrawal (Response to QS2)

	Average Score of Total Respondents	Average Score of Rule-abiders	Average Score of Violators
Southern California	1.40 (n=107)	1.32 (n=37)	1.44 (n=70)
Massachusetts	1.38 (n=103)	1.28 (n=87)	1.94 (n=16)

* See Appendix for ANOVA results

The survey results are far from causal relationship between the certainty of formal sanctions and compliance predicted by deterrence theory. Taken at face value, they seem to suggest that the two are inversely related. However, it would be wrong to assume an inverse relation between the two because formal sanctions are by no means the only definable motive affecting rule compliance. For example, the low perceived probability of detection might negate the effect of high perceived probability of penalty imposition. We will concern ourselves with this matter later. At the moment, it is important to emphasize that the empirical data offers room for refuting deterrence theory's entrenched proposition of penalty threats. The data do not support an *a priori* reason for assuming that the severity and certainty of formal sanctions will necessarily promote compliance.

Indeed, most interviewees in both regions denied the significant influence of formal sanctions on their compliant behavior. One drycleaners' counter-question for the interviewer is illustrative: "What are your questions about? Do you really believe we are that simple-minded, opportunistic people?"

Impacts of the probability of detection

To say that formal punishment has no significant deterrence effect is not to say that deterrence theory is falsified. Intuitively, the probability of detection must play a more decisive role in the deterrence framework than does punishment. This is so because detection is a necessary precedent to punishment. If an actor perceives zero probability of detection, the meaning pertaining to the severity and certainty of formal punishment evaporates. Precisely for this reason, we must measure the probability of detection perceived by drycleaners to fully evaluate the validity of deterrence claim. Before making an estimate, let us briefly look at the ratio of the number of dry cleaning facilities to the number of inspectors in each region. From time to time, agencies employ part-time inspectors, so the exact ratios are difficult to estimate. Thus, the following table includes only full-time inspectors.

Table 10. The Number of Dry Cleaning Facilities per Inspector

	Number of Facilities (F)	Number of Inspectors (I)	F/I
Southern California	3800	50[33]	**76**
Massachusetts	756	8[34]	**94**

We can infer from these statistics that the actual inspection rate might be higher in southern California than in Massachusetts. Is this reflected in drycleaners' perceptions of the likelihood of detection? To measure the *perceived* probability of detection among drycleaners, I asked the following questions at the beginning (QD1) and the end (QD2) of interviews and surveys to check consistency of responses.

- *QD1: "Let's suppose that there are instances where you slip into temporary noncompliance, if not intentional, with one requirement or another. When noncompliance with one of the requirements occurs for a month or so, what are*

[33] This estimate of the number of inspectors is derived from the witness of a senior enforcement manager in Division of Engineering and Compliance of the SCAQMD.
[34] This number of inspectors comes from the witness of an ERP dry cleaning sector manager of the MADEP.

the chances that agencies will find out? Please, indicate from 1 (0%) to 7 (100%) certain?"[35]

- *QD2: "Let's suppose that 100 drycleaners are in violation for a month or so. How many do you expect will be detected?"*

In general, responses to the two questions were consistent. For both questions, southern California drycleaners perceive a higher probability of detection compared to their Massachusetts counterparts (See Table 11-1 and 11-2).

Table 11-1. Perceived Probability of Detection: Responses to QD1

	Total Respondents	Rule-abiders	Violators
Southern California	35% (n=107)	26% (n=37)	40% (n=70)
Massachusetts	11% (n=103)	7% (n=87)	35% (n=16)

* See Appendix for ANOVA results

Table 11-2. Perceived Probability of Detection: Responses to QD2

	Total Respondents	Rule-abiders	Violators
Southern California	41.5% (n=107)	37.4% (n=37)	43.7% (n=70)
Massachusetts	20.2% (n=103)	18.1% (n=87)	32% (n=16)

* See Appendix for ANOVA results

These survey results provide a strong rationale to refute deterrence theory by showing that the perceived probability of detection does not determine drycleaners' behavior in question. Interview data compared favorably with the survey data. When QD1 was asked in interview settings, most interviewees in Massachusetts replied, "I have never thought about that." Nonetheless, when pushed to indicate some ballpark figures, most answered, "Well.... 10%, 5%? Maybe lower than 5%.... I really don't know." Of 38 interviewees, only 2 drycleaners had relatively high expectations of detection (20% and 30%,

[35] This question draws on Braithwaite & Makkai (1991).

respectively). Meanwhile, the southern California interviewees reported 35-45% probability of detection.

Before closing the discussion regarding the perceived probability of detection, I need to solve two puzzles that appeared in the survey results. This is necessary to better support my argument that the perceived probability of detection has little, if any, effect on compliance behavior in our cases.

First, as in the case of the severity of punishment, good environmental performers have lower expectations of detection than do violators, both between regions and within regions. Does this mean that compliance is inversely related to the probability of detection? What can explain the apparent paradox behind these numbers? Second, the same interview question asked in different forms resulted in variations in responses. How can we explain this confusing difference? Deterrence theorists would require answers to this inquiry.

Psychological theories and in-depth interview data provide plausible answers to these inquiries. Although I do not intend to explain my empirical observations by way of psychological reductionism, psychological theories provide important insights that help to solve these puzzles.

Regarding variations between the regions, a difference in actual inspection rates might cause different perceived probabilities of detection. The Prospect theory in psychology offers a reasonable explanation of this phenomenon. The theory posits that "people systematically accord higher estimates to the frequency of events that they can recall more readily, than to those that are more difficult to recall" (Etzioni 1988). This account is supported by higher inspection rate in southern California. Recall the SCAQMD's primary enforcement strategy introduced in Figure 2. The SCAQMD has traditionally viewed a primary purpose of law enforcement as creating deterrence and this regulatory philosophy seems to lead to more frequent field inspections. Increased inspections in turn led to higher perceived probability of detection.

Variations between rule-abiders and violators can be explained in the same manner. Violators confessed that experiences of being caught by inspectors increased their perceptions of detection. Therefore, the data presented in Table 9-1 and 9-2 alone are insufficient to imply the inverse relationship between compliance and the perceived

probability of detection unless we know the previous violators' current compliance status or unless we are sure that perceptions of detection did not change significantly over time. This is so because violation always precedes detection. Nevertheless, these survey results help to confirm that actual inspection rates were higher in southern California (minimum one to three inspections per year) than in Massachusetts. It prompts us to doubt the effects of the perceived probability of detection associated with deterrence claims.

A second inquiry about a variation between QD1 and QD2 may be answered by a psychological theory positing that people tend to think they are safer than others in risky situations. In retrospect, the subject of QD1 (you) was not identical with QD2's (100 drycleaners). Although the distinction was not deliberate, respondents seemed to take QD1 as their own case while QD2 as others'.

Two different interpretations of the responses to QD2 can be made in relation to compliance trends. One interpretation supports the deterrence theory. To explain the Southern California compliance trend, deterrence theorists would argue, "See.... People believed that they would not be caught. That is why the compliance rate has been low. If you would like to increase the compliance rate, then increase the *perceived* probability of detection via *more frequent* inspections."

This deterrence claim seems incorrect because it was formulated in a way that renders testing the theory impossible: when a rule violation occurs in a set of conditions under which it is not expected to occur, the deterrence threats might be said to be "not high enough" (Etzioni 1988). But how high is high enough for preventing violations? Without answering the question, the above deterrence argument is not valid. More seriously, this argument does not explain the increasing compliance trend in the Massachusetts industry whose perceived probability of detection is lower than that of Southern California.

Instead, the results should be interpreted differently. It is quite difficult to increase the perceived probability of detection unless actual inspection rates dramatically increase. This interpretation implies that the attempts made by agencies to increase the number of inspections they carry out in order to raise compliance may be less effective than deterrence theory prescribes.

Our final task in this subsection is to examine whether drycleaners' present perceptions of detection differ significantly from their past perceptions. This examination is an effort to ensure methodological validity by overcoming the limit of a dominant research tendency that treats past behavior as the dependent variable with present perception as the independent variable (Grasmick & Bursik 1990).[36]

I was not able to quantify the changes in perceptions of detection due precisely to a methodological problem not only on my part but also on the part of the drycleaners themselves. Most interviewees refused to respond to the question, "By what percentage have your perceptions of risk have changed?" simply because they could not estimate the rates. One drycleaner countered, "If you were me, could you do that?" Having rarely considered the probability of detection in everyday life, how could it affect their behavior? Nevertheless, all interviewees in question converged on the same point: Their perceived probability of detection increased for the first few years of the new regulation and remained more or less stable later on. In the Massachusetts case, increases in awareness of threats resulted mainly from KDA's outreach to its members in an effort to promote member participation in association activities. The reason for KDA's activities will concern us in the following chapter. For the moment, it is enough to say that the data associated with perceptions of detection show that the probability of detection does not reflect the behavior of actors in practice.

In sum, all empirical data regarding the probability of detection fail to explain the observed difference in compliance trends between the two cases. While the findings can account for an increasing compliance trend in Massachusetts, the same explanation is not valid in the Southern California case. If neither formal sanctions nor the probability of detection is a factor that plays a significant role in drycleaners' expected utility function, then what is it? The only economic factor left to scrutinize is the cost of compliance.

---

[36] Another method of overcoming this limit is estimating the direct effects of present perceptions of detection on present inclinations to comply or violate in the future (Grasmick & Bursik 1990). However, this method is questionable in that it only measures "intentions" as the dependent variable. That behavioral intentions are not necessarily synonymous to actual behavior is one of my main critiques of the theory of norms.

Impacts of the cost of compliance

Before examining the data, it must be emphasized that we should not confuse the cost of compliance with cost factors (commonly known as deterrence factors) in the expected utility function. As noted in Chapter 2, deterrence orthodoxy treats as cost factors in its expected utility function the perceived probability of detection (P_D), the probability of formal punishment when detected (P_P) and the perceived severity of formal punishment (S_P). In making compliance choices, rational actors are assumed to compare "$P_D * P_P * S_P$" with the costs they would have to pay to fully comply. By the cost of compliance, I only mean the latter. This distinction is necessary for an accurate discussion of the benefits of compliance in the next subsection.

Deterrence theory assumes that unlike cost factors, the cost of compliance is fixed and difficult to overcome. However, my research shows that its magnitude can be either reduced or amplified by actors' perceptions.

In 1993, the EPA estimated that the average dry cleaning facility would spend approximately $6,300 (fixed cost) installing pollution control equipment and $1,100 (variable cost) per year operating and maintaining equipment. In addition, waste disposal was estimated at $1,500-2,000 per year. Costs of recordkeeping, reporting and operator training were not included in the EPA's analysis.

To measure the annual cost of compliance, I posed the following question:

- *Omitting the cost of new equipment, how much money do you spend per year to fully comply with all applicable requirements?*

I focused particularly on respondents' immediate answers as a means to gauge the *perceived* costs. The average self-reported annual cost of compliance for Massachusetts drycleaners was $804, while in southern California, the comparable figure was $4,291. Such a large difference is surprising because although the two regions are subject to different regulations, they share similar requirements. Thus, annual costs of compliance should be expected to be nearly identical (See Table 4 on p. 100). The range of reported costs is also noteworthy, as demonstrated in the frequency distribution (See Table 12).

Table 12. Variation of the Annual Cost of Compliance

	Southern California	Massachusetts
$200	-	**47**
$201-$500	-	8
$501-$1,000	2	23
$1,001-$1,500	-	11
$1,501-$2,000	2	10
$2,001-$2,500	4	1
$2,501-$3,000	**14**	2
$3,001-$3,500	**15**	-
$3,501-$4,000	**17**	1
$4,001-$4,500	**18**	-
$4,501-$5,000	**24**	-
$5,001-$5,500	2	-
$5,501-$6,000	2	-
$6,001-$10,000	7	-
Total	107	103

Approximately 46% of Massachusetts drycleaners indicated that they spend exactly $200 per year complying with the ERP. This could hardly be considered a coincidence; indeed, this is the annual ERP fee that drycleaners must pay the MADEP. It must be noted that at the program's onset in 1997, the KDA heavily promoted compliance with the new regulation. At four seminars designed to familiarize drycleaners with the new requirements, KDA board members consistently informed their colleagues that compliance would not be expensive and that the ERP's yearly fee was only $200, while not mentioning other costs. In all likelihood, the percentage of respondents who actually believe that the $200 completely covers the cost of compliance is less than 46%. This became evident at a drycleaners' religious meeting held in a church in Newton. Eight drycleaners were present. After the meeting, I asked them to fill out survey questionnaires. While answering, one person asked, "How much do we spend?" "$200," another replied immediately. This exchange could have influenced some—possibly all—in the group. Indeed, one drycleaner crossed out his original answer, "$1,000" and instead inserted "$200." No one questioned the $200 figure.

As shown in Table 10, approximately 76% of Massachusetts respondents indicated an annual cost of compliance ranging from $200 to $1,000. This range remains far below southern California's. How can we account for this discrepancy? An important explanatory factor is that significant costs attributed to compliance by southern California

drycleaners are categorized as normal operational costs in the Massachusetts group. For example, many Massachusetts interviewees did not consider the cost of waste disposal as a compliance cost. I asked them, "You must pay $6-7 per gallon for (Perc) waste removal and $25-30 for filter disposal. Why did you not include these costs?" In response, some added the costs to their estimation, but others insisted, "I have to pay for waste disposal regardless of the ERP, so it does not make any difference in my compliance costs." In a similar vein, approximately two-thirds of the Massachusetts interviewees did not consider that recordkeeping incurred costs, in contrast to their southern California counterparts.

Many southern California respondents meticulously noted compliance-related costs. Furthermore, they tended to amplify the cost by including *psychological* costs. Some interviewees even included fees required not by the SCAQMD but by fire departments and sanitation districts. These drycleaners emphatically stressed to me that Rule 1421 is simply too costly to follow:

Interviewer: Could you outline your estimated compliance costs according to each requirement?

– A drycleaner from Pomona starts matching costs with Rule 1421 requirements –

Interviewer: Hold on. Where does this number come from? Isn't this a Fire Department fee? I'm asking about Rule 1421.

Drycleaner: I know, but what's the difference?

– At my request, he deleted $720 and his compliance cost decreased from $5,000 to $4,280. When he finished matching costs with requirements, approximately $1,500 in costs were left unmatched –

Interviewer: What is this money ($1,500) for?

Drycleaner: Well...let's say....stress. (after reconsidering) *I don't think this is correct. It must be more expensive* (He insisted that the annual compliance cost be higher than $10,000. I recorded $4,500.)

In fact, this scenario, in varying degrees, took place several times during the southern California interviews. Without exception, these drycleaners confessed that they were in violation of one requirement or another. More interesting is that regardless of amount,

89.7% of the southern California respondents complain that compliance costs are too high. In dramatic contrast, 92.2% of Massachusetts respondents view compliance costs as low or reasonable.

Table 13. Perceptions of the Cost of Compliance

		Is the Cost of Compliance Too High?	
Southern California (n=107)	Rule-abiders (n=37)	Yes	31
		No	6
	Violators (n=70)	Yes	65
		No	5
Massachusetts (n=103)	Rule-abiders (n=87)	Yes	2
		No	85
	Violators (n=16)	Yes	6
		No	10

The following interviews are instructive:

– Interview with a drycleaner from Reading, Massachusetts –

Drycleaner: I'm spending approximately $1,000 per year to comply with the ERP.

Interviewer: Do you think that's too much?

> Drycleaner: Not at all. $1,000 per year is nothing, considering the benefits we have from the ERP

(Discussion of the benefits ensues.)

Interviewer: Can I ask you about your annual gross income before tax?

> Drycleaner: I used to make $120,000 – $150,000, but I am making much less these days because the economy is bad.

– Interview with a drycleaner from Cerritos, California –

Drycleaner: I am spending approximately $600 per year.

Interviewer: Do you think that it is too much?

Drycleaner: Yes, I do.

Interviewer: Can I ask you about your annual gross income before tax?

(Drycleaner was reluctant to answer the question, but agreed after some persuasion.)

Drycleaner: Approximately $350,000.

Interview: Well....do you really think that you're spending too much money complying with Rule 1421?

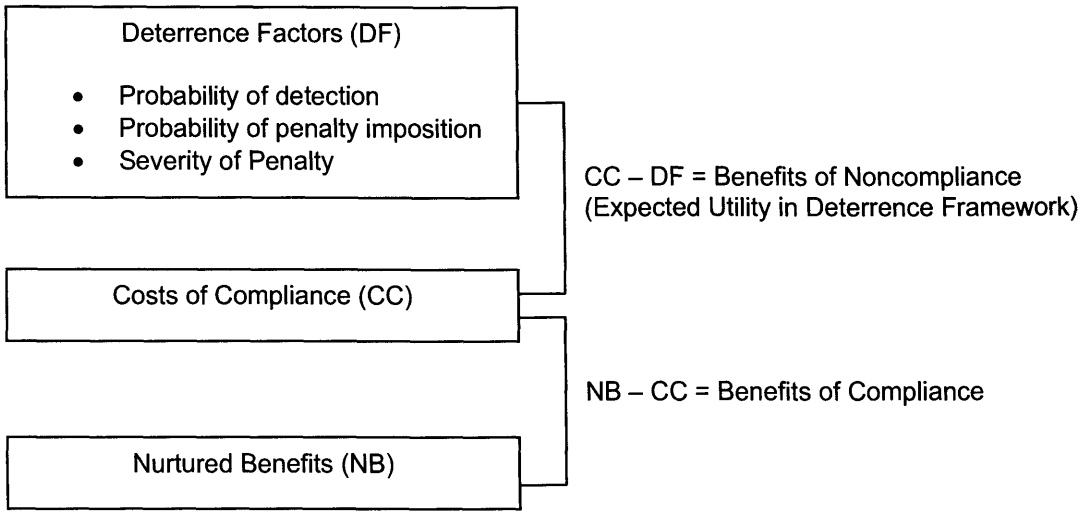
Drycleaner: I know why you are asking me this question. Of course, $600 per year is nothing compared to my income. But I am spending money that I otherwise would not spend. Money does not come easy. You may not know it because you are a student, but someday you will understand what I mean. What is Rule 1421 about? It is all about collecting fines. It is a regulation for regulation's sake that has nothing to do with protection of public health. What benefits can the people have from Rule 1421? Nothing.

It is clear that the perceived cost of compliance has a significant impact on making compliance choices. However, a critical question remains. To decide that the cost of compliance is either high or low, it must be compared with something. What provides this point of comparison?

According to deterrence theory, deterrence factors serve this role ($P_D * P_P * S_P$). The actor complies if and only if the potential cost imposed by deterrence factors exceeds the monetary costs of compliance, otherwise s/he does not comply. However, deterrence factors are unlikely to be comparable across groups, as in the previous subsections, which showed that they did not play a significant role in the drycleaners' choice-making. An alternative comparable factor is income. Because few drycleaners were willing to reveal this figure, I estimated it by the number of hangers consumed per year. Although imprecise, this method shows that even the lowest estimated income renders insignificant the costs of compliance. Moreover, the above interviews imply that perceived costs relative to income do not play a decisive role.

Whether drycleaners view the cost of compliance as high or low depends on the perceived benefits of compliance, which I call *nurtured benefits*. It was not until the ERP seminar in September 2004 that I recognized the importance of the nurtured benefits, despite repeated references to it from drycleaners. To avoid confusion from later on, there is a need for clarifying conceptual distinction between nature of these nurtured benefits and nature of benefits assumed in deterrence theory's utility function (see Figure 10).

Figure 10. Conceptual Distinction between the Benefits of Noncompliance and the Nurtured Benefits of Compliance



In deterrence theory, actors are assumed to subtract the multiplication of deterrence factors from monetary costs of compliance (e.g., cost of pollution abatement equipment) to assess the expected utility. Note that the expected utility estimated in this way is not the benefits of compliance but the benefits of noncompliance. Meanwhile, the nurtured benefits discovered by the dissertation research are the benefits that accrue with compliance, which is invisible in deterrence framework. When deliberately nurtured, perceived benefits exert more influence on compliance behavior than does any other economic factor. The following section demonstrates this point.

Benefit of noncompliance vs. nurtured benefit of compliance

Veridical perception requires that the perceived relative height of two adjacent mountain peaks must not change with changes of viewpoint; similarly, purely rational actors must

not reverse their preference and choice-making with changes of situational characterization, because they stick ideally to a set of axioms such as transitivity of preference (Tversky & Kahneman 1981). Note that the economic axioms are not statements of logical necessity but assumptions about the actor's choice-making. Whether and to what degree the actor's reasoning about making choices depends on such assumptions is an empirical question whose answer is found in the actor's actual behavior pattern. The following story illuminates what typically occurs in drycleaners' minds when they confront a choice situation:

> In the summer of 2004, the MADEP requested online filing for the first time in the ERP's history. Although traditional hardcopy submittals were still allowed, the MADEP strongly preferred online filing to reduce regulatory costs on their part.
>
> Massachusetts KDA intuitively recognized that most drycleaners would likely be unfamiliar with the new submission format. In an effort to help drycleaners e-file their annual self-certifications, KDA held an ERP seminar at the Crowne Plaza Hotel in Woburn on September 1st. The board members even had a rehearsal the day before to make sure that the session would run smoothly. Moreover, they leased 10 laptops to be prepared for the largest possible attendance, and asked both the MADEP staff and some students (including me) to attend the seminar for technical assistance. The seminar was open to both members and non-members. Disappointingly, only 35 drycleaners attended the seminar. This was less than half the number attending ERP seminars of the previous few years.
>
> After the seminar, board members got together to have dinner in a Korean restaurant in Medford. While waiting for the food to arrive, Mr. Sung-Bae Kim from Beverly raised a question: "It is really strange. I have received many phone calls from our members asking about the seminar. But few of them came tonight. Why didn't they come?" His question sparked the others' curiosity because they had also received many phone calls since mid August, yet comparatively few members showed up. A discussion on possible explanations for the low attendance followed.
>
> Someone said, "The time was not right. It was too early for people." The seminar started at 6:00 PM, but most drycleaners close shop between 7:00 and 7:30 PM (Previous seminars usually started at 8:00 PM.) Obviously, KDA was familiar with typical closing times. While scheduling, however, KDA was afraid that the seminar could be delayed if unexpected technical problems occurred during the online demonstration. For this reason, KDA decided to begin earlier. Most board members agreed that the timing was a likely barrier. Indeed, many of the 35 attendees arrived between 8:00 and 9:00 PM.

Another board member proposed an additional reason: "Isn't it because they did not want to spend $50?" (KDA had required a $50 seminar fee to cover hotel and laptop costs.) Some agreed, but president Choi, the chairman of the advisory board, and Lowe had a different opinion, essentially, "Does $50 really matter?" (When KDA first started the ERP seminar in 1997, they required a $100 annual membership fee, yet approximately 200 drycleaners attended, and few people complained about the fee.)

While the discussion continued, a group of drycleaners came to the restaurant. (This restaurant functions as a social club for Korean drycleaners from parts of Suffolk, Middlesex and Essex counties.) The board members and drycleaners seemed to know each other very well. One of the board members asked a drycleaner who had just arrived:

> "You promised that you would come to the seminar. Why didn't you show up?"
>
> "What are you talking about? When did I promise? I just asked if there were any changes in the ERP requirements and you said 'no'."
>
> "But do you have any idea how to use the Internet?"
>
> "My son does. Anyway, how was the seminar? No need to answer. I can already tell."

Another board member asked, "It wasn't because of the $50, was it?" The question was partly a joke and partly serious. A reply followed: "How dare you say that?" A pretend boxing match ensued to demonstrate jovial relations.

After dinner, some board members continued talking, and Choi, Kim and I went outside to smoke. Three other drycleaners were already smoking outside. We stood together. Choi offered, "We prepared a lot for this seminar but only a handful of people showed up. What would Paul (Paul Reilly from the MADEP) think? It was so disappointing." One of the three responded, "I'm really sorry...seriously. But you know what our job is like. I worked alone today because my wife is sick. I was too exhausted. And you said there would be nothing new except for online filing. What could I gain from the seminar? I already know what to do. You guys taught me."

When Choi, Kim and I returned to the table, the board members were still discussing how to promote participation in KDA events. Choi repeated what we had just heard. Lowe snapped his fingers because he had been making the same point: "See, we made a big mistake. To encourage member participation, we should not ponder how to penalize non-participants. They won't care. What we must do is convince them that there are real advantages in joining us." (Discussion of strategies to create more beneficial KDA events and increase attendance went on for another hour.)

One month later, I met with Lowe. I reminded him of what he had said during the dinner. He added:

> We're business people. When business people face something new, what first comes to our mind is "So, how can this benefit me?" A question of "how will this disadvantage me" is at best a secondary concern. Let me give you an example. When machine manufacturers introduce a new machine, I first think, "How is this machine better than the one I have?" not, "How could this new machine be worse than the one I have?" I have no doubt that others think in the same way....We used this psychology when emphasizing the necessity of the ERP. Didn't I tell you this before?

I went through my field notes and matched them with recorded interviews. Surprisingly, similar comments were found in interviews not only with Lowe but also with several southern California drycleaners. But interviews in southern California were mostly about complaints. For instance, "What benefits can people have from Rule 1421? Nothing."

During my fieldwork, I discovered a most interesting phenomenon. Drycleaners within the same region told stories that were similar to a curious degree. The two communities have completely different perspectives on the potential benefits of the regulatory requirements[37] and one perspective predominates in each region. Specifically,

[37] The following question was asked to measure the degree of the perceived benefit of compliance: "To what extent is the following statement true?: *If I comply with the current state regulation, the benefits exceed the costs*. Please, indicate from 1 (strongly disagree) to 7 (strongly agree)" The responses are summarized in the table below.

	VAR00001	N	Mean	Std. Deviation	Std. Error Mean
VAR00002	MA	103	5.6990	.91646	.09030
	CA	107	1.6075	.97861	.09461

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR00002	Equal variances assumed	.468	.495	31.245	208	.000	4.09155	.13095	3.83340	4.34971
	Equal variances not assumed			31.285	207.845	.000	4.09155	.13078	3.83372	4.34939

that which seems to annoy the southern California drycleaners is accepted in Massachusetts. With the recordkeeping requirement, for example, a southern California drycleaner asserted, "It has nothing to do with the environment or human health. Why must we keep records for years?" In contrast, a Massachusetts drycleaner stated, "It's just like a housekeeping book. Recordkeeping helps us manage our business more efficiently." Another example is found in responses to a weekly leak check requirement. The typical southern California response was: "If Perc is leaking, it's not our fault. It's the manufacturers' fault. Why should we be responsible for that?" A Massachusetts member expresses his community's view: "The weekly leak check helps us detect Perc machine problems prior to a total breakdown. When problems are detected in advance, we can repair them ourselves. It saves big money."

How can we account for the divergence in the stories that drycleaners tell about their practice? If we accept Lowe's remark about psychology, the puzzle of each region having a dominant perspective is to some degree resolved. Indeed, it is not difficult to infer that KDA and KDLA composed instructive stories for distinct purposes. Nevertheless, two critical problems remain unsolved. First, why did the two trade associations come up with diametrically opposed stories? Second, why did the majority of each dry cleaning community believe its respective narrative? Tracing the answer to the first question is the heart of the dissertation and is discussed at length in Chapter 5. For the moment, it is sufficient to say that different narratives resulted from differing conceptions of self-identity and situational characterizations in a dynamic social web.

The second question is by no means simple to answer. It requires an understanding of the process by which manufactured narratives are accepted by individuals as objective reality. In response to this inquiry, deterrence theory may argue that, as is often the case with organizations, the two trade associations must have both internal rules to prevent behavioral deviations and sanctions for nonconformity. Empirically, this argument is absolutely wrong about our cases. The trade associations *can* dismiss members for misbehavior deemed harmful to the group. However, there are no clear definitions of harmful acts in their charters, so judging a particular act as damaging is highly controversial.

Moreover, even when an executive board agrees on the detrimental nature of particular actions, sanctioning is rare due to fear of negative backlash from members who consider it overly harsh. This was demonstrated twice in southern California in 1996, when two former KDLA presidents publicly disagreed with an association position. In this case, KDLA officials ejected the men from the group. This caused dissent in the membership sufficient to force the leadership to revoke the sanctions.

Less orthodox deterrence theorists may argue that the transformation from manufactured narrative to accepted truth is facilitated by homogeneous preferences between trade associations and individual drycleaners, all pursuing self-interest. If true, there is no need to promote and legitimatize the standardized narrative.[38] But why would a rational actor believe in a collective story and behave in conformity to it, given that s/he already has well-defined criteria for acting? Unable to answer this question, neither strict deterrence theory nor a more flexible variety is capable of explaining transformational process that took place in southern California and Massachusetts.

Presumably, the orthodox version of the theory of norms could provide a viable account of the transformation process, as discussed in Chapter 2. However, a pure normative account leads ultimately to an oversocialized conclusion that cannot adequately respond to the issues of legitimation and individual autonomy.

Legitimation is a process of reification. In other words, it is a process of making ideas acceptable not to the manufacturers of narratives (because the legitimacy of a story is self-evident to its manufacturers) but to others in a community. To persuade others, the legitimatizing process must provide not only values at a normative level but also substantial knowledge at a cognitive level (Berger & Luckmann 1965). While normative values tell the actor "why you should do *this*, not another," knowledge answers "why and how this is what it is".

Knowledge precedes values in legitimatizing ideas (Berger & Luckmann 1965). This is true because doing right by following prescribed normative values requires knowledge of how to distinguish right from wrong. An explanation based on the theory of norms lacks knowledge as an essential legitimatizing instrument. Without this

[38] This hypothetical deterrence account draws on Sabel's (1992) critique of the liberal account on the politics of trust.

component, it would be difficult for manufactured stories to convince the target population. Although propaganda may convince a population for a certain period, it will not function indefinitely. Overlooking knowledge results from incorrectly assuming that individuals are wholly in the power of universal norms. However, actors are not necessarily passive recipients of externally given norms. They often act on their own, driven by self-interest or emotion.

An alternative explanation overcomes the limits of deterrence and normative accounts. For a standardized story to embed itself into an individual's reality, it must include persuasive *meanings* that become listed in the person's mind. At minimum, the story must be in harmony with hearsay evidence turned virtual memory. The Massachusetts case illustrates how this alternative account provides a fuller explanation than its rivals.

As noted in the interview with Lowe, KDA was aware of drycleaners' psychology. To simply warn them to "comply or you will be in trouble" was obviously insufficient, though necessary. In the effort to bring the maximum number of drycleaners into compliance with the ERP, KDA used drycleaners' inclination for tangible benefits to its advantage. The effort at first required a list of compliance benefits to be advertised. At this stage, what most concerned KDA was that the listed benefits that accrue with compliance be verifiable in drycleaners' everyday business activities. If not, drycleaners might believe that KDA's advertisement was lip service or deception. KDA feared that this could undermine the association's credibility.

As a mechanical engineer-turned drycleaner, Harry Cho in Peabody had expertise in repairing a variety of machines. He would help neighboring drycleaners with their repairs. Lowe and Choi were also familiar with working mechanisms of Perc machines. From their personal experiences, KDA recognized the potential benefit of a weekly leak check requirement and started advertising it. Afterwards, several drycleaners contacted KDA. Cho and other key members of KDA immediately responded to their calls for assistance. Some drycleaners previously fixed their machines by themselves without KDA's assistance. For them, KDA's advertisement seemed absolutely reasonable: "It is true that if any sign of a problem is noticed in advance, you can prevent major

malfunctions. A weekly leak check was obviously a good idea", a drycleaner in Foxboro commented.

Whenever KDA board members visited dry cleaning facilities that requested assistance, they discussed the reasons drycleaners should comply. Their verbal advertisement on sites went well beyond the repair of machines. It was more like the "fixation of beliefs" (Peirce 1877). KDA emphasized the importance of recordkeeping because they worried that many drycleaners would ignore it while the MADEP would view violation of this requirement as a 'broken window'. Drycleaners in violation of the recordkeeping requirement could be under intense regulatory oversight although they met other requirements. It could lead those drycleaners to complain that the ERP was excessively stringent. The analogous example used by KDA to promote compliance with this requirement was a housekeeping book.

Moreover, KDA's emphasis on the health benefits of reduced Perc use is noteworthy. KDA knew that few drycleaners believed the reports of Perc's carcinogenic effect. In fact, the KDA board members did not believe it, either. Nevertheless, they advertised, "Perc is a chemical. Chemicals do not do a body good." This statement was accompanied by Choi's street-level experiment. At the ERP's onset, Choi was curious of whether and how dangerous Perc was. He caught a house mouse and put it into Perc. Choi discovered, "Perc leads to instant death for the mouse." He added more: "Do you ever see cockroaches in your shop? I'll bet you don't. Why do you think that is?" His experiment quickly circulated as a funny story in the Korean dry cleaning community. Undoubtedly, the process of sharing information necessitates networks of social relation as a prerequisite that facilitates the circulation of the story. This point will be discussed further in Chapter 5.

Drycleaners who directly benefited from KDA's assistance held the experience in their memory. These experiences are not restricted to the beneficiaries' memory. Just as the data saved in a floppy disk can be available to any personal computer owners, so their memory becomes available in a form of business episode transferred to other drycleaners. Now, they know what benefits there are, what to do to get them and, at least, whom to contact when they have troubles. It becomes recognized that complying with the ERP as a law is not only normatively right. It is also recognized that compliance may bring about

some benefits. In other words, KDA's standardized story becomes capable of being reduced to empirical factual knowledge in drycleaners' cognition. Correspondingly, the Massachusetts dry cleaning community starts accepting KDA's advertisement as the persuasive truth. When KDA was successful in convincing drycleaners with its standardized narrative, knowledge of the potential benefits involved in the situation had steering consequences for drycleaners' conduct.

It is worth noting here that those potential benefits, by definition, always existed. Several interviewees in southern California recognized the same kind of benefits. However, this recognition was buried beneath the KDLA's dominant story emphasizing the unfairness of Rule 1421. In KDLA's story, there is nothing beneficial in Rule 1421: "What benefits can the people have from Rule 1421? Nothing." The perceived benefit of compliance is fixed at zero. On the contrary, KDA excavated and nurtured perceived benefits. In so doing, invisible, superficial ideas turned into subjectively available objects.

The acknowledgement of the nurtured benefits has special connotations in reference to compliant behavior. In deterrence theory, the type of impression that comes to mind first does not make any difference in the outcomes of a cost-benefit calculation, and thus it has no bearing on choice making. In effect, depending on how people view a situation in which a behavioral transition is required, they commit to different behaviors. In other words, whether something is viewed as an uncompensated loss or as an investment incurred to achieve some benefit makes a difference in the actor's assessment of behavioral choices (Tversky & Kahneman 1981).

Contextual embeddedness of the cost and benefit of compliance

Thus far we have discussed several economic factors in terms of their impacts on drycleaners' compliant behavior. Although our discussion has not dealt with all of the possible variations and combinations of these factors, it was sufficient to reveal that each economic factor's real impacts cannot be understood solely by rational reasoning in isolation from particular social contexts. All economic factors under scrutiny are socially embedded.

Broadly speaking, the term "embeddedness" refers to the fortuitous nature of economic action with respect to social structure, political institutions, culture, and cognition (Zukin & Dimaggio 1990). Since Karl Polanyi (1944) who used the term to expose the capitalist self-regulating market as not natural but artificial by explicating the nature of economic action in pre-industrial societies, the concept of embeddedness has stimulated research in a variety of academic disciplines, including labor economics (Piore 1975), economic sociology (Granovetter 1985), immigrant entrepreneurship (Portes & Sensenbrenner 1993), organizational theory (Uzzi, 1997), and location decisions (Romo & Schwartz 1995), to name a few. However, existing compliance literature does not seem to incorporate this concept into discussions in productive ways.

My empirical data demonstrate that the costs and benefits of compliance play a crucial role in making choices in a way unexplained by deterrence theory and the theory of norms. From the viewpoint of a deterrence theorist, economic factors are not social constructions but automatic responses to certain conditions. However, this view cannot deal with the wide variations of the perceived costs and benefits of compliance between the two regions discussed here under similar formal regulatory conditions.

These economic factors can be better understood by adopting the notion of contextual embeddedness. I avoid the more commonly used term "structural", and instead use "contextual" to clarify my point as distinguished from an oversocialized view[39] on the one hand, and to emphasize the usefulness of the relational approach on the other. I have no doubt that the economic actions of individuals at a micro level as well as macro economic patterns are influenced by networks of social relationship. Beyond this point, it should be emphasized that what we must look into are social relationships between particular concrete actors rather than abstract actors encapsulated by stereotypical role identification (Granovetter, quoted in Swedberg 1990). Examining social relationships in the latter sense leads ultimately to a view that people in certain categories behave in the same way (i.e., regulatory agencies behave this way and trade associations react that way, etc.). As was already shown above, however, the variations in the drycleaners' perceived costs and benefits of compliance resulted from different strategies performed by the same

[39] This does not necessarily mean that all authors using the term "structural" embeddedness have an oversocialized viewpoint. While using this phrase, for example, Grenovetter reminds us of inappropriateness of oversocialization.

categorical actors, that is, trade associations. Stereotypical categorizations of role identification and social relationship are insufficient to capture the source of the difference in our cases.

Contextual embeddedness departs from the assumption made in formal semantic analysis where categories have clear, well-defined, closed, and monolexemic labels (Feinberg 1979, Piore 1995[40]). Thus, the concept overcomes the oversocialized view of embeddedness by including cognitive embeddedness as its crucial subset ensuring interpretation of the "subjective meaning-complex of action"[41] in particular contexts. The notion of cognitive embeddedness is useful in "calling attention to the limited ability of human and corporate actors to employ the synoptic rationality required by neoclassical (deterrence in the dissertation) approaches." (Zukin & DiMaggio 1990, parenthesis added). However, this notion should not be confused with bounded rationality. Cognitive embeddedness is not just about the limited mental capacity humans hold for exercising rational reasoning. It is more like the ways in which actors, under the influence of sociability, reinterpret the meanings of things taken for granted and, in turn, create new meanings.[42]

If we are to explain social phenomena, then our explanation must address the very subjective meaning the action implies for the actor (Schutz 1967). Recall the Massachusetts case. While the reactions of southern California drycleaners to Rule 1421 did not quite deviate from a commonsense anticipation that industry would resist regulations, their Massachusetts counterpart's reactions to the ERP was counterintuitive. We found the rationale behind the Massachusetts group's behavior in different perceptions of costs and benefits, which were initially forged by KDA and adopted as an objective reality by individual drycleaners. This process was not totally a deceptive

---

[40] To illuminate the limit of the classic analytical view of categorizations, Piore (1995) likened the concept to a ripple: "categories are more like the patterns generated by a handful of rocks thrown into a still pond. Each has a core that fades gradually as you move out from the center. At their edges, categories overlap and are ambiguous." (p.122)

[41] One of the most influential marching orders for sociology is given by Max Weber who tells, "the object of cognitions is the subjective meaning-complex of action." (Weber 1947, p.101)

[42] Zukin and DiMaggio (1990) define cognitive embeddedness as the ways in which the structured regularities of mental process limit the exercise of economic reasoning. For me, this definition is nothing more than a slight twist of bounded rationality. Therefore, I provide an alternative definition for our discussion's sake.

manipulation of beliefs. As discussed at length in the previous section, KDA recognized accessible potential benefits and tried to reap them in everyday business activities. In so doing, individual drycleaners came to view the ERP in a new way. Mr. Jae Mun Nam in Northborough said:

> I am always willing to follow all the laws because I personally believe that government regulations are necessary on behalf of the public. But for me, to be totally candid with you, regulations sometimes looked unfair because they could only benefit the public at the expense of businesses. Now, I have a little bit different perspective. It was not until the ERP that I came to think that regulation could benefit all. It's as it should be.

He reinterpreted the conventional meaning of regulation (something burdensome) and attached a new meaning (something potentially beneficial) to it.

Contextual embeddedness admits that actors can be either rational or normative or in-between while rejecting any form of *a priori* rationality or normative values. What determines the final direction of behavior depends on interpretations of contexts. This means that both material facts and normative values themselves are indeterminate. Specific socio-historical contexts give meanings to them, and actors interpret and react to them. Regarding choices of action in relation to a particular set of preferences, an array of choices is expanded or constrained by the webs of understanding of the ongoing practices, identities, and interests of other actors that prevail in particular issue contexts. As such, a key to understanding the choice making under relational approach is to explicate the "intersubjectively constituted identities and the intersubjective meanings out of which they are produced" (Lee, Y. 2003). In other words, the making of choices is contingent upon actors' characterization of a particular situation in which they are located, and this situational characterization is heavily affected by ongoing relations between self and other actors in time. In this sense, knowledge embedded in individual's cognition is not completely rational but reflexive; the greater part of knowledge is socially derived and handed down to an individual by social networks. This is the essence of the relational approach, embracing both rationality and normative values. Chapter 5 will offer, in greater detail, examples and theoretical accounts of the connections between

networks of social relations, their influence on defining self-identities and compliance choice making within the socio-historical context.

Do a Moral Obligation and the Perceived Legitimacy Make a Difference?

As a reactionary correction of the deterrence frame of reference, the theory of norms replaces economic factors with social norms, which from a deterrence standpoint, are the sources of "organized hypocrisy"[43] in the way of objectively seeing problems of rule compliance. The inherent theoretical limits of the normative arguments have been uncovered in Chapter 2 and the previous section of this chapter, in comparison with deterrence theory and the relational approach. Therefore, this section will only examine whether and to what extent a sense of moral obligation (to comply) and the perceived legitimacy, two major explanatory variables of this theory, can account for the observed difference between the two cases.

Impacts of a sense of moral obligation

Proponents of the theory of norms often present real world examples showing that there are less violations than we would expect from the probability of detection and formal punishment, and that even in the poorest regions, a complete breakdown of law does not lead most people to engage in looting (Wilson 1993). They argue for the normative and communal nature of rule compliance. That is, society provides its members with an internal compass guiding them to act in prescribed ways that secure social order and minimize deviations (Wilson 1993). We call this internal compass "a sense of moral obligation" to obey laws. I am not under the illusion that I can provide an opposition to the moral argument. What I aim to examine is if there was a significant difference between the southern California community and its Massachusetts counterpart in terms of the degree to which they engage in this moral sense. If a general moral sense, as the theory of norms posits, is a decisive factor that should account for the observed difference in compliance trends, Massachusetts drycleaners are anticipated to demonstrate the higher degree of commitment to it, other things being equal. The

[43] Krasner (1999), Quoted in Lee, Y. (2003)

following questions were posed to roughly measure drycleaners' moral obligation to comply. The survey results are summarized in Table 14.

QM1: To what extent do you agree with the following statement?; "Regardless of whether laws are legitimate, citizens must obey the laws." Please, indicate from 1 (strongly disagree) to 7 (strongly agree) certain.

QM2: To what extent do you agree with the following statement?; "Despite decreases in profits, my business activities must not harm human health." Please, indicate from 1 (strongly disagree) to 7 (strongly agree) certain.

Table 14. Degree of Moral Obligation to Comply

	Average Score of Responses to QM1	Average Score of Responses to QM2
Southern California	6.57 (n=107)	6.50 (n=107)
Massachusetts	6.50 (n=103)	6.59 (n=103)

* See Appendix for ANOVA results

The differences in the average scores between the two regions are statistically insignificant. Drycleaners in both regions report a similar degree of duty to comply with regulations. The results are not surprising because we know that ordinary people recognize the importance of maintaining social order, and people know that the best way to maintain social order is to obey the law.

Confusingly enough, however, drycleaners' responses to the following question (QM3) were in stark contrast with those to the question of moral obligation (QM1).

- *QM3: To what extent do you agree with the following statement?; "If a government regulation targeting the dry cleaning industry is unfair, it is hard for drycleaners to comply. An unfair regulation must be revoked." Please, indicate from 1 (strongly disagree) to 7 (strongly agree) certain.*

Table 15. Degree of Resistance to Unfair Regulation

	Average Score of Responses to QM3
Southern California	6.50 (n=107)
Massachusetts	6.59 (n=103)

* See Appendix for ANOVA results

Were respondents hypocrites? If so, why did they lie? If not, what are we missing? Here our primary task must be to figure out whether a social norm of obedience *really* exists in the dry cleaning communities and to examine whether it is internalized in a form of moral obligation to comply at individual level. The task focuses special attention on the southern California community because their collective response to QM1 is diametrically opposed to the actual behavior, in comparison with the Massachusetts community's.

Based upon directly observable actions, proponents of the theory of norms would argue that there is no such a thing as a norm of civil obedience in the southern California community. They would say, "Social norms are abstracted from external manifestations of some sort (Schneider 1968). If directly observable actions by more than 90% of drycleaners fall into violation, it goes without saying that no social norm of obedience exists. Their responses to QM1 must be lies." How faithful is this argument to empirical reality?

The following hypothetical example might be useful in helping to point out the fallacy in the above argument: Aliens secretly visited southern California in the late 1990s and observed drycleaners' business activities for years. They witnessed that most Perc machines were leaking and that drycleaners were dumping Perc-containing waste in a sewer system. Correspondingly, aliens inferred, "Judging from observable behavior, there are no formal laws regulating drycleaners in this region of the Earth."

We know that this inference is wrong because we are already aware that there has been Rule 1421 in southern California. The reality is that the Rule has been broken with great frequency. The example implies that the rate at which southern California drycleaners violate Rule 1421 has nothing to do with falsification of the Rule's existence.

Likewise, even if every drycleaner were observed to behave differently, this would have no bearing on the guiding norm's nonexistence.

It is possible that southern California drycleaners falsely answered the question. People sometimes lie or speak with less than perfect understanding. Can this prove the nonexistence of the norm of obedience in the southern California community? I think not. Anthropologists have argued that even lies conform to standards and can tell us something significant. If these drycleaners had lied, then they might have believed that the lie conforms to a standard. Is it not *prima facie* evidence that the norm of obedience or a moral obligation to comply exists? Indeed, there are some symbols and concepts which are so general that virtually anyone who considers her/himself to be a member of society will accept them (Feinberg 1979). It is tenable to argue that a norm of compliance or obedience to laws is such a concept easily acceptable to ordinary people.

In addition, there is a good reason to believe that a sense of moral obligation exists in the form of social norm in this community. At minimum, there is no difference in socialization between the two dry cleaning communities highlighted by the theory of norms. Most Korean drycleaners had been through primary and secondary socializations that emphasized conformity to laws or state authorities. Primary socialization is the first socialization an individual undergoes in childhood and it involves more than purely cognitive learning. It occurs under circumstances that are highly charged emotionally. This is so because a child's socialization is done by significant others such as parents. S/he takes on these significant others' roles and attitudes and makes them her/his own. Since the child has no choice in the selection of her/his significant others, s/he internalizes their world as the only conceivable world. Therefore, primary socialization is the most important one for an individual (Berger & Luckmann 1967) and likely to result in entrenched beliefs.

By the time a Korean child enters an elementary school, s/he is told by parents, "Behave yourself. Do not challenge your teachers. They are the same as us [parents]." This stems from Confucianism that has provided Koreans with philosophies on everyday life since the 15th century, and sets the stage on which children are divided into the good and the bad. Confucianism likens the state to a parent and a teacher. Every interviewee, like any other Korean, is familiar with a famous Confucian doctrine: "Emperor (the

state), teacher, and parents are all identical." The state is to citizens what a parent is to children. For most interviewees, it is always wrong for children to disobey a parent. It follows that it is wrong to challenge the state.[44]

Secondary socialization is best illustrated by formal education (Berger & Luckmann 1967). Institutions of formal education under the auspices of specialized agencies contributed to strengthening the very belief in the importance of civil obedience. Most interviewees had formal education some time between the mid 1960s and the mid 1980s when Korea had been under two consecutive military dictatorships. They had been taught (or brainwashed) in schools that the greatest democratic value is obedience to the state authority (which is essential to maintain unjust military regimes).[45] Although blind obedience has been replaced in Korea by the notion of democratic legitimacy since the mid 1980s, those who immigrated to the U.S. seem to be bounded within their socializations structured in minds.

One may argue that familiarity with social norms or the state ideology is one thing, and their internalization is quite another. Unlike mere familiarity, internalization refers to "the immediate apprehension or interpretation of an objective event as expressing *meanings*, that is, as a manifestation of another's subjective process which thereby becomes *subjectively meaningful to myself*" (Berger & Luckmann 1967. Italics added). Therefore, one may ask how I am certain that a norm of obedience has been internalized in drycleaners' minds. This is a legitimate interrogation, so I need to respond to this question in detail.

Interviews frequently went beyond the issues of Rule 1421 and the ERP, and dealt with Korea's politics, economy, national defense, education and other social issues. Most interviewees had extremely negative views on any behavior that from their perspective might disrupt the status quo. For example, these drycleaners unleashed strong abomination of labor and student activists for their "irresponsible" activities: "The government is doing its best.... Criticizing is easy, but presenting alternatives is quite

[44] This paragraph discusses in no ways the extent to which this Confucian doctrine is valid in the 21st century Korean society. For the moment, it must be restricted to the interviewees' experience prior to immigration.

[45] Militant anti-government movement during the 1970s and 1980s in Korea seems inconsistent with the argument in this paragraph. Counterargument requires an understanding of conditions under which rival theories emerge and are distributed. This does not concern us because it goes far beyond the scope of the dissertation.

difficult. Do they [activists] have a vision of our country's future? I think they don't. They are making matters worse"; "Labor movement for justice? Bullshit. I think their stomachs are too full. They need to know what hunger is like."; "Those assholes [student activists] just don't want to study. That's why they protest. They don't even think about their parents working hard to pay tuitions. Stupid half-brained jackass."

Some interviewees admitted the necessity of social movements. Even in such cases, they mostly ended up saying, "An unjust law is also a law. Activists must not attempt to overthrow it. Why don't they seek more peaceful ways within the permissible limit set by the Constitution?" They were afraid that social movements challenging existing laws and government would bring about turmoil.

Culmination of interviewees' tendency to obey the state authority was observed during the period of the Korean Presidential impeachment in March, 2004. The incumbent President used to be involved, though indirectly, in labor movement in the mid 1980s and is known for his sympathy for upsurging social movements in a variety of arenas. Given that most interviewees' political opinion was diametrically opposed to the Korean President's, they were anticipated to respect an impeachment holding. However, drycleaners' reaction was quite the opposite of my presumption: "I don't like the President Rho, but the impeachment is wrong. It is like kicking a father off the family because he is not doing well." At first glance, drycleaners' hatred of social movements and disagreement upon the impeachment seem to be incompatible. However, this attitude clearly demonstrates internal consistency of moral reasoning on their part and shows the extent to which interviewees adhere to the state authority. Young Bin Choi, a former president of KDLA in Lawndale, California asserts:

> Under any circumstances, people should obey the law for harmonized society even if the obedience results in some inconvenience and monetary loss on my part. In the long run, that will benefit all of us including our children. How do you think the United States keeps maintaining its power over others? This country is ruled by laws. Most people obey the laws.

Interviewees viewed social order, laws and the state as coextensive. Allegedly, these drycleaners had an internalized belief in a duty to obey the state that from their perspective is the only accountable agent securing social order and laws by force.

Unlike the theory of norms' anticipation, the internalized social norm of obedience does not provide plausible accounts of the difference observed in our cases. A sense of moral obligation to obey the law may be necessary, but insufficient to ensure compliance judging from the observed phenomenon in which southern California drycleaners showed decreasing trends in compliance rates at a low level, despite their high degree of attachment to a sense of abiding by formal rules.

Impacts of the perceived legitimacy

A second major component of the theory of norms is the perceived legitimacy, that is, a specific evaluation of the appropriateness of a given regulation. It mainly comprises the reasonableness of the rules (Winter & May 2001), the manner in which rules are enacted (Bardach & Kagan 1982), and the fairness of regulators in enforcing the rules (Levy 1997), among other things. The following questions were posed to measure the drycleaners' perceptions of legitimacy or fairness of regulation and regulatory agency in each region. The questions were designed to contain similar contents in different formats for the purpose of the response consistency check. The results are summarized in Table 16:

To what extent do you agree with the following statements? Please, indicate from 1 (strongly disagree) to 7 (strongly agree) certain.

- *QL1: The current state regulation(Rule 1421 for southern California and the ERP for Massachusetts) is fair*
- *QL2: The state agency is responsible and reliable*
- *QL3: Drycleaners' opinion is reflected in regulatory decision making*
- *QL4: When I have difficulty complying with the state regulation, the state agency helps me solve the problem*
- *QL5: The state agency's way of enforcing rules is fair*

Table 16. Degree of Perceived Legitimacy: Average Scores of Responses to QL1 ~ QL5

	QL1	QL2	QL3	QL4	QL5
Southern California (n=107)	1.54	1.88	1.76	1.75	2.10
Massachusetts (n=103)	5.85	5.90	5.94	5.62	6.00

* See Appendix for ANOVA results

Table 16 shows that in each dry cleaning community, responses are quite consistent across the questions. Overall, the southern California community has strong negative impressions on both Rule 1421 and the SCAQMD. Their stories are opposed to the Massachusetts' where KDA did field (mouse) and thought (cockroach) experiments. KDLA officers and several individual drycleaners argued, essentially:

> Rule 1421 makes no sense. If Perc is really dangerous, then government should've banned its production in the first place. But the chemical industry is still producing it. Isn't this evidence that Perc is much less dangerous than government advertises?
>
> Moreover, we are not the only Perc users. The Hollywood, Navy, the aeronautic industry, metal finishers, solvent degreasers.... they all consume tremendous amount of Perc, but they are not regulated. Why us? It is because we are non-white minority immigrants. One day, I asked an inspector why the SCAQMD regulate us. He said, "I don't know. I am just doing by what I heard from higher authority." Even inspectors are unable to justify their action (Personal Communication with Mr. Seojun Ma in Fullerton, California)

In contrast to drycleaners' belief, in fact, other Perc users are also regulated (e.g., Solvent degreasers are subject to Rule 1122; film cleaning and printing operations are regulated under Rule 1425, etc.) However, most drycleaners did not know about regulations targeting other Perc users. Even when I informed them that those industries were also being regulated, many interviewees were skeptical of the information: "Are you sure? The association never mentioned that."

Massachusetts drycleaners were also unaware that other major Perc users are regulated. Nevertheless, KDA's response was different from KDLA's:

> It seems unfair that government touches only the dry cleaning industry. Other industries using Perc should be regulated. But they are who they are and we are who we are. Unlike those industries, we do not harm the environment and human health by following the ERP. We are proud of that. And it is not difficult to fully comply.
>
> - In response to the question of whether or not field inspectors abuse their power over drycleaners, the interviewee said -
>
> Do inspectors abuse their power? No. We [drycleaners] have been doing well. Why would they harass us? (Personal Communication with the president of KDA)

In general, the Massachusetts community views the ERP and the MADEP as legitimate and fair, as opposed to the southern California community's views on Rule 1421 and the SCAQMD. If we accept these findings as truthful, compliance must be strongly correlated to how drycleaners view of the nature of current regulation and regulatory agency, that is, the perceived legitimacy of rule and rule enforcement. This is not to say that the perceived legitimacy is the sole factor motivating compliance behavior. As we have seen, compliance is also connected to actors' material well-being to some degree. Nevertheless, it is reasonable to say that the perceived legitimacy plays a crucial role of behavioral guidance instructing one how to act. Proponents of the theory of norms posit that this behavioral guidance emanates from social norms. It has nothing to do with rational reasoning. One consigns the perceptions of legitimacy to the level of social system, and concrete behavior stemming from this guidance constitutes social action (Feinberg 1979).

While this position seems tenable from an empirical point of view, it presents a further question with respect to the formulation of the perceived legitimacy. Why did the two communities with identical cultural attributes and level of formal education come to have different perceptions of legitimacy under similar regulatory conditions? If we are to fully understand the role of the perceived legitimacy in making compliance choices, it is essential to continue pushing the question of how community members formulate a sense

of legitimacy. We will discuss the issue associated with the above question in detail in the following chapter. For the moment, it would be useful to mention briefly the importance of the trade associations and of regulators' strategies in formulating dominant perceptions of legitimacy.

One of crucial points of the dissertation, following social constructivism, is that reality is socially defined and interpreted through social interaction. Concrete individuals and groups of individuals serve as definers and interpreters of reality. To understand socially defined reality at any given time and its change over time, it is a prerequisite to understand the role of the social organization (i.e., trade associations and formal regulators in interactions in the dissertation) that influences actors by defining and interpreting for them aspects of social reality (Berger & Luckmann 1967). This is a main theme of Chapter 5.

The problem of variations in social norms

While having discussed the impacts of the two normative factors on compliance behavior, three types of inconsistency have been recognized, which cannot be explained by the theory of norms. The first type of inconsistency is one between norms and drycleaners' actual behavior. A good illustration of this has been provided in the southern California case (under the heading of 'impacts of a sense of moral obligations').

The second type involves norms that seem contradictory but are found in a single community. These norms are held simultaneously by a single drycleaner. The theory of norms contends that one's general sense of moral obligation to comply, resulting from a life-long socialization process, is likely to affect the specific assessment of given regulations (Winter & May 2001). Indeed, a theoretical understanding of norms of moral obligation has been centered on legitimacy. However, our data are incompatible with this traditional wisdom. Despite strong qualitative evidence of an internalized sense of duty to obey the state and the laws, the majority of drycleaners in both regions indicate that it is hard for them to comply unless a given regulation is fair. The southern California drycleaners especially illustrate this seeming contradiction, as they confront an inconsistency in the logic of their beliefs:

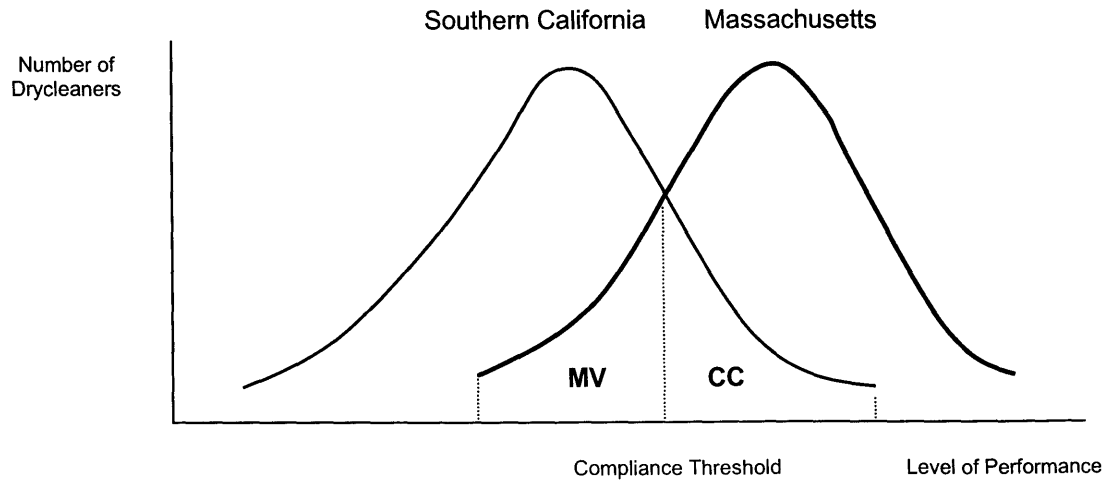
- The state is a legitimate authority.
- Regulations are enacted by the state.
- Therefore, regulations are inherently legitimate.
- However, the regulation encountering drycleaners is illegitimate.

In this confrontation, these drycleaners' internal moral obligation to obey the law seems to have been overridden by a more specific evaluation of the rule's appropriateness. Nevertheless, they still believe that an unjust law is a law that must be followed.

The above two inconsistencies reveal that while general norms with respect to a moral obligation are similar, perceptions of legitimacy are different between the cases. This implies that an internalized moral obligation does not work under certain circumstances. Just as a compass cannot indicate north in a magnetic field, so it appears that an internal moral compass is incapable of guiding behavior within certain social contexts.

A third inconsistency is found in variations in compliance within a single community. A careful explanation of this type of inconsistency will be provided in greater detail in the last section of Chapter 5. But before turning to that task, let us take a look at Figure 11 to clarify the inquiry.

Figure 11. Within-Group Variations in Compliance[46]



[46] This figure was originally suggested by Prof. Archon Fung.

The majority of the Massachusetts dry cleaning community fully complies with the ERP while a small number of drycleaners violate it (area MV). Conversely, the majority of the southern California community violates Rule 1421 while a handful of drycleaners comply (area CC). Although the theory of norms is capable of explaining the between-group variation, it rarely provides plausible accounts of variations within a group. In this sense, the theory of norms is not so much incorrect as it is incomplete. How can we account for the within-group variations? Can we simply attribute them to individual idiosyncrasies? Otherwise, are there any other fundamental reasons for within-group variations?

These three internal inconsistencies observed in our cases cannot easily be accommodated within the theory of norms.

Beyond Deterrence Theory and the Theory of Norms

This chapter has investigated two regulatory instances that were expected to yield similar outcomes, according to predictions of dominant theories. Yet despite nearly identical conditions, the two dry cleaning communities' regulatory outcomes with respect to compliance trends were in stark contrast. We have found the reasons for the divergent compliance decisions in the different perceptions of costs and benefits accruing with compliance on the one hand, and the perceived legitimacy on the other (See Table 17).

Table 17. Analytic Outcomes of the Method of Difference

	Dependent Variable	Independent Variables						
		Economic in Nature					Normative in Nature	
	Compliance Trend	Probability of Detection	Probability of Penalty Imposition	Severity of Penalty	Compliance Cost	Compliance Benefit	Moral Obligation	Perceived Legitimacy
Southern CA	Declining	Equivalent	Equivalent	Equivalent	*Divergent*	*Divergent*	Equivalent	*Divergent*
MA	Increasing							

While the cost of compliance was identified by deterrence theory as a critical compliance factor, the way it is formulated and the route through which it affects decision-making are radically different from what the theory suggests. Most notable is a discovery of the perceived benefit, which I call nurtured benefits. Deterrence theory does not recognize or

incorporate the role played by nurtured benefits in affecting compliance behavior. Likewise, although the theory of norms has paid particular attention to the importance of perceived legitimacy, the fundamental error of this theory lies in its failure to recognize that an individual is by no means unconditionally subject to classificatory thought. This theory appears incapable of disentangling the formulation of perceptions of legitimacy in response to formal regulatory strategies and one's general sense of moral obligation at a deeper level, a shortcoming since these views are sometimes independent of one another as our cases suggest.

More critically, neither theory is able to answer the question of where these influential factors affecting compliance choices come from. For deterrence theory, it does not matter where they come from, if and only if the model can explain and predict behavior. This position presupposes that economic factors are inherently disembedded and rather externally given, viewing action as stemming from prior preferences. When the factors are actually endogenous and socially constructed, however, the meaning of rational action becomes unclear (March & Olsen 1989) and the manner in which they are shaped is important.

In response to the question, the theory of norms would say that compliance factors are socially and culturally developed. This assertion is much the same as saying that they are externally given. In order to prune away this futile tautology, it is necessary to identify the conditions of norms generation (Ullmann-Margalit 1977).

As this chapter has shown thus far, though in fragmented ways, all accounts are funneled into the roles played by the trade associations in relation to regulatory agencies. Both deterrence theory and the theory of norms miss this critical point. Even the seemingly factual accounts of the observed phenomena told by the individual drycleaners are little more than subjective interpretations of meanings affected by the dominant narratives forged by the trade associations. Therefore, it is indispensable to examine why and how the two trade associations contrived radically different ways of handling the nearly identical situation. The examination will be focused on how individual drycleaners are related to the associations and how their structured relations interact with the state regulatory agencies in a broader social context. By adopting the relational approach, we will capture how different patterns of interactions could bring about the different

willingness, opportunities and capacities for individual drycleaners to respond to the regulation.

In the following chapter, the relational approach provides a better understanding of compliance behavior through in-depth descriptions which replace the vague, abstract concepts of the existing views with more precise, concrete ones. This shift in emphasis in interpreting rule compliance enables the important recognition that the contexts within which diverse actors interact do matter.

CHAPTER 5

MAKING SENSE OF COMPLIANCE AND NONCOMPLIANCE

In relation to regulators' enforcement strategies, this chapter tells a story of *how* and *why* the two trade associations came up with radically different organizational strategies of incentives and constraints for their members. The story is both explanatory and exploratory: the sense of how is explained through specific situations in which the events actually occurred; the sense of why is explored through identifying the essential conditions in which similar situations could arise. The story is framed by the relational approach's key phrases such as 'socio-historical context', 'relations among actors' and 'ongoing processes'.

To provide a clear picture of rule compliance behavior in a coherent narrative, the separate stories of the events described in the previous chapter must be viewed in a web of socio-historical contexts since their partiality exists in the matrix of a whole. The importance of understanding context can be illuminated by a linguistic analogy. An event is to a context what a word is to a whole sentence. For example, the English word "fine" conveys a different meaning when used as either a noun or an adjective. Its true meaning can only be grasped in a whole sentence, not in isolation from other words. Meaning is *always* contextual. Recall the example of the Red Sox-Yankees relation. Why are the Red Sox pitchers more inclined to commit to a norm of retaliation when they face the Yankees? Without understanding a past series of events between the two teams in the historical context, the present hostility may seem mysterious to people who are not familiar with the rivalry.

Although actors are not always shackled by historical legacies, present events and their relations are often built on past events. If they appear unrelated to past events, this may not necessarily reflect the lack of connection to the past, but rather a deliberate manipulation to serve some purpose (e.g., diplomatic relations between the U.S. and Iraq). In other words, perceptions of the past and present are not fixed, but can constantly be reinterpreted in an effort to serve particular ends. Accordingly, we must analyze relations between actors and events through a process of moving back and forth along a

historical horizon – in what I refer to as 'ongoing processes'. Analyzing specific relations between events and actors reveals interesting variations in outcomes, depending on how actors interpret or characterize their past and present in ways that inform their decisions for the future (Piore et al. 1994). It is my hope that this in-depth storytelling will help us understand why the actors behave in certain ways – why some actors comply with present regulation and why others do not.

This chapter consists of three sections. The first section provides a brief historical sketch of the two dry cleaning communities. After outlining the ways in which individual drycleaners are linked to their respective trade associations, it then shows how different forms of linkages create different channels of communication with and representation to regulatory agencies. The third part of this section discusses the role of regulators and their strategies affecting drycleaners' perceived legitimacy on a given regulation in relation to the associations.

The second section examines how these different relations between drycleaners represented by trade associations and regulatory agencies shape their identities, their understanding of given regulations, and thus their strategic compliance choices. The reason for focusing on trade associations is that as implicitly demonstrated in the previous chapter, they tend to be viewed as significant others by individual drycleaners, and thus exert steering influences on individual behavior. Finally, the last section juxtaposes these case studies to experiences within other industries in order to explore the essential conditions of compliance behavior in the context of small firms.

Structures of Networks

Linkages between Individual Drycleaners and Trade Associations

The Southern California Case

Korean immigrants in southern California came to concentrate on the dry cleaning industry in the late 1970s. As the number of dry cleaning facilities increased, competition heated up and conflicts became intense. Viewing this tendency as self-destructive, drycleaners strongly felt a need for a coordinating mechanism to resolve conflicts. Having experience in organizing dairy farmers associations prior to immigration, Hee-Kyu Park worked with several other drycleaners to organize sixty-two facilities in the

region. In October of 1982, they founded the Korean Drycleaners-Laundry Association (KDLA).

KDLA's activities covered extensive areas: from founding its own training school whose primary mission was recruiting new drycleaners and providing its members with technical assistance; to offering annual seminars on management and special dry cleaning techniques; to creating a golf club and diverse cultural clubs, and hosting end-of-year parties and picnics to promote intimacy among members; to establishing hotlines to connect its members dispersed across four counties; to hiring a lawyer and developing emergency service system to provide legal services; to granting scholarships to members' children, to name a few. In the early 1990s, KDLA even raised a fund amounting to $200,000 from which those who paid an annual membership fee could borrow up to $5,000 at a zero interest rate. These practices were successful at expanding the association's scale, and thus the membership reached over one thousand by the mid 1990s. However, tensions surrounding the effective use of the fund and other issues grew over time, and subsequently exploded in 1997.

1997 was an extremely difficult year for KDLA. The hardship was generated by the environmental regulation-related issue in the previous year. In 1996, the president of an American drycleaners association[47] was accused of contaminating a septic system. Immediately after the accusation, the American association proposed a plan that drycleaners in southern California co-establish a fund to clean up contaminated sites. In response, two former KDLA presidents (in 1994 and in 1995, respectively) wrote letters supporting the proposed plan under the name of KDLA. Their letters deviated from the KDLA's official policy resisting all types of unfair (from the KDLA's perspective) environmental regulations. KDLA argued that compared to the film industry and the metal finishing industry, dry cleaning operations have negligible impact on the environment. To overturn Rule 1421 or relax its requirements, KDLA had donated considerable portions of the membership fees to California Fabricare Institute (CFI) that

[47] Interviewees did not remember the official name of this association. It was simply known to Korean drycleaners as the American Drycleaners Association. This association must be either the Greater Los Angeles Dry Cleaners Association (GLADCA) or the Harbor/South Bay Dry Cleaners Association (HSBDCA).

had challenged the Perc-related regulations. Accepting the proposal could be viewed as turning KDLA's position on its head.

Moreover, KDLA blamed these two former presidents for making fraudulent use of the KDLA's name, and thus dismissed them from membership in fall 1996. The news of the two men's ejection from the association appeared as a warning sign in *Cleaners News* published in October 1996. It was a shocking scandal in the Korean dry cleaning community and it did not take long time for the community's opinion to be divided into two groups. A majority group argued that the two men deserved the ejection, while the other group counter-argued that although it was wrong to use the KDLA's name without permission, their ejection from membership was too harsh given that their act was not personal embezzlement. This group claimed that at minimum, establishing a clean-up fund through cooperation with American associations would not be a bad choice. In early 1997, this second group of drycleaners withdrew from KDLA and founded a new association called Coalition for Korean Drycleaners (CKD).

At this critical moment, ten former KDLA presidents met together to resolve the tension. This informal advisory group's most powerful persuasion among other things was, "Wasn't it enough to experience the tragic division of our mother country? What would Americans think? We are disgracing the entire Korean community in southern California." The advisory group's emotional stimulus was quite persuasive. The two associations agreed to reunite and reinstate those two former presidents. They officially announced the agreements in October 1997.

The reconciliation between the two associations brought about self-contradicting tendencies with respect to the degree of cohesion within KDLA. While a majority of members contributed to increasing the level of group cohesion by following the association's guidance, the small number of drycleaners began to challenge associational decisions inside the governing board of KDLA.

In accordance with the first tendency, it was visible that the association's resistance to Rule 1421 became intense with increased supports from more drycleaners. Resistance to the Rule does not mean that KDLA openly advocated noncompliance. It took a form of raising questions of the Rule's fairness. Rae Young Kim, a former KDLA president in 1993, stated that, "Even if American associations hated the Rule, they

seemed to give up opposition in despair due probably to pressure from government. Unlike us, they didn't fiercely resist it. KDLA stood in the front line fighting against the Rule." Encountering the amendment of the Rule proposed in 1998, KDLA conducted systematic research on Perc's health effects and international cases. The association's findings countering the SCAQMD's are summarized as follows:

- There is no scientific evidence confirming Perc's carcinogenic effects.
- In the same vein, there is no solid rationale for the SCAQMD's claim that Perc contributes to air pollution in southern California.
- Canadian, British, Danish, and Swedish governments never reported Perc's dangerous effects on human health.

To advertise unfairness of the Rule, KDLA recommended that its members contact customers. KDLA launched a signature-collecting campaign and the individual members appealed to customers for their sympathy. One of KDLA officials stated, "The campaign was successful. Most customers understood the situation facing us. Some of them even said that the Rule was ridiculous." The perceived public support made KDLA and its members feel confident of the campaign, and thus the resistance to the Rule became intense at both associational and individual level.

Here a critical question arises: why did KDLA begin to more actively commit to resisting the Rule immediately after the reunification? The association declared to be serving the members' collective interest, but this does not address the question of "why at this moment, why not before." An alternative explanation is as follows.

As noted above, the breakup of the association in 1997 disappointed many drycleaners in the region. This event was so embarrassing that the key constituents of both KDLA and CKD wanted to let it go. As Sabel (1992) correctly pointed out, however, simply forgetting cannot let bygones be bygones. More precisely, it was impossible to erase what already took place in many drycleaners' minds. Letting bygones be bygones required a convincing story that redefines the past event and "suggests a future in which all subsequent conflicts will be limited in virtue of being defined in advance as family fights" (Sabel 1992). In order to prevent or mitigate potential cynicism toward the association, KDLA needed to convince its members that previous conflicts

resulted simply from misunderstandings rather than irreconcilable differences. Resisting the Rule in cooperation seemed to the association to be the best way to demonstrate that KDLA and CKD had shared a common value and history, and that the prior conflict was like a quarrel between husband and wife. A former KDLA president commented, "Soil becomes firmer after rain. Since reunification, the association has been in perfect order and the members have become more collaborative. So, we could concentrate on the impending issue in more effective ways than before. A misfortune turned into a blessing." Indeed, the campaign against the Rule was considered by drycleaners as a symbol of *esprit de corps* within the community.

Meanwhile, a small number of drycleaners strongly felt that the association's guidance was headed in the wrong direction. One drycleaner belonging to this group stated, "I admit that Rule 1421 was unfair from the drycleaner's perspective, but legitimate from the public perspective. Isn't it true that Perc pollutes the environment in one way or another? And the Rule was not that difficult to comply with. The association overreacted and made worse the relationship with the SCAQMD. Things could be better, but KDLA never accepted that it made a mistake." Another drycleaner scornfully added, "Why would they accept it?.... It [increased conflict with the SCAQMD] was not a mistake. It was deliberate."

An opinion leader of the opposing party raised objections to the association's guidance through the official channel of governing board meetings, only to be ignored. Eventually, he was officially excluded from the board. A drycleaner in Cerritos explained:

> KDLA has had twelve branch offices in southern California since 1986. The governing board of the association used to consist of representatives of each branch office. All of a sudden, however, the association rejected our branch representative from the governing board.
>
> We demanded an explanation of that decision. KDLA responded that the incumbent president exercised a veto and said that they would accept anyone except for him. Why not him? He had worked so hard for KDLA. And he has been a member of the Minority Public Advisory Board of the AQMD since 1998. He is familiar with diverse environmental regulations and maintains a

> good relationship with the AQMD people. That was why we recommended him as a board member.
>
> We remonstrated given that the president did not have a veto power according to the charter. Surprisingly, they already amended the charter and granted a president veto power. We didn't know that. How could that happen? As you may know, a charter is to an association what Constitution is to a nation. Its amendment must be approved by a general assembly which is held in December every year. They did not even submit an amendment proposal to the general assembly. What kind of organization is like this?

KDLA and these drycleaners have since drifted apart. The tension between the two parties intensely protruded in early 2004. The leader of the opposing drycleaners was in charge of a golf club founded in 1991 as a KDLA's affiliated sports club. KDLA sent official letters to its members and the golf club to show that their patience was getting thin. Let us look at the main contents of those letters.

> Document #: KDLA 2004-002
> From: Korean Drycleaners-Laundry Association
> To: Executive Secretary of the Golf Club
> Subject: Notice to Prohibit the Use of the Term "KDLA"
>
> February 6, 2004
>
> ..... The golf club was founded as a branch of KDLA to promote friendship among the members. Over the last few years, however, the club was led by non-members and broke off the relation with KDLA. KDLA will no longer stand it....Based upon a decision made by the governing board, the Association clarifies the followings:
>
> 1. Your club cannot use the term "KDLA" on February 1st, 2004 and thereafter.
> 2. On February 1st, 2004, the association founded a new golf club whose official title is "KDLA Golf Club."
> 3. The association will notify sponsors and drycleaners in the region that your club has nothing to do with KDLA.
>
> News Letter: Vol.1, No.1
> From: Korean Drycleaners-Laundry Association
> To: KDLA Members
> Subject: New Golf Club
>
> February 6, 2004
>
> .....In the last few years, the golf club has been drifted apart from KDLA. To address the members' concerns, the KDLA governing board met with Mr. Doh [the executive secretary of the golf club] on January 22nd, 2004. *He declared that the golf club would withdraw from the association and act independently.* The governing board accepted Mr.

> Doh's declaration. Therefore, KDLA created a new golf club this year. Bi-monthly golf tournaments will be hosted by the new club from now on..... (Italics added).

Mr. Doh denied the statement italicized above: "I've never said that. On the contrary, they asked me if the golf club were willing to be independent of KDLA..... The golf club does not belong to the governing board. It belongs to the entire dry cleaning community. So, I said 'I cannot decide it now. I must ask the club members.' That was all I said."

KDLA sent a subsequent letter to Doh.

> Document #: KDLA 2004-006
> From: Korean Drycleaners-Laundry Association
> To: Executive Secretary of the Golf Club
> Subject: Confirmation Notice to Prohibit the Use of the Term "KDLA"
>
> March 1, 2004
>
> ..... Despite the previous warning letter issued on February 6th, you announced under the name of KDLA that your club would host the 70th golf tournament. KDLA has no choice but to interpret your announcement as spiting the association. KDLA warns you that next time this happens again, appropriate actions will be followed.....

One retiree in Lawndale, who identified himself as neutral, stated, "The conflict within the association was not serious, but it has rapidly grown because both parties hurt the other's emotions. KDLA seemed to think that the leaders of the golf club undermined the association's efforts to pursue collective interests of the community..... In the meantime, the golf club members claimed that the association distorted their opinion to dominate decision power by excluding them. These guys might be mistreated, but they should consider why the governing board viewed them in that way."

Throughout the second half of the 1990s to now, the association has suffered from factional infightings and from a minority group's exclusion from associational matters to avoid undeserved blames. One drycleaner in this group stated, "People viewed me as a splitter and I was really hurt. Why should I be treated in that way? I am not going to contact KDLA again." This minority group of drycleaners formed its own small-scale network apart from KDLA and shared information about regulations, cleaning techniques and social life on their own.

The Massachusetts Case

Massachusetts Korean Drycleaners Association (KDA) was founded in May 1982. Starting with seven drycleaners in Boston area, KDA's membership reached approximately fifty by 1989. KDA's main roles were helping new drycleaners open a business and providing them with technical assistance. Throughout the 1980s, the associational activities remained within the dry cleaning community, focusing solely on developing and sharing special dry cleaning techniques. They made no effort to contact outside actors such as suppliers or government agencies.

It was in 1990 that the association took first collective action to cope with a cartel among suppliers. Drycleaners believed that the prices of commodities indispensable for a dry cleaning business were set too high, but individual drycleaners did not know what to do to solve the problem. After collecting extensive opinions from its members, the association negotiated with suppliers to lower the prices. KDA seems to have aimed for a co-op, but failed. A former chairman of the association's governing board explained:

> We got the prices right for a short period of time. Unfortunately, some of us deviated from KDA's guidance. Suppliers strategically selected a certain number of drycleaners and offered them ridiculously low prices. They [the drycleaners] withdrew from the purchasing association one by one. So, our effort to collectively purchase cleaning commodities failed. Immediately after that, suppliers set the prices above the previous levels..... We could've done better if all of us had cooperated (Personal Communication with Byoung-Joon Chang in Peabody).

This experience brought about two lessons for the community: First, individual drycleaners began to learn the importance of organizing; second, KDA recognized how difficult it is to organize collective actions.

In the early 1990s, there were approximately 270 Korean drycleaners in Massachusetts. Of them, two hundred drycleaners joined the association and a surge in membership generated a serious problem for KDA. Unexpectedly, nobody wanted to be in charge of the association. That is, the association could not even find candidates for a presidential position. The reason was twofold. First, since the members' expectations

from the association were elevated as evidenced in abrupt increases in membership, potential presidential candidates were afraid that they could not meet those expectations. No one wanted to be remembered as an incompetent leader. Second, drycleaners already knew that the position would require personal sacrifice in terms of time and money given that former presidents used to devote their own resources to associational activities to make things work.

Facing this problem, KDA searched a person who had a capacity to lead the association. In November 1992, Ki-Seok Kim, the 3rd KDA president, contacted Harry Cho to deliver the association's suggestion to set him up as the next president. Cho declined the invitation. Nevertheless, Kim visited him three times to tell him that national government recently passed the environmental law regulating the dry cleaning industry and the current board members were not prepared to handle it. KDA kept appealing to Cho's expertise in legal issues and sympathy for the association. Kim delivered the association's subsequent message confirming that "First, the association will grant you sufficient amount of discretion. You can do with it as you think best. Second, we know that it is required for you to spend extra time doing the associational works. But you will not spend your own money." To keep the second promise, fifteen board members collected $3,000 to cover Cho's future associational activities (although Cho ended up losing $2,000 out-of-pocket in each year of his presidency). Persuaded by the association, Cho finally accepted an appointment.

On December 10th, 1992, KDA convened a special session of the general assembly in the Lexington Holiness church to announce an appointment of the new president. Encountering a new OSHA regulation, Cho wanted to use this meeting as a stage of an environmental seminar as well. Approximately 150 drycleaners attended the meeting despite a snow storm warning on the date. Cho recalled this event in which he was deeply involved for the first time:

> The heavy turnout was a pleasant surprise to the association. At the same time, it gave us [KDA] a difficult homework…….
>
> They participated in the meeting not only to listen to a new president but also to know about a new regulatory environment. We presented how Perc could harm drycleaners and generate ground-level ozone, but it was not enough. They asked essentially,

> "so, what exactly do we have to do?" Our answers were too general to meet their inquiries. The board members felt a duty to study to meet the members' demands. On the other hand, the governing board members agreed that this could be a good opportunity to increase the influence of the association within the community.

A visible regulatory plan by the state government was not proposed until 1995. Nevertheless, key board members began preparing for would-be regulations because they anticipated that a new state regulation might be enacted in the future. At the same time, the association made efforts to increase self-esteem of members and internal cohesion in the community. These efforts were derived partly from members' personal hardships as non-white immigrants and partly from the lessons of the 1990 experience.

In Massachusetts, there was a self-defeating atmosphere in which drycleaners felt an inferiority complex with respect to their jobs. Job dissatisfaction was derived both internally and externally. This was generally true in other regions in the United States. They tended to think that dry cleaning was a low class job avoided by educated people. A drycleaner in Newton confessed:

> Every morning, I say hello to customers going to work in suits. Many of them are professionals....professors, doctors, lawyers, businesspeople, accountants.... Honestly, I envied them.... I graduated from the second best university in Korea. Many of my college friends have respectable professional jobs. I frequently asked myself, 'what am I doing here?'

Some drycleaners in Massachusetts (and in southern California, too) used to be employed by large firms. At some point in their professional career, they encountered invisible racial discrimination and recognized that they might be no longer promoted. For that reason, they decided to retire before being laid off and moved on to start their own businesses. These drycleaners commented, essentially, "When I first came to the United States, I had a dream, but I couldn't get over a hurdle of reality. There was nothing I could do in this country except for low class jobs".

Many interviewees believed that dry cleaning was despised by other Koreans. In the early 1990s, KDA invited a Korean consul-general in Boston to its events, but he

never showed up. KDA heard its members self-contemptuously say, "If we were a Korean Doctors Association, he definitely would come."

Psychological disparity between a membership group and a reference group, and its concomitant feeling of self-despise were major barriers to group integration because drycleaners entrapped by this self-destructive consciousness tended to make themselves hermits. From the association's viewpoint, there was a need for overcoming the sense of defeatism permeating throughout the community. Cho stated:

> One day, I watched then popular Korean soap opera depicting immigrants' life. Some lines looked down on drycleaners. I was angry. What's wrong with dry cleaning? We are not criminals, are we? We work more than twelve hours per day, six days per week to make money for our children's education. Why should our job be looked down on? You know the old Korean proverb, "All legitimate trades are equally honorable." No occupation in this world deserves despise..... I strongly felt that the association must do something to make things correct.

From 1993, KDA started offering periodic seminars dealing with two different but related issues. Spring seminars dealt with advanced cleaning techniques and fall seminars focused mainly on effective management skills (As noted in Chapter 3, KDA translates the ERP recordkeeping requirements into a way of systematic management years later). But these were not the whole contents of seminars. What KDA really aimed for at the time was imbuing its members with self-respect. In spring seminars, KDA repeatedly emphasized, "See, nobody can do this without being trained. Our job requires special machines and techniques. We are professionals."

KDA's effort to enhance self-respect served as what Berger and Luckmann called re-socialization in which the past is reinterpreted by retrojecting into the past self various elements that were subjectively unavailable at the time. This reinterpretation of past biography follows the re-socialization formula: "Then I thought.....now I know...." (Berger & Luckmann 1967, p.160). Several interviewees commented, essentially, "They [KDA] were absolutely right. There is no reason to shame a dry cleaning job. Rather, it is shameful to be shameful of my job." In a similar vein, a drycleaner in Northborough stated:

> I don't remember when exactly it was....but it was a weekend after a management seminar in which Mr. Cho and Mr. Lowe kept telling that we should escape a sense of inferiority.....
>
> My daughter going to a college in New York State was home. Her roommate's father was a plastic surgeon. I told her, "I wish I could be a doctor or a professor, so that you can be proud of me." She hugged me and said, "Dad. Whatever you do, I am always proud of you"..... That my child took pride in me was a great comfort..... Honestly, I am still not that proud of being a drycleaner, but I am no longer shameful of my job.

As intended by the association, seminars were not simply about how to fix machines, skills and primitive forms of management. They were also about how to fix the permeating belief in the community.

Redefining self-identity through re-socialization seems to have contributed to tightening internal cohesion to a considerable degree. KDA estimated that there were approximately 150 attendants in each seminar. It is possible that the high attendance rates throughout the 1990s resulted from reasons other than enhanced self-respect, such as the association's extensive member outreach. Indeed, to bring as many drycleaners as possible to associational events, KDA contacted all available drycleaners' networks such as religious groups and rotating credit associations widely dispersed in the state. However, the outreach effort was not new. It had been made long before 1993, but drycleaners' participation rates at that time were not as high as those of the 1990s. Therefore, it is reasonable to infer that those who previously disaffiliated themselves from the community came to interact with others by way of redefined self attached to the communal life.

It must be mentioned here that our emphasis on redefined identity does not lead automatically to collective identity sometimes underestimating the uniqueness of individuality. My aim is limited to show; that self-identification is a key element of the individual's subjective reality; that different identities lead to different actions; and that identity formation is a social process, that is, identities are (re)shaped by particular social relations. Needless to say, these are also true in the southern California case. We will discuss the above points in greater detail in the following section when illuminating the

broader social context in each region in which identities are embedded. For the moment, our focus sticks to examining how individual drycleaners are linked to KDA.

As we have seen, KDA played a role of a (re)socializing agent. It is likely that the socializing agent takes on the feature of significant others *vis-à-vis* the individuals being (re)socialized (Berger & Luckmann 1967). Although significant others are not the only source serving to crystallize and sustain the individual's identity, they usually occupy an influential position in processes of identity formation. Indeed, many interviewees stated that KDA's encouragement played a decisive role in escaping a sense of job inferiority. Not surprisingly, individual drycleaners came to discuss business details with KDA and gave their support to the associational decisions. In turn, increased member support contributed to successful fulfillment of associational goals.

This aspect is best illustrated in KDA's involvement in the Massachusetts governor's election campaign in the mid 1990s. Led by Korean Society of New England (KSNE)[48], opinion leaders of the entire Korean community gathered together to discuss how Korean immigrants in the region could promote their social standing. From their perspective, it was urgent to move beyond an ethnic enclave and interact with mainstream society.[49] A promising way to do this was raise the political voice by actively engaging in election campaigns. They decided to donate campaign resources to a candidate who made minority supports explicit in election pledges. While other business associations' contributions were negligible, KDA was successful at raising a fund which amounted to $12,000. KDA appealed to the members' emotions: "Changes can be so slow as to be imperceptible during our life, but our children will benefit from our continuing action. You don't want your children to be ignored and discriminated in this country as you were." Myung-Sool Chang, the editor of New England Korean News, stated, "Since this event, KDA's status in the entire Massachusetts Korean community has been elevated to a considerable degree. Now, it is hard to imagine the Korean community's statewide events without having recourse to KDA."

---

[48] Korean Society of New England was founded in 1972. Despite its name, the Society represents the Korean community in Massachusetts only.

[49] The term "mainstream society" is frequently used by Korean immigrants to refer to the American society. The term implies that these immigrants are not integrated into the new society.

It was around this time that the Korean consul-general in Boston started appearing KDA's events and KDA became a regular guest at events hosted by a consulate. Moreover, drycleaners began to take on key positions within KSNE. Individual drycleaners viewed the association's elevated social status as their own and gave more credits to KDA.

This does not necessarily mean that the individual regarded oneself as an organic element or a cell of the association. Nevertheless, it is no exaggeration to say that the degree of integration within the dry cleaning community has increased and the association has been more entrusted by its members. These trends are implicitly evidenced in analyses of terms of reference used by interviewees when they call KDA. Approximately one-third of Massachusetts interviewees used the first-person plural possessive form to indicate KDA. That is, they called KDA "our" association. It was not until the comparison of interview transcriptions for the two regions that I recognized the significance of this type of a term of reference as a mode of indicating a high degree of social intimacy, because using a plural possessive form rather than a singular form is a deep-rooted manner for a Korean speaker to indicate one's possession (For example, native speakers of Korean say "our school", "our house" and "our country" etc. to actually indicate my school, my house, and my country in certain contexts). It was evident that the frequency of saying "our association" was even higher in Massachusetts than in southern California. Unlike their Massachusetts counterparts, the majority of southern California interviewees simply called KDLA "the association" or "the cleaners association."

It must be noted here that the possessive form "our" as in "our school", "our house" and "our country" must be interpreted as the perceived closeness between a speaker and her/his schoolmates, family and fellow countrymen, not between a speaker and a listener. In the same vein, the term of reference "our association" can be considered as indicating social proximity among the community members. At minimum, the possessive form "our" cannot be used in a term of reference without a strong sense of solidarity.

The degree the individual's reverence or dependence upon the association can be measured by a personal pronoun used by interviewees in front of the outsider, that is, the

interviewer. Each Korean personal pronoun has multiple modes of expressing degrees of reverence. In other words, by either using honorifics or lowering oneself, a speaker expresses her/his degree of respect. Besides a term of reference involving a word "association", many interviewees in Massachusetts used the third-person plural pronoun "Geu-Boon-Deul" to indicate KDA (more precisely, the KDA board members) while southern California interviewees used "Geu-Saram-Deul" to refer to KDLA officials. The two pronouns equally translate into the English pronoun "They". However, the semantic zones associated with each Korean pronoun are quite distinct. Although the latter (Geu-Saram-Deul) does not imply antipathy between KDLA and interviewees, it does not contain a sense of reverence. In the meantime, it is no controversial to say that the former (Geu-Boon-Deul) expressed by Massachusetts interviewees connotes the higher level of reverence.

More explicit evidence that demonstrates a sense of solidarity or trust among drycleaners is found in a recent event. In July 2004, two KDA board members and two other drycleaners opened a company to supply trade commodities such as hangers, shoulder guards, detergents, starch, and spotting chemicals. Establishing a supply company seemed to be highly risky given that two other Korean-owned companies (Ace Supply and Lee & Park Enterprise) could not survive even a year. Those two companies went bankrupt because they failed to compete with big suppliers. Nevertheless, the founders of the new company are confident:

> Though Ace and Lee & Park were run by Koreans, they were Connecticut-based and had no personal connections with Massachusetts drycleaners. They were simply pursuing profits just like others. But we are different. We personally know many members and don't aim to make big money out of this business. We already own dry cleaning shops and have ways to make living. All we want is breaking the cartel of big suppliers to protect small drycleaners. Hopefully, our members will understand it and switch to us (Personal Communication with Byung Hyun Lee).

For the moment, there is no definite way to evaluate whether the four founders' belief in the future cooperation of drycleaners is true or false. To confirm it, we need more time to observe how this company is doing. At least, however, the event is enough to show that some drycleaners, if not all, view themselves as linked to each other with a strong sense

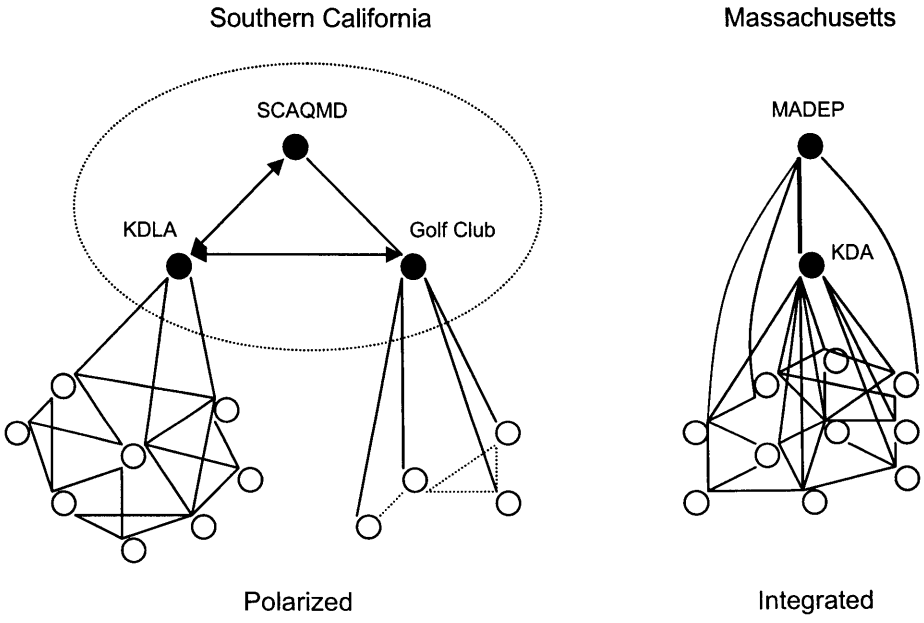
of solidarity. Otherwise, the new supplying company could not be established due to the risky business environment.

Relations between Dry Cleaning Communities and Regulatory Agencies

We have thus far examined how the dry cleaning community in each region is structured in terms of the relations between individual drycleaners and the association. The examination reveals distinct patterns of interactions in southern California and in Massachusetts. Mirroring Richard Locke's terms, I refer to these as polarized and integrated types of network, respectively. In his study of the Italian economy, Locke (1995) argues that different patterns of sociopolitical networks shape different economic behaviors. From the array of distinct subnational arrangements, he identifies three ideal-typical networks: hierarchical, polarized and polycentric networks.

Our discussion of two distinct networks benefits from his study. The dissertation transfers the unit of analysis from associations and unions to individual firms. Now, let us look at how two different types of network induced the communities into different channels of communications with regulatory agencies (See Figure 12).

Figure 12. Network Structures between Regulators and Regulated Entities in Southern California vs. Massachusetts



In a polarized network of southern California, the SCAQMD encountered divergent reactions to the formal regulation from the two opposing camps. This led eventually to a triad of mutual distrust (See a dotted oval in Figure 12). Specifically, as noted in the previous section, opinion leaders of the golf club admitted needs for regulation and believed that KDA misled the community to unnecessary conflicts with the SCAQMD. To erase a bad image of the community as a polluter, the golf club leaders became relatively cooperative to the regulatory agency. They have established friendly relations with the SCAQMD through ongoing participation in the Minority Public Advisory Board.

KDLA was suspicious of the benign relationship between the golf club leaders and the SCAQMD. Because the executive secretary of the golf club was a state-certified environmental educator, KDLA suspected that key golf club members attempted to benefit from stringent regulations at the expense of other drycleaners. KDLA's perception that they were mistreated strengthened a sense of being persecuted. "It is KDLA that represents the entire Korean dry cleaning community in southern California. Why does the AQMD keep contacting those guys [the leaders of the golf club] and alienate a real industry representative? Something must have been going on between them", a KDLA official vehemently complained.

The SCAQMD has not recognized factional infighting within the dry cleaning communities until recently, so they were sometimes confused of the opposing responses to identical regulatory signals. An SCAQMD staff member stated:

> We meet with representatives of Korean drycleaners to discuss our concerns and find common ground. Sometime later, other drycleaners [presumably, KDLA] call and visit us, and present different opinions. When we say, 'we already listened to representatives of your association', they respond, 'They are not the representatives. It is KDLA that represents Korean drycleaners, and we are the executive officers of KDLA.'

For the SCAQMD, both groups of drycleaners were members of the identical community under the similar conditions. Given its view of the industry, the SCAQMD cast a suspicious glance at KDLA that kept challenging the Rule and the agency: "If some drycleaners are capable of complying with Rule 1421, why not others?" (Personal

Communication with a Field Inspector). From the SCAQMD's viewpoint, the majority of drycleaners were unwilling to comply not because they did not have capacity but because they did not want to. Correspondingly, the SCAQMD established harsher penalty policies and deployed more regulatory resources to deal with recalcitrant polluters.

For KDLA, the SCAQMD's enforcement style as well as Rule 1421 *per se* was an excessive oppression of small minority businesses. Mr. Ha, a former president of KDLA stated:

> We did our best to get things to work, but the AQMD didn't even try to listen to drycleaners' concerns. They already decided what to do before listening to our opinion..... Public hearing? Were they really willing to listen to non-white small drycleaners? I don't think so. It [public hearing] was a cheap and tawdry political rhetoric.

Some KDLA members even brought Perc and hydrocarbon to public hearing held in the SCAQMD headquarter in order to show that Perc is not dangerous. More precisely, it was an attempt to demonstrate how angry drycleaners were. The SCAQMD was upset with this "insane" attempt and became more skeptical of the KDLA's willingness to jointly find reasonable solutions. Needless to say, antagonism between KDLA and the SCAQMD grew rapidly and continuing antagonism seems to have foreclosed possibilities of mutual understandings between the two.

In contrast to the southern California Case, the Massachusetts case demonstrates not only direct contact between the MADEP and individual drycleaners but also a well-established continuing channel of communication between the agency and KDA. If not frequent, Massachusetts drycleaners enjoy open dialogue with the agency staff. During the ERP seminars, they ask detailed questions stemming from everyday business contingency and the staff provides customized solutions. In cases that the agency staff cannot answer immediately, they keep inquirers' contact information and respond afterwards (normally within a week). Drycleaners who experienced the MADEP's contact through phone calls appreciated the agency's responsiveness (The MADEP's unique enforcement strategy will be discussed in detail in the following section, in comparison with the SCAQMD's).

In addition, diverse opinions of individual drycleaners are filtered through KDA and, in turn, transmitted to the MADEP and the MADEP views KDA as a legitimate representative of Korean drycleaners in the state. While the MADEP sends information about the regulation to every single drycleaner through official letters, it always follows-up actions to confirm that regulatory message was appropriately received by KDA and individuals. Furthermore, the MADEP consults the association when they face difficulties inducing violators into compliance. In sum, the relationship between the dry cleaning community and the MADEP is cooperative in nature.

This cooperative regulatory relationship has been formulated through repeated, multiple points of contact. Since the first year of the ERP, the MADEP has met annually with the industry to communicate overall performance and to discuss how to further improve it. This ongoing communication contributed to building trust between the MADEP and the industry. The president of the Massachusetts association commented,

> Our seminars have been held on Friday or Saturday evenings. Although we invited them [the MADEP staff] to join the seminars, we really did not expect that they would come because it was weekend evenings. Who wants to spend time attending seminars which they do not have to attend? Surprisingly, however, DEP *always* sent their staff to listen to us. And they answered our questions in great detail. We truly appreciated that.

A drycleaner from Framingham made a similar comment:

> When I first came to the seminar, I was a little surprised because our president introduced DEP staff to us. It was Friday evening. They must have been off-duty. Honestly, I had thought that a new rule had nothing to do with the environment and public health. But their attendance changed my view on the ERP. I started thinking, 'They really want to help us and a new rule must be very important to us. If not, why did they come in Friday evening?'

Another anecdotal story further reveals the relationship between KDA and the MADEP. In a board members meeting, a drycleaner from Arlington said,

> I have a good idea how to encourage people to pay annual membership fee. Let's ask DEP to collect it along with annual ERP

> fee on behalf of us. If DEP were telling people to pay it, they will accept the request without questioning.

Obviously, he was joking, but his joke clearly shows how the association views the MADEP and how individual drycleaners have responded to regulators' requests.

In summary, there are similarities and notable differences between the two communities. They are similar in that each region has a strong, influential trade association. Individual drycleaners have recourse to their association in deciding how to respond to a given regulation. They are different in that the linkages among drycleaners in southern California are relatively polarized, compared to those in Massachusetts. Such polarization of the community led eventually to a breakdown of communication between KDLA and the SCAQMD while KDA and the MADEP held a cooperative relation through multiple points of contact over time.

Impacts of Formal Regulatory Strategies on Perceived Legitimacy

Thus far, we have discussed differences in the two associations' attitudes toward regulators and given regulations. Although the previous section explained how the associations' perceptions of regulatory regime became divergent, it focused mainly on the regulated entities' internal stories while remaining relatively silent on their reactions to regulators' enforcement strategies. Recognizing that the account in the previous discussion alone is insufficient to draw a clear picture of the generation of perceived legitimacy, this section explicates how different enforcement strategies between the SCAQMD and the MADEP contributed to drycleaners' divergent perceptions of fairness and legitimacy.

Conclusively speaking, the SCAQMD's enforcement style takes on a typical feature of traditional command-and-control, that is, deterrence strategy. On the contrary, the MADEP's strategy can be characterized as "command-and-consult." Let us examine, in detail, in what exactly they differ and how drycleaners react.

The Southern California Case

Recall Figure 2 in Chapter 3. The SCAQMD's enforcement principle clarifies that a primary goal of law enforcement is to create an adequate *deterrent* to illegal activities. Correspondingly, the agency's enforcement system was oriented toward creation of an expected penalty that outweighs the economic gain from violating regulations. To investigate whether this principle was reflected in field inspectors' enforcement style, I visited the SCAQMD Headquarter in Diamond Bar and met with a field inspector who was in charge of inspecting sixty facilities in West Los Angeles. While showing and explaining a compliance log form to me, an inspector said:

> See....there is nothing difficult to fill out this form. It takes only three minutes a day. I don't understand why people don't do this.
>
> (In response to the interviewer's question of 'why do you think they do not comply with the regulatory requirements?', she said,) Well....maybe, personality?, you know, some people are lazy....I think it is a critical factor. The cost of compliance could be another reason, but I think it's relatively moderate.
>
> (In response to a subsequent question of 'What is the best strategy to bring them into compliance?', she said,) They are sort of a small, so they might need some sort of assistance....maybe. But despite the agency's technical assistance and a loan program, many people haven't changed their behavior. So, I think regulatory stimulus is necessary. I mean.... I am trying to let them know what went wrong.... Penalty imposition is unavoidable in this process..... I just go by the book. That's what I do. Without it, these people wouldn't change their behavior. That's why we've done more inspections over the last four years.[50] (Personal Communication with J at the SCAQMD).

How did drycleaners view the SCAQMD's stringent deterrence strategy? Jong-Moon Lee in Paramount told his experience:

> One day, while I was removing lint from the machine, an inspector came. He said I violated the rule because I didn't seal a lint container. How absurd it was! I said, 'Don't you see I am cleaning the machine? How can I put lint into a container while it is sealed?' He suspiciously said, 'It seems that the container's remained open for a while.' 'No. I was about to seal it, but you rang the bell, so I came to the counter'. But he didn't trust me. I

[50] Table 6 in Chapter 4 reveals that this effort has no significant effect on compliance.

> felt so bad not because he imposed fine but because he treated me as a liar……It seems like they drive around just to collect money. I think that's the whole point.

Presumably, the inspector thought that it is more objective and uncontroversial to base his judgment on what he directly observed at the moment of inspection. Regardless of his intention, however, his enforcement style led this drycleaner to feel that he was mistreated and eventually to doubt the intention of inspection and the Rule itself. Indeed, a view that the main goal of Rule 1421 is "collecting money" permeates in the Korean dry cleaning community in southern California. Of twenty five interviewees, twenty one people made the same point directly or indirectly.

In addition, Southern California drycleaners blamed the SCAQMD for its irresponsiveness:

> Last year, or two year ago, I got a Notice of Violation. I called them [the SCAQMD] to ask what to do. They told me I could either appeal or pay the fine until….I don't remember. Anyway, that's not what I wanted to hear about. I just wanted to know what I should do to get things right, so I asked again. They connected my call to another person. This guy said that he couldn't answer right away, and if I left my phone number, someone would get back to me. Alternatively, he said, I could find what I wanted to know on their website. I really didn't want to look into the website because I was not familiar with the Internet. So, I just left my number, but they never contacted me….. I called again a couple of weeks later, but they told me the same. If the Rule is really important to protect the environment, as they claim, then why don't they tell me what exactly to do? (Personal Communication with C. Park in Pomona).

> It was the year when the AQMD announced that they would amend Rule 1421. They asked drycleaners to answer survey questionnaires. I did it with hope that our opinion would be reflected in an amendment. I faxed, but couldn't reach them. I faxed them over and over again, but to fail. Finally, I called them to ask how to send the survey form. They said that their fax machine was broken, but would be fixed within hours. I faxed them the next day. Still not working….. It took a week…. If I don't repair my broken Perc machine right away, I know they will put me in big trouble. But it took a week for them to fix a damn simple fax machine. How can they tell us to do this and that? (Personal Communication with K. Park in Diamond Bar)

> Inspectors visited me twice last year. When I asked them some questions, they didn't answer me properly. They must have sufficient knowledge of what they do. I think they simply ignored me. They seemed to think I was bugging them with unnecessary questions to distract their attention (Personal Communication with C. Kim in Ontario).

The SCAQMD's deterrence principle is not just a theory in textbook but practical enforcement guidance in actual use. Contrary to the agency's anticipation, this enforcement strategy without a capacity of adequate responsiveness produced intense backfire, and thus failed to yield changes in the regulated entities' behavior they sought. From the perspective of drycleaners in southern California, inspection is simply a means to increase the SCAQMD's revenue and rule 1421 was enacted to justify it. Drycleaners' perceived illegitimacy on the Rule foreclosed their effort to be aware of the Rule's requirements, let alone the impacts of their business activities on the environment and human health.[51]

The Massachusetts Case

Unlike the SCAQMD, the MADEP does not rely solely on a deterrence approach, and instead takes on a different strategy, which I call command-and-consult. This does not mean that the MADEP gave up a traditional penalty policy. Jeffrey Chormann who is in charge of the ERP enforcement and compliance stated, "If we find somebody who's out of compliance, the mindset is to take enforcement. When it [violation] is minor, we send a notice of non-compliance [Lower Level Enforcement]. If it's something more egregious or a repeated thing, it warrants a higher level of action [Higher Level Enforcement]. He continued, "But……."

> …. we don't necessarily go in there with the attitude 'we gotta find something.' It's more of a….. I mean, we don't walk in with the black hat and say 'we are looking to find as many problems as we can.' We are also looking to help, you know, and provide assistance, as well……. beyond sort of the regulatory aspects…..

[51] During my fieldwork in southern California, I witnessed that some drycleaners brought their grandchildren to a shop to take care of them for a day. It clearly shows that they never believe that Perc is dangerous.

This attitude stems from inspectors' field experience. Due to limited regulatory resources, the same MADEP inspectors deal with both small and large firms. Having that kind of experience, inspectors recognize that small business is a totally different kind of operation, that violation is sometimes inadvertent rather than willful, and that small firms needs more technical assistance. The comment of John Reinhardt, the ERP general manager, is consistent with Jeffrey Chormann:

> In the beginning, it was very difficult to work with even the smallest sector such as the photo processors. They were not sure about our intention..... But they recognized we didn't try to go in and find things that were wrong.....
>
> Of course, we do want people to comply. That's what our job is. However, because they're small, we do.... try to help them enhance compliance rather than just enforce..... They are small business..... they wouldn't have a capacity of knowing all technical stuff. That's the kind of thing we are more willing to work with them on as opposed to taking sort of a hard line attitude.....
>
> For a while, part of our enforcement strategy was really to call people, and talk to them, say, 'Are you still in business? Why didn't we get a certification? Wondering if you're there and you're not something else now and are still doing on-site dry cleaning....Get your certification in or you may get a letter of enforcement from us.'..... There're more connections, either through the notices in the mail or through our other outreach types of things that we do, through the association..... We have a very good relationship with the associations.

This attitude is substantially reflected in the MADEP's practice. The MADEP starts its inspection with investigation of self-certifications which is due September 15th. Three times per year the MADEP sends notices, clarifying what drycleaners need to do to comply with the ERP. On July 1st, in addition, the agency mails out complete compliance assistance package to everyone who needs to self-certify, giving her/him two months and a half to prepare a compliance certificate. The agency's effort is highly appreciated by drycleaners:

> Every year, I have several notices from the DEP and our association, and they remind me of what to do. When they ask 'why didn't you do this?', it's really hard for me to deny those notices.....

> They're not like, 'Watch out. We're gonna come and close you down.' It's more like, 'This is what you need to do. If you have questions, give us a call.'.... (Personal Communication with Gu-Ho Hong in Lowell).
>
> We are not allowed to discharge laundry water into the septic systems. If I were in violation, typical inspectors would say, 'You are in violation. Stop, because the rules say you can't do that' and that's it. I know about a typical enforcement style because I was a groundwater inspector while in Korea. In fact, that's what I did.
>
> But these guys [the MADEP staff] are different. Basically, they say, 'Stop, but you can do this or that.' Actually, they offered five options that can legally replace wastewater discharge into the septic system. As a matter of fact, three of those options were economically unfeasible, but there were options you might entertain. More importantly, these guys are trying to go the extra mile to tell, 'This is what you need to do, and this is what you are allowed to do' (Personal Communication with Hyeon-Kweon Yune in Townsend).
>
> In other states, inspectors come to catch you. In Massachusetts, they come to enlighten you (Personal Communication with Byung-June Chang in Peabody).

In addition to the agency's proactive technical assistance, its responsiveness appears to contribute to shaping a sense of legitimacy. In the 2004 ERP seminar on e-filing, two drycleaners could not activate their accounts for unknown reasons. Paul Reilly from the MADEP tried to solve the problem, but did not figure out what went wrong. He wrote down these drycleaners' names, business identification numbers and contact information, and promised to call them within two days to let them know what they should do. I asked Lowe a month later if Reilly really contacted them. Lowe said, "Yes, he did."

> I already asked Paul the same question. The problem was that they didn't have a tax identification number because their shops were newly opened. So, he gave them a temporary number to activate their accounts.....
>
> (In response to the interviewer's question of 'Is their prompt response usual?', Lowe said).
> They're quite reliable and very quick to respond to drycleaners' inquiries. That's part of what makes us get along.....

Drycleaners find the agency's responsiveness as important as the technical assistance. The agency's efforts to satisfy the demands for increased responsiveness seem necessary for the generation and maintenance of the drycleaners' perceived legitimacy. This we will discuss in detail below.

Generation and Sustenance of Perceived Legitimacy

Comparison of drycleaners' reactions to different enforcement strategies provides important lessons with regard to the generation and sustenance of perceived legitimacy on the regulated entities' part. The interview data demonstrate that the way perceived legitimacy is shaped and maintained differs from ones deterrence theory and the theory of norms assume.

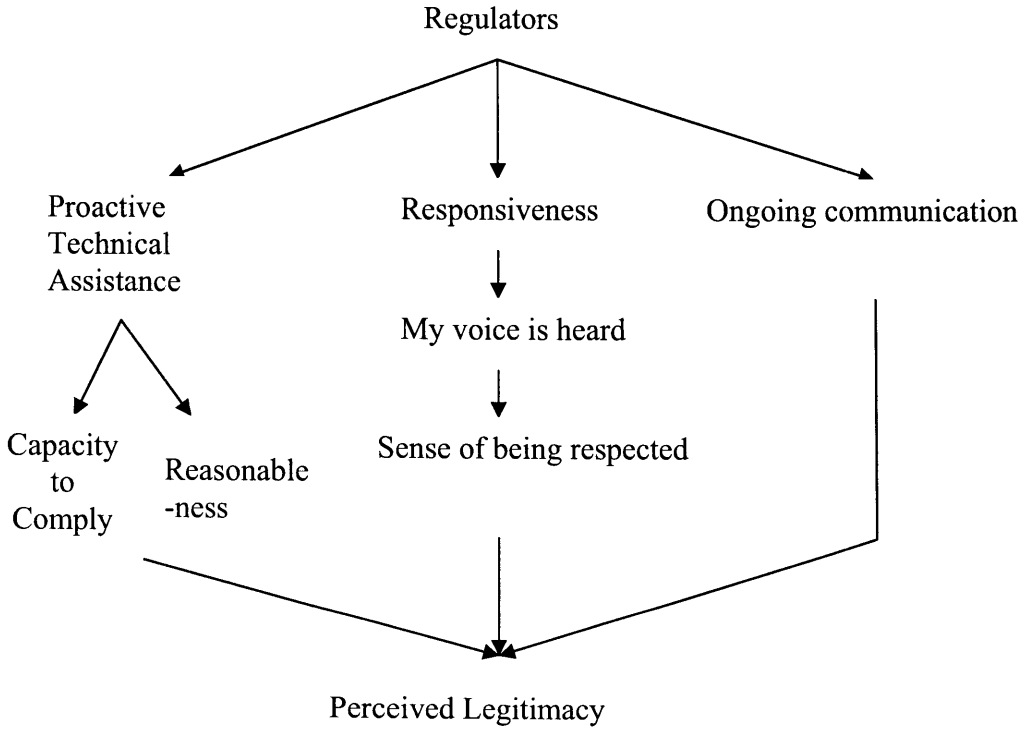
For deterrence theorists, legitimating mechanism is by no means of concern since every law or regulation is automatically legitimate if and only if it has been enacted in accordance with general formal principles (Offe 1984). That is, legitimacy is not about content but about pre-established legal process. In deterrence framework, there is no need for explicit legitimatization "as long as.... role acceptance is forced upon citizens...by their own utilitarian/instrumental motives" (Offe 1984, p.145). Is this the only criterion by which ordinary people judge whether or not a certain law is legitimate? In some cases, yes, but in others, it is questionable. The example of the latter is a traffic law. We stop at red lights and go on at green lights. We obey this rule not because it was made through constitutional-legal process but because we assume that compliance with this formal rule will increase our safety. Whether formal rules are accepted as legitimate depends not upon what they are but "what likely results of their application are" (Offe 1984, p.135).

For proponents of the theory of norms, legitimacy is a critical factor that should explain compliance behavior. On the one hand, the theory of norms assumes legal-rational legitimacy when it discusses a sense of moral obligation to obey the laws. But it goes further when the issue comes to *perceived* legitimacy. This theory views consent as a precursor of legitimacy. That is, legitimacy is a matter of "whether or not a given rulership is believed to be grounded on good title by most men subject to it" (Bozeman 1987). Without arguing against this notion of legitimacy, I would like to address its weakness to suggest more relevant legitimatizing factors later.

Consensual legitimacy cannot solve the problem of *subjective* differences in perception of obligation. Drycleaners in southern California and Massachusetts equally accept that the SCAQMD and the MADEP are legitimate governing entities. As described in Chapter 3, in addition, the SCAQMD made as much effort as the MADEP did in order to outreach target constituents and involve them in rule-making processes. Nevertheless, the southern California community views a given regulation as illegitimate, as opposed to their Massachusetts counterpart. Obviously, neither consent on legitimate rulership nor expanded opportunity for participation is by itself a sufficient condition to generate and sustain the perceived legitimacy, though necessary.

If this is true, then what are the additional conditions under which the regulated accept given rules as legitimate, at least in a small firm context? As implied in the preceding subsections, the crucial elements that gear into perceived legitimacy are *proactive technical assistance*, *responsiveness*, and *ongoing interface* between the regulated and regulators (See Figure 13). Let us examine the mechanism through which these three components provoke the perceived legitimacy in the mind of the regulated.

Figure 13. Generation and Sustenance of Perceived Legitimacy



Technical assistance obviously helps drycleaners expand their capacity to learn how to comply, but that is only a part of contribution. Regarding the generation of perceived legitimacy, more or equally important is that proactive assistance translates directly into rules' *reasonableness*.

Common complaint most frequently raised by southern California interviewees is, "This Rule is ridiculous. Make a compliable regulation." In general, small firms indicate a great deal of uncertainty about what compliance means with respect to current regulation (Patton & Warthington 2003). Nevertheless, the SCAQMD falsely assumed that drycleaners were capable of complying with all requirements by themselves. At best, the agency only expressed its willingness to provide reactive assistance. From the perspective of southern California drycleaners, in contrast to the agency's assumption, it is almost impossible to fully comply with rule 1421. They simply do not know what to do. Conversely, provided with options to meet regulatory requirements, Massachusetts interviewees view the ERP requirements as doable:

> The DEP let us know what to do to fully comply. It's like homework with solution templates. There is no difficulty meeting the requirements (Personal Communication with an incumbent president of KDA).

Provision of technical assistance in advance facilitated Massachusetts drycleaners' positive reaction and led them to believe the regulatory requirements were reasonable.

Second, government responsiveness helps the regulated recognize that "our voice is heard" and it subsequently leads to *a sense of being respected* on the part of the regulated. In turn, respect by others provides and strengthens the social ground for self-respect. We have already seen in the previous section what role a sense of self-respect plays in promoting compliance in the Massachusetts case. As we will discuss in the following section, enhanced self-respect and respect by others are crucial elements in explaining compliance behavior in relation to shaping self-identity in a broad social context.

By putting excessive emphasis on stringent deterrence efforts, the SCAQMD inadvertently reduced its responsive capability *vis-à-vis* regulatory target constituents. Correspondingly, it provoked a negative reaction from drycleaners who felt left out and disbelieved the agency. When people feel left out and perceive that government does not

care much what they think beyond the ballot box, they experience alienation. When this feeling and perception persist over time, people experience their governments as illegitimate (Cooper 1992) and resist in one way or another.

Here, it must be noted that if technical assistance and responsiveness were one-point-in-time phenomenon, the regulated would feel deceived. A sense of deception undercuts respect, attenuates trust, and breeds resentment (Campbell et al. 1970). If the MADEP had provided assistance and been responsive only in the beginning of the ERP implementation, drycleaners' perceived legitimacy, if any, could have evaporated. Indeed, ongoing, if not frequent, contacts between the regulated and regulators provide a critical background where legitimacy is sustained. That perceived legitimacy is reinforced or weakened by the continuation of contacts suggests that regulators give more recognition to consistency of rapport as well as its quality.

In sum, the notion of legitimacy helps to explain some of the differences in regulatory outcomes. This perceived legitimacy is neither given by objective constitutional-legality nor guaranteed by legitimate rule-making process. It is contingent on agencies' specific enforcement strategies *vis-à-vis* individual target constituents. That is, fundamental differences in the regulatory approach between the SCAQMD and the MADEP brought about the different perceptions of legitimacy, and thus different compliance outcome.

Regulatory Relations, Identities and Compliance Behavior

The previous section examined; 1) the nature of relationships between the trade associations and the regulatory agencies; 2) the ways in which those relationships have been established; and 3) the ways in which drycleaners' perception of enforcement strategies shape and sustain perceived legitimacy. This examination paves road to the relational approach's core argument: small firms' compliance with formal regulations develops along with configuration of regulatory relationships. In other words, compliance is a surface expression that results from the patterns of interactions between the regulators and the regulated.

The regulatory relationship does not, however, translate directly into actual behavior. How can different types of relations lead to different degrees of compliance

behavior? To make a conceptual bridge, I turn to the notion of identity. The role of identities in perceiving the external world has long been demonstrated in the literature of experimental psychology. The literature posits that one's identity plays the role of an "axis of interpretation implying that one will find in the external world what is relevant to that identity." (Markus et al. 1985) It must be emphasized that my aim here is not to look for a linear causality between social relations and identity. Although identity presupposes particular social relations, it also affects patterns of those relations. Through dynamic reactions of identity to social relations, the two reinforce one another. By showing the interactive processes between identities and surrounding social relations, this section aims to understand how regulatory relationship contributes to shaping identity and how their interaction is important in determining compliance behavior.

Let us first look at how regulatory relations affect actors' self-identity formations and their views of counterparts in interaction. This will provide the basis for understanding why one identity becomes chosen over others.

The story of southern California is marked by divergent interpretations and limited interactions between the SCAQMD and KDLA. In southern California, drycleaners have a strong sense of discrimination with respect to their scale of business, emerging from the existing interactions with the SCAQMD. This was directly addressed in public hearings. The KDLA board members would make a strong protest to the SCAQMD staff against Rule 1421: "If we were Ford, Toyota or Dow Chemical, would you do the same?"

This remonstration was an insult on the regulators' part. The SCAQMD staff responded that the agency never discriminated against small businesses and they were just doing what they were supposed to do in order to protect public health. The SCAQMD viewed KDLA's attack as stemming from a hackneyed excuse of recalcitrant violators to justify their acts, and thus required more stringent enforcement. For KDLA, on the other hand, the SCAQMD's response was a lie. No matter what the SCAQMD said, drycleaners were extremely skeptical of the intention behind the statements. For example, a board member of KDLA vehemently blames inspectors:

> Whenever I demand an explanation of my status being in violation, they [inspectors] say, "It could be legal in Korea, but you are in the U.S. In the U.S., blah, blah, blah...."

> The fact that I am from Korea has nothing to do with the issue. If I were from U.K or France, would they say that? And I know I am in the U.S. I have been in the U.S for approximately thirty five years. Those guys looked younger than thirty. What the fxxx do they want to teach me?

The inspectors might want to simply show that they understood the violation was not willful but accidental or caused by a misunderstanding due to cultural differences. Regardless of inspectors' intention, however, their message is interpreted by receivers as an insult. Not surprisingly, antagonism between the two continued and KDLA regarded itself as "businesspeople discriminated against by government." KDLA believes that its members are discriminated against because they are "non-white" immigrants and "small" business owners with no power.

In Massachusetts, the cooperative relations that developed between the MADEP and KDA led drycleaners to a different identity formation. As noted above, there was a permeating tendency in which most drycleaners viewed themselves as nobody. They even took it for granted that a Korean consul-general in Boston did not accept their invitation. Though disappointed, KDA continued to enhance drycleaners' social status. In 1994, KDA invited Mr. Angello, a member of the State House of Representatives, to a New Year's party. Angello was selected as a main guest because he was the chairman of Natural Resource Committee in the House. He accepted the invitation and delivered a congratulatory address at the party. KDA knew that Angello was more likely than a Korean consul-general to come because drycleaners meant votes to him. Whatever reason was behind Angello's attendance, an elected official's appearance in a KDA-hosted event was a pleasant shock to most drycleaners. Drycleaners came to feel that they were not ignored. Furthermore, subsequent attendance of the MADEP staff in KDA seminars since the ERP preparation stage has contributed to enhancing drycleaners' self-respect. Massachusetts Korean drycleaners became viewing themselves as "citizens" just like other Americans, not simply minority immigrants isolated from mainstream society.

Once shaped by existing social relations, identity functions as a lens through which actors view the external world and provides the ways to interpret other actors' nature, motives, probable actions, and attitudes in any given contexts, and, in turn, affects

relations with others by either strengthening the existing patterns of interactions or resisting them.

Recall our two cases. Antagonistic relations led southern California drycleaners to identify themselves as "minority small business people discriminated against by government." For KDLA and its members, the SCAQMD's motive to enact Rule 1421 was not to protect public health but to maintain its identity as a regulator. In other words, KDLA believed that the SCAQMD created a new regulation to reinforce its *raison d'être* as regulators because it needed to keep demonstrating to the public that the agency always does something for the public. From a KDLA's viewpoint, the dry cleaning industry was targeted and victimized primarily because the industry comprised non-white immigrants with no political power. A sense of discrimination made this group of drycleaners get angry and urged them to fight against unfairness because obeying unfair rules undermined their self-respect. It in turn exacerbated already persistent hostile relations.

In the Massachusetts case, the MADEP emphasized formally and informally its view of the industry. Drycleaners Environmental Certification Workbook articulates:

> Professional drycleaners are an essential part of our communities. Their services save us time and keep our clothing in the best possible condition. Most drycleaners are family-owned businesses which have been good neighbors for decades. Dry Cleaning has become such a routine part of our lives that we rarely think about it (Workbook, p.2)

Mr. Chang, a former chairman of KDA advisory board, commented, "It was not us but the ERP staff that included this paragraph. I don't think it was a lip service. If it really was a sugar-coated word, why did they [the MADEP] involve us in rule-making? They treated us as citizens they are supposed to serve, not simply the target of regulation. Their attitude made us feel good." Arguably, cooperative regulatory relations contributed to forming a sense of being respected within the dry cleaning community and helped drycleaners define themselves as "good citizens."

KDA wanted to retain enhanced self-respect and demonstrate to customers and government "who we are." One of the demonstrations took the form of a clothes donation campaign in 1997. Sponsored by Boston Ballet and Dunkin Doughnuts, KDA collected

clothes from its members and customers, and donated them to poor neighborhoods through Goodwill Industry Morgan Memorial. KDA selected the Goodwill as a channel for donation in order to maximize the benefits on the beneficiary's part (The Red Cross and other NGOs, KDA says, wanted to take 30 to 35% of profits accruing with the event as a service fee while the Goodwill requested only 15%). KDA also offered free job trainings to those who were willing to work at dry cleaning facilities. For these community services, KDA won the Outstanding Community Award from the Massachusetts Governor. Lowe commented that winning the governor's award prompted the association to take on more social responsibility.

Annual seminars can also be understood as a way to demonstrate drycleaners' commitment to public spiritedness. Needless to say, a primary purpose of the ERP seminars was educating drycleaners, but it was not the whole story. KDA wanted to show "we are doing our best" to the outsiders. That was why KDA invited the MADEP. Indeed, the ERP seminars function as a ritual that increases internal cohesion for the insiders on the one hand, and demonstrates drycleaners' goodness for the outsiders on the other. Again, KDA won the Outstanding Environmental Performance Award from the state government. It made them feel proud and willing to meet social expectations.

These experiences are particularly important for the ongoing confirmation of self-identity. To maintain a sense of "I am truly who I think I am", I need not only the implicit confirmation of identity on my part but also the explicit confirmation that others bestow on me (Berger & Luckmann 1967). For example, to retain my identity as, say, a freelance columnist, I need not only self-confidence but also requests of columns from newspapers and magazines. Otherwise, I would gradually encounter an identity crisis and feel like a jobless journalist. KDA's deliberate outreach to a mainstream society was successful at inducing regulators to witness drycleaners' credible commitment to social responsibility. In return, the MADEP gave more credits to KDA, and the relationship between KDA and the MADEP became more benign.

Viewing identity as essentially social opens up room for the significance of the relational sensitivities of actors in interaction. As we have seen, the trade associations' differing self-identities led to differing perspectives of the regulatory agencies. Put simply, the SCAQMD is viewed as an adversary by KDLA while the MADEP is

considered to be a friend by KDA. Different identifications of counterparts in interaction as an adversary versus a friend are likely to lead actors to interpret identical phenomena differently because an adversary tends to harm while a friend does not. For example, the U.S. missiles have a different meaning for Cuba from for Mexico due solely to different diplomatic relations. Likewise, drycleaners in each region interpret identical regulatory actions in question in radically different ways. The comparison of the following interviews is quite illustrative:

Example 1. Different views on penalty exemptions
– Interview with Mr. Rae Young Kim in Westchester, California –

> *R. Kim*: Last year, I was imposed $1,800 because of a Perc leak. They told me to fix the machine by.... I think, the end of October. After repairing the machine, I called them to notify it. Unexpectedly, they reduced the fine down to $220.
>
> *Interviewer*: Did that experience change your impression on SCAQMD?
>
> *R. Kim*: What do you mean?
>
> *Interviewer*: Since the beginning of the interview, you have complained about them. Did the reduction of the fine make you think that they are more generous than you thought?
>
> *R. Kim*: (He raised his voice) No. Think about my case more carefully. First, they never revisited to check out whether I really repaired the machine. Second, I never begged them to reduce the fine. How did they know that I fixed it? Why did they reduce the fine? Let me get this straight. I believe that my violation has no significant impact on the environment. If that really were serious, they should have imposed heavier penalty on me, right? I am sure that SCAQMD knows that this law (Rule 1421) is problematic. Nevertheless, they insist that this law is important for our health. It is ridiculous.

– Interview with Mr. Sung Bae Kim in Middleton, Massachusetts –

> *Interviewer*: Have you ever received a notice of rule violation?
>
> *S. Kim*: Yes, but it was a long time ago.
>
> *Interviewer*: What was the reason?

S. Kim: I did not have a computerized Perc detector. So, they [DEP] imposed $200 on me.

Interviewer: Did you think that their decision was fair?

S. Kim: Well.... It was not unfair. I should've had it by then, but I just forgot to purchase it.

Interviewer: What did you do after that?

S. Kim: I immediately purchased a detector and called them to notify it.

Interviewer: Did they revisit your facility?

S. Kim: No. They just believed that I had it. And I was exempted from the fine. They were nice and understood that people could make a mistake.

Example 2. Different views on compliance assistance
– Comments from Mr. Ha, a former president of KDLA, in West Hills, California

> We know that they have official compliance assistance program. But it is a lip service. How can they know what we need without listening to us? Even though they have held public hearings several times, our opinions were by no means reflected. We just wasted our time by attending the hearing sessions.

– Comments from Mr. Choi, an incumbent president of KDA, in Reading, Massachusetts.

> A compliance guidebook helped us understand the purpose and meaning of regulatory requirements ..... The guidebooks include the key concepts we must know and standards that apply before, during and after our primary business activities. It was quite helpful.

These diametrically opposite evaluations of the same events can be explained in two different, but related ways. On the one hand, assistance programs were more comprehensive and helpful in the Massachusetts case because of ongoing interactions between KDA and the MADEP. The other conceivable explanation is that Massachusetts drycleaners appreciated the MADEP's actions because they already had a good impression of the MADEP, and not vice versa. Likewise, southern California drycleaners were extremely suspicious of the SCAQMD's actions because they hated the SCAQMD, and not vice versa. The above examples show that identities or images about formal

regulators formulated through specific relations play a critical role in the trade associations' evaluation of agencies' subsequent regulatory actions.

It is notable that the trade associations interpret the past relations with the state regulatory agencies according to the present relations. In fact, KDLA and KDA had no virtual contacts with the agencies before Rule 1421 and the ERP, respectively. Under this same historical condition, the two associations characterize the agencies differently: While KDLA says "AQMD was never helpful", KDA states "DEP never bothered us (before the ERP)." Each association uses these reconstructed historical relations to justify that its current characterization of the agency is "correct." It in turn reconfirms the identity of the agency and the meaning of its actions associated with the assigned identity. Now, the associations have a clear idea of "who they are" as well as "who we are", and concomitantly, "what actions should be done" to best deal with their requirements. Correspondingly, the two trade associations came up with radically different behavioral guidance to respond to the given regulation. In the southern California case, KDLA had no intention to cooperate with the SACQMD. Look at the following instance:

> One day, I was visiting the KDLA office located in Gardena. Mr. Han, executive officer, was speaking to a drycleaner through a speaker phone. A caller seemed to have opened recently a dry cleaning shop. He was complaining about the complexity of Rule 1421 and asking what to do. Han explained the major requirements in detail, but the caller was not sure if he correctly understood Han's explanations. Another drycleaner [one of KDA officials] in the office interrupted:
>
> *Drycleaner in the office*: .... I recommend not wasting your time by trying to fully comply. No matter how hard we try, we will fall into violation.
>
> *A caller*: What do you mean? I don't understand.
>
> *Drycleaner*: Let me give you an example. It is a commonsense that once highway patrols decide to issue 100 tickets per day, they can do. What about 200 or 300 tickets? Of course, they can do. My point is that the purpose of Rule 1421 is to collect fines. So, once AQMD decides to collect more money, we cannot be free from detection.

> The caller seemed confused. Han added, "Don't be stressed out. If you want to meet every detailed requirement, you cannot run a business. Just do what others do. If you have any problems or questions, call us again."
>
> Where did this seemingly confusing recommendation come from? I asked why he had this opinion. He told me what happened to him last year: "My shop was inspected last year. When an inspector first checked if the Perc machine was leaking, there was nothing wrong. A computerized detector showed no sign of a Perc leak. I expected him to leave after reviewing the records. But he checked the machine again. No leak. Then he started sniffing garments, and looking around a boiler room, etc. Then, he rechecked the machine. His detector finally made alarm sound. He imposed $1,800 on me. Do you know how long he stayed in my shop? 4 hours. Can you believe that? I couldn't do anything that day because of him. If you were I, would you spend your energy making efforts to comply? It will make no difference." Han added, "Actually, he is not the only one. Many drycleaners complained about similar experiences."

In contrast, KDA actively encouraged drycleaners to comply with the formal regulation. The association kept saying, essentially:

> You may know that the association was deeply involved in the ERP creation. So, we have made great efforts to assist you to comply with ERP and most drycleaners have fully complied. DEP believes that we are making a credible commitment. You should know that we are one group. When your violation is detected by DEP, it will undermine our collective reputation. If you have any problems meeting the ERP requirements, let us know and then we will do our best to help you. If you keep violating the rules, we will have no choice but to notify DEP to protect others. In that case, you should not expect us to help you and you will be in trouble (Personal Communication with Dong-In Choi).

In addition to encouragement to share the fate of others, KDA created and dispersed the potential benefits of the ERP to promote compliance rate as high as possible. Without going into detail, since it is the same explanation as already presented in our discussion of nurtured benefits in Chapter 3, we can note that emphasis on the benefit of compliance could reconcile self-interest and collective behavioral guidance.

This effort was derived mainly from the 1990 experience of the failure to establish a KDA-initiated purchase association. The experience taught the association that however negligible it looks at the onset, the small number of deviations from

guidance would eventually have a domino effect. That is, KDA learned that collective actions could easily be shaken by chain reactions of egocentric behavior. To ensure cooperation within the community, therefore, KDA needed to take advantage of the conventional logic of business which should not be overlooked for businesspeople.

For the moment, it must be emphasized that the two associations' behavioral instruction functions as norms-like guidance to which the majority of community members have conformed. The messages from the associations alike dictate community members to act in ways quite different from rational decision-making assumed in deterrence theory. Within the deterrence framework, actors' choices of action follow the rule of transitivity, telling "If I prefer A to B and B to C, then I will choose A." However, drycleaners in both regions are prompted to follow a different mode of behavior: "Do A if and only if others do A." In the Massachusetts case, it translates directly into "comply *because* others comply." As evidenced in KDA's stories, this second guidance has little to do with the probability of detection and the severity of formal sanctions. It is an attempt to coordinate members' behavior to *collectively* demonstrate the community's public spiritedness.

In the southern California case, KDLA's message conveys more complicated connotation. The same type of guidance (Do A if and only if others do A) translates implicitly into "Do it on your own as others do. None of us will blame you whatever you do. Choice is up to you." KDLA does not offer what exactly to do, and thus its members lack a guided interpretative framework. At a surface level, correspondingly, southern California drycleaners choice making seems relatively atomized and rational. At a deeper level, however, individuals are still influenced by the association's continuing message to deal with the perceived threats: "Rule 1421 is not only costly to comply with but also unfair. So, it is hard for most of us to fully comply. What are you going to do?" The southern California case provides an interesting lesson with respect to individual choice making: When ongoing interaction among actors is interrupted, actors are led to act rationally (Heideger, Quoted in Piore 1995). However, the criteria to base actions in rational ways are still socially provided.

The behavioral guidance offered by the two associations is also different from social norms internalized through a life-long socialization assumed in the theory of

norms. In general, this type of social norms is considered as solutions to past recurrent problems implicitly formulated over a long period of time. However, trade associations' behavioral guidance in question is a solution to new problems which from the onset are enjoined as such. In the Massachusetts case, the behavioral guidance connotes, "comply because you understand what it means, why it is important and what you need to do." Obviously, this is not blind norm compliance.

Unlike the theory of norms' assumption that internalized social norms are difficult to resist, the southern California case reveals that entrenched moral obligations to obey the formal laws, a principal component determining compliance behavior within a framework of the theory of norms, is easily overwhelmed by newly emerging behavioral guidance.

In sum, the choice of drycleaner compliance is not simply determined by the perceived probability of detection and the perceived severity of formal sanctions. More important is the perceived cost and benefit of compliance, and as we have seen, these material facts take on different meanings according to regulatory contexts. Nor is the choice to comply dictated by abstract notions of moral obligations to obey the laws. Though moral obligations certainly exist, they have little effect on the final choice of action when the perceived cost of compliance is high and/or specific regulations facing the regulated entity are perceived as unfair, as evidenced in the southern California case.

Compliance behavior is affected heavily by the recognition of 'who I am', 'who they are', 'whether I am threatened or fairly treated by them', and 'how I might best deal with those threats or respond to their actions in particular contexts.' Identity plays a crucial role in characterizing the contexts. It guides actor's interpretation of the external world and helps her/him understand (and misunderstand) the regulatory situation. As such, an actor selects the most appropriate course of action on the basis of a specific situation characterization. The most appropriate course of action may take a form of either self-interest oriented or norms-guided behavior. This means that actors have a wider array of potential choices of action than is assumed by deterrence theory and the theory of norms. These choices are enabled or constrained by social structures that are mutually created by actors through interactive practices in time. In other words, it is

always conditioned by how the interpretive dimension of identity shapes the way an actor defines a situation in which s/he is located.

Essential Conditions for Rule Compliance of Small Firms

The dissertation has reiterated that compliance behavior is a surface expression of regulatory relationships that develop in particular socio-historical contexts. To support the validity of this argument, my discussion delved into narrating what has been going on *under* the surface over the last two decades in the two regions. By doing so, my storytelling revealed 'justificatory (or surface)' reasons and 'real (or deep)' reasons for compliance (and noncompliance) behavior.

Justificatory reasons on the part of the regulated are more or less economic in nature. Those reasons ascribe to the perceived cost and benefit of compliance apart from the perceived probability of detection and the severity of formal sanctions. The most important finding in this regard is that the array of the economic facts are indeterminate, and thus can be malleable according to interpretations of the ongoing practices, identities, and intentions of other actors. As such, real reason for compliance is social. My storytelling has shown how social reasons affect economic reasoning without overlooking its significance and how they together govern the actual behavior.

This recognition is readily shared by organizational theorists and economic sociologists who aware a flexibility in individual preferences (that neoclassical economists assume away), but who nevertheless preserve the basic rationalist framework (Piore 1992). Michael Piore epitomizes this point:

> Neither the social nor the epistemological theory should in principle conflict with individual welfare maximization. Individuals in our theoretical universe are not irrational, but they may be *a*rational or *pre*rational in the sense that the variables and processes on which the social and epistemological focus are generally .... prior to the calculations that rational actors in economic theories .... are presumed to make (Piore 1992, p.431. Italics original)

To avoid confusion, for the moment, I need to clarify what Piore means by the epistemological and the social approach. The epistemological approach is quite similar to the rationalist approach, focusing on the "presumed relationship between means and

ends" or "*models* of reality in terms of which rational actors calculate gains and losses and the way in which those models evolve over time." The social approach focuses its attention on identity formation, that is, "how the individual *defines* her/himself" (Piore 1992. Italics original). He points out complex process of how an actor comes to distinguish between means and ends, and urges to look into theoretical realm where the distinction between means and ends does not arise.

Despite that Piore concerns the issue in the context of technological change and organizational structure, his theoretical inquiry shed light on my discussion to explicate the meanings of the research findings. It is an attempt to clarify a realm preceding both rational calculation and identity formation. In an effort to build the empirical basis on which the relational approach stands, my task in this final section focuses on identifying the essential conditions that affect formation of social reasons underlying compliance behavior. Although the relational approach puts a great emphasis on the importance of particular contexts, the term "particular" does not mean that the same events cannot be reproduced elsewhere due to unique local circumstances. Rather, it implies the rejection of any form of determinism. In this vein, divergent compliance trends in the two regions should not be explained by fatalism or relativism. They were the outcomes of deliberate choices of action on the regulated entity's part. I find the essential conditions that facilitate compliance choice in combination of; 1) the existence of influential trade associations and 2) cooperative relationship between regulators and the regulated.

The Role of Trade Associations

Conventional wisdom states that small firms are less likely than large firms to obtain information on regulatory requirements from trade associations. Although the dissertation cannot tell the relative importance of trade associations to large vs. small firms, our research showed that these associations play a decisive role in small firms' making compliance choices.

Communities are by no means the arithmetic aggregation of individuals. They are created and sustained through the interaction among individuals. The interaction is the process through which individuals define themselves and create identities in the broader social contexts (Piore 1995). It provides a clue for appropriate modes of actions

associated with identities. Trade associations coordinate and direct the patterns of this interaction among individuals, and simultaneously with the outsiders.

One of the significant roles of trade associations is one as a translator. Regulatory agencies have traditionally been viewed as "neutral, fact-based implementers of the legislative will and unmistakable transmitters of regulatory signals." (Fiorino 1995) Our cases clearly demonstrate that this view is too often wrong. The real world is complex and laden with political conflicts and value choices. Simply saying something or providing information cannot ensure that regulatory message is transmitted as such. However abundant it is, information cannot be used without being interpreted. It is *always* communicated through interpretation of meanings. Without interpretation, genuine choices of action would be impossible because actors must understand the surroundings in order to act.

What we must recognize in this regard is that small firms are not self-reliant on understanding regulatory requirements. All too often, they are reluctant to interpreting regulatory messages by themselves, and thus require someone who can correctly interpret and translate regulatory will, facilitate understanding of reality, and suggest the most appropriate action on behalf of them. It is because small firms are afraid that they may misunderstand complex regulatory signals and know that organizing and acting collectively may be the *only* way to affect or to get attention of government (Tendler, 2002) when they attempt to correct the wrong. Necessary information and suggestions of behavioral modes can be provided by third parties such as professional magazines and university-based research institutes (like Occidental College-based Pollution Prevention Education and Research Center [PPERC] in the southern California case). However, small firms tend to give more credits to trade associations mainly because the associations are viewed as a kind of "significant other." Although it is wrong to assume that only significant others serve to understand reality by helping actors interpret the external world, a central position of understanding, accepting and maintaining reality is still occupied by significant others (Berger & Luckmann 1967). For individual small firms, trade associations are the most reliable translator because the associations are considered as sharing the same interest that minimizes the possibility of willfully distorting the information.

Beyond a role of a translator, the associations function as a narrator. They forge narratives based on the interpretation of regulatory situations. The narrative is a method by which actors organize and interpret the past and present events. It also serves as a template for future actions (Piore 1995). Although no single person can control narratives, a leader is likely to be a most prominent narrator. Trade associations as leaders tell their stories first and most frequently, and their voices are heard more clearly than others' (Piore 1995). When reality is presented to individuals mediated by a narrative, it gives meanings of things and not just facts. This makes the associations' narratives a powerful standardized guidance directing individual firms' interpretive processes. Unlike a liberal notion of the reasoning ego, there are a number of ways in which understandings of reality are passed on to each individual. Small firms require a comprehensive channel of interpretation to economize their energy and act appropriately to deal with complex reality. Trade associations are the most effective, reliable avenue to meet this demand on the part of individual small firms.

The Role of Regulators and Importance of the Regulatory Relationship

Advocates of government regulation have traditionally argued that regulatory agencies must be tough and maintain distance from the regulated entities to avoid agency capture. As such, adversarial relations have been a default mode of formal regulations. This adversarial institution seems much less effective in regulating small firms than traditional wisdom suggests. Rather, cooperative regulatory institution based upon mutual trust between the regulated and regulators seems to be more effective. In this vein, although the existence of influential trade associations is necessary for increasing compliance of small firms, it is by no means sufficient. Strong associations would be a major barrier to promoting compliance if they lead communities to emotional withdrawal from a larger society in general and to distrust toward regulators in particular. This is evident in the southern California case.

Due to strong suspicions of regulatory intention, KDLA has doubted the veracity of information from not only the SCAQMD but also other segments of the surrounding society. The SCAQMD and PPERC have provided various compliance and beyond-compliance options to help drycleaners in the District. For example, the SCAQMD

announced that they had $2 million grants available for non-Perc cleaners. Drycleaners switching from Perc to hydrocarbon could get $5,000 and to wet cleaning $10,000. The SCAQMD did not require repaying the money. Surprisingly, no association members applied for the grant. Instead, they requested that the SCAQMD use it to provide undeniable scientific evidence confirming that Perc is dangerous. PPERC's effort to technically assist drycleaners also failed. KDLA derisively states, "If Perc is bad, PPERC is worse (this is a ridicule stemming from the center's name). They are wrong about everything."

KDLA members do not even trust non-member drycleaners. Hans Kim in Rancho Cucamonga, a former biochemist, used to attend KDLA technical seminars and explained why and how Perc is dangerous. The only feedback he received from the attendees was, "Since when have you worked for the AQMD? What do you want to get out of this?" Because KDLA distrusts the SCAQMD, anyone who shares the same opinion as the SCAQMD's is viewed as an enemy. Correspondingly, all communications were interrupted by a breakdown of information flows and the association came to get more and more insulated. A sense of "nobody is on my side" made the association get angrier and prompted it to fight against enemies.

The Massachusetts case presents a diametrically opposite relation. KDA board members state, "The ERP is legitimate. It was the product of collaboration between the DEP and us", "They [The MADEP] treated us as innocent until proven guilty. It's as it should be", "We are doing our best and they know it. In return, they trust us and we know it." These attitudes led essentially to "We don't want to cheat on someone who trusts us. We will live up to our promise." Furthermore, trust in the regulatory agency facilitates forming trust in a third party. Unlike in the southern California case, KDA has maintained a cooperative relationship with the Toxics Use Reduction Institute (TURI) at the University of Massachusetts Lowell. TURI was established by the Toxics Use Reduction Act in 1989. Since its inception, the institute has worked closely with the MADEP. The MADEP's guarantee that TURI could be helpful for developing educational programs assured KDA to accept assistance from the institute. Recently, KDA and TURI began collaborating to develop a new program aiming for beyond-compliance.

The importance of regulatory relationship is evidenced in another two categories of examples: First, in three Massachusetts industries consisting of small-sized firms; and second, in good environmental performers of southern California and recalcitrant violators of Massachusetts in the dry cleaning industry. They reinforce the relational approach's implicit argument that the more collaborative the regulator-regulated relationship, the higher compliance will be.

The first category involves the printing industry, the photo-processing industry and gas stations. Together with the dry cleaning industry, the first two industries are subject to the ERP. Because of the lack of in-depth interviews with the associations of these industries, I was unable to confirm whether there exits trust between the MADEP and these industries. Nevertheless, I could validate from the MADEP's statement that the two trade associations have been very cooperative with the agency. The ERP general manager states:

> Partnership with industry groups helped get a lot of buy-in. Trade associations helped us with compliance and enforcement. In one year, we realized our response rate was low in the printing sector, so we called the trade association and asked if they could help us with the non-compliance rate. They were able to do a broadcast fax to all their members, saying "you didn't get your certification in." After that, more came in. There's an incentive to help us: They can recruit new members and can serve as a liaison...with a good view in their eyes and our eyes (Personal Communication with Tara Velazquez).

As in the case of the dry cleaning industry, the MADEP could raise the percentage of printers and photo-processors under their oversight with help from the trade associations (See Table 18).

Table 18. Identified Number of Firms Pre- and Post-ERP

Industry	Identified Number of firms before ERP	Identified Number of firms after ERP
Photo Processing	100	500
Printing	250	1100
Total	350	1600

Source: April & Greiner 2000.

Two years prior to the ERP, the Massachusetts printing industry established the collaboration with the MADEP under the Massachusetts Printers Partnership (MP2) focusing on increasing compliance. A 1997 contractor-evaluation of MP2 found dramatic improvements in environmental performance by participating firms. Encouraged by the members' environmental improvements without undermining competitiveness and due to the awareness of the MADEP's reasonableness acquired from the past interaction, the printers association readily accepted the ERP and responded to the MADEP's request for further partnership. The MADEP estimated in 1998 that approximately 900 printers out of 1,100 were in compliance (NAPA 2000).

The case of the photo-processing industry presents the significance of not only regulatory relationship but also the nurtured benefit of regulation. When faced the ERP, the trade association questioned the need for regulating the industry in the first place. Photo-processors' major pollutant identified by the MADEP was silver-bearing wastewater discharged to publicly owned treatment works (POTW). The association claimed that the silver from photo-processing wastes has extremely low toxicity and that there were no EPA regulations regarding silver levels in POTW sludge (April & Greiner 2000). Nevertheless, the benign relationship with the MADEP convinced the association to believe that the ERP requirements were reasonable. Photo-processors were told by the association that it is economically beneficial to recover silver even when including the capital cost of recovery equipment (Personal Communication with Two Anonymous Photo-Processors in CVSs).

Speculatively, individual photo-processors must have seriously taken into consideration the potential benefit accruing with compliance in making choices. April and Greiner's (2000) interviews with twenty photo-processors and Qualtex, a company that manages photo-processing wastes for approximately 400 minilabs at locations such as Walgreens, WalMart and CVS, revealed increases in compliance with the ERP standard. Of twenty, fifteen firms were changing silver recovery canisters more frequently than before. The other firms were monitoring canisters more carefully and performing scheduled replacement as opposed to the traditionally haphazard method, which resulted in excessive silver discharges. Qualtex stated that its system to manage

canister replacement also improved. Those results were confirmed by independent industry experts who stated that since the ERP, photo-processors in the state have paid much closer attention to silver recovery systems.

Meanwhile, a group of gas stations hit road in the opposite direction. Gas stations whose majority comprises Armenian immigrants were one of the major targets at the ERP preparation stage. To convince gas station owners to accept the necessity of the regulation, the MADEP presented a contaminated gas station as an example and notified that it would cost at least $2 million to clean it up. The Armenian association was skeptical of the accuracy of the cost estimation, so that it collected money from approximately 300 members and cleaned up the site by itself. The actual site clean-up required only $250,000. The association became extremely suspicious of the MADEP's regulatory intention and strongly resisted the new regulation. Because mispresenting the clean-up cost weakened its bargaining position to a significant degree, the MADEP could not deal with the industry's challenge. After all, the ERP design team exempted gas stations from the ERP because they were afraid that the failure in this industry could cross out the success in the others. Alternatively, the MADEP launched a less stringent regulation called Stage II targeting gasoline fuel dispensers.

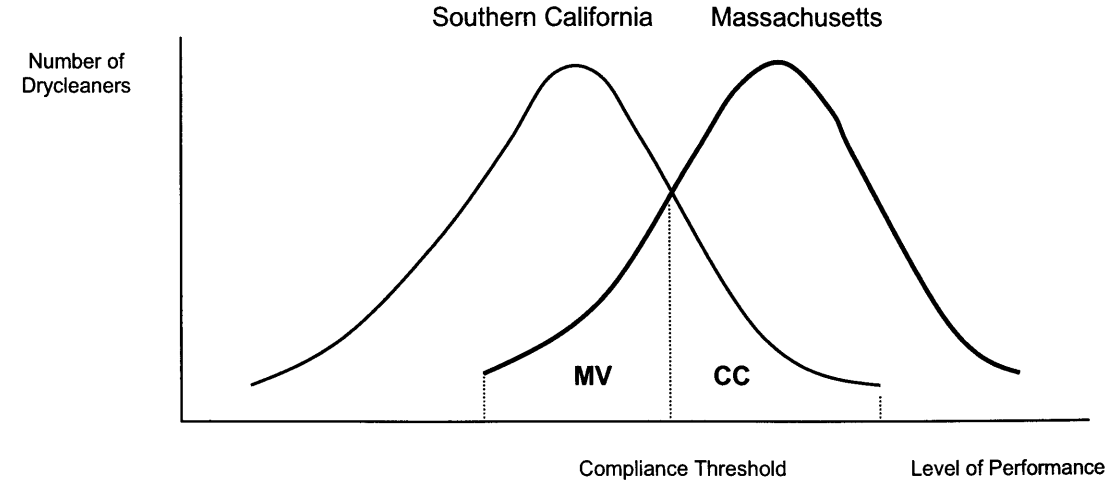
It is difficult to directly compare the ERP firms with Stage II firms with respect to compliance trends due to the lack of comparable data. The following is the only data that can be used as a proxy (See Table 19). Although the data only cover environmental justice areas, the wide differences in percentages of Higher Level Enforcement (HLE) actions and lower enforcement actions tell that the Stage II firms' compliance rates must have been lower than the ERP firms.

Table 19. Profile of Inspections and Enforcement in Environmental Justice Areas–FY 2004

	% of Facilities in EJ Areas	# and % of Inspections in EJ Areas	*% of HLE Done in EJ Areas*	*% of All Enforcement Done in EJ Areas*
ERP-All Sectors	32	10 (29%)	***0%***	***14%***
Stage II	28	28 (47%)	***50%***	***46%***

Source: The MADEP 2004

A second category of examples refers to both good environmental performers in southern California and violators in Massachusetts in the dry cleaning industry. When illustrating the importance of regulatory relationship, the examples concomitantly provide a reasonable explanation of variations in compliance within each community. Recall Figure 10 in Chapter 4.



The majority of Massachusetts drycleaners fully complies with the ERP while a small number of them violate it (area MV). Conversely, the majority of southern California drycleaners violates Rule 1421 while a handful of drycleaners comply (area CC). Neither deterrence theory nor the theory of norms explains why these within-group variations take place. For the two theories, firms in areas CC and MV are simply statistical outliers.

Let us turn to the relational approach claiming that the more collaborative the regulator-regulated relationship, the higher compliance will be. Our empirical data on these statistical outliers unexplained by the existing theories are fairly consistent with the relational approach's claim. In the southern California case, the interviews could confirm that despite KDLA's strong hostility toward the SCAQMD, good environmental performers (located in CC) maintain relatively positive impression of the regulatory agency. Chong Kuk Kim in Ontario states,

> I am pretty sure that the AQMD is doing well. Their active enforcement has contributed to enhancing the air quality in southern California..... There is nothing wrong with Rule 1421. Above all, I appreciate the AQMD's effort to understand small

> drycleaners' business environment. One day, they called me and asked if they could use my shop as a classroom to recruit new field inspectors. They said that they needed real business environment to get inspectors understand the difficulties of the dry cleaning business. Isn't it nice of them? I had been running a dry cleaning shop in Texas before I moved in to California. In Texas, I couldn't even imagine this kind of regulators.

Paul Choi in Lancaster, who introduced me to the SCAQMD staff, made an almost identical comment. Choi used to work at Boeing and retired due mainly to invisible racial discrimination at workplace. He adds to Kim's comment:

> Some requirements of Rule 1421 seem too strict, but I have no intention to blame the AQMD for the Rule. They are public officials and subject to higher authorities. I mean.... just as we are required to comply with laws, so they are required to meet demands of the CARB (California Air Resources Board) and EPA. They are just doing what they are supposed to do.....
>
> KDLA blames that the AQMD are discriminating small businesses and minorities, but I don't think so. I have known some staff for several years because I was a member of the Minority Advisory Board. Personally, I believe they are reasonable and willing to help small businesspeople with compliance.

Other interviewees who were introduced in local newspapers as environmentally friendly drycleaners (including wet cleaners) share the same view as Kim's and Choi's, and tend to believe in what the SCAQMD says about Perc and Rule 1421. At minimum, unlike the majority of KDLA members, they do not doubt regulatory intention. This perception on regulators affects directions of behavior. Although belief does not necessarily make actors act, it, regardless of whether to be true or false, puts them into a condition under which they will behave in certain ways when the occasion arises. Obviously, doubt or distrust does not have such an active effect (Peirce 1877).

Behavior of recalcitrant violators in Massachusetts can also be explained in a similar vein. But the reasons for their violations seem to result not so much from hostility toward the MADEP as from the breakdown of interactions with the agency and the association. However, they still illuminate the importance of regulatory relationship in making choices of action.

When the MADEP inspectors detected repeated violations, they always notified KDA and asked if the association could help violators commit to compliance efforts before imposing penalties. The MADEP staff said that it was because the purpose of inspections was not to penalize violators but to bring them into compliance in the first place. The MADEP's untraditional way of handling violators was appreciated by KDA and most drycleaners. For KDA, it was a good way to increase the association's influence on its members. For individual drycleaners, it was a way to avoid excessive HLE actions accruing with accidental violations. As such, the MADEP's pre-notification was viewed as a sign of the regulators' goodness of heart. However, some violators were upset with the MADEP's method. An anonymous violator in Malden furiously complained:

> When they [the MADEP] find violations, all they have to do is giving fines. I am not going to complain about that. But because they spoke to the association about me, people would think I have violated the rule all the time. I swear that's not true. I was in violation only once for a short time. But who is going to believe me? They ruined my reputation..... What if my landlord knows about it? He is not going to renew the lease and I will be pissed off..... I don't understand why the DEP did that. Though I don't have evidence, something must be going on between them [KDA and the MADEP].

Interestingly, KDA defends the MADEP:

> We know that those who were notified by the DEP made the same violation more than twice. They are obstinate violators. If not, the DEP won't call us. The DEP call for assistance only when they think someone keeps violating because s/he does not understand the inspector's instruction due to a language problem.... In those cases, we called them [violators] to ask if they needed any help. But some of them said, "You got the wrong person. I was never in violation." We knew they lied, but what can we do if they respond in that way?

If KDA tells the truth, then a crucial question arises: Why did those violators deny the association's help? Although the sample size of the recalcitrant violators is too small to draw on a definite answer, in-depth interviews revealed that the violators' comments converge on a single point: They do not know what to do to meet all regulatory

requirements because they have *never* engaged in associational activities, much less contacts with the MADEP except for inspections.

It is usual in dry cleaning communities that when someone wants to newly run a dry cleaning business or when a drycleaner wants to run an additional shop, s/he looks for existing shops to take over them rather than opening a new facility. Taking over an already-operating shop is preferable due to the potential to absorb the existing customers. If a facility owner were known as a violator, nobody would give a look to her/his facility for fear of the future clean-up liability. In this instance, the distinction between reputation as a social factor and property value as an economic factor becomes blurry. Reputation in the community translates directly into the monetary value of the property. For this reason, the violators conceal their violation records and insulate themselves from others.

Another reason for this group of violators' reluctance to call for KDA's assistance stems from a strong suspicion of the intention behind the MADEP's notice of violation to KDA. These drycleaners suspect that KDA requested the MADEP to do it in order to revenge them because they neither participated in the associational events nor paid association fees. The MADEP is viewed as helping KDA for unknown reasons. In short, they trust neither KDA nor the MADEP. From a compliance viewpoint, this aspect brings about a vicious circle. Although the violators want to get things right, they simply do not know what exactly to do and have nobody to ask. Therefore, their uncorrected violations are detected in the follow-up inspections and, again, the violators try harder to hide subsequent violations from other drycleaners.

One may recall that most Massachusetts interviewees said that compliance assistance workbook was comprehensive, and thus ask why these violators do not use it. A plausible answer can be found in Kim's response to my inquiry about why he attended the ERP seminar:

> You are a student, so let me ask you this question. Can you understand all the contents of textbooks without your teachers' help? (I said no). Right, few people can. That's why students take classes. They need instructions. At least, they need to confirm whether their understanding of something is correct by asking teachers and other students. Things are the same for us. KDA and the DEP are proud of their joint product [a compliance workbook]. They must be. It was easy for me to understand the workbook, but only after I listened to the lectures. Someone may understand it

> without help by reading over and over again, but who is going to do that? It's longer than fifty pages.

Indeed, the recalcitrant violators who never attended the ERP seminars stated that the compliance assistance workbook was not so comprehensive. The story of the Massachusetts violators by no means implies that all self-contained actors are necessarily rule violators. Nevertheless, it is reasonable to infer that in the contexts similar to the Massachusetts community, those actors are more likely to fall into violations. It is so because the breakdown of social interactions deprives them of willingness and opportunities to learn about ways of promoting their capacity to comply.

As we have seen, making choices of compliance never follows a straight line. Rather, it results from complicated webs of ongoing social interactions. We traced the origin of compliance behavior to the patterns of these interactions among actors that govern the framing of the external world, contingencies and outcomes. Different patterns of social interactions or relations lead actors to interpret the situations in which they exist in different ways, and in turn shape different identities' of self and others. Differences in identities lead to the corresponding differences in preferences, and thus probable choices. In this way, social relations become the basis of interests, which are now endogenous rather than exogenously given.

Again, the nature of the relationship between self and others determines identities of self and others in interaction in a particular social context. Because identities are developed through repeated interactive processes, they have a corresponding capacity to judge and produce *contextually meaningful* behavior (Abrams 1997) that makes sense of the situation in light of who did what and why. After all, social relations are at the heart of small firms' compliance behavior.

CHAPTER 6

CONCLUSION

SUMMARY OF STUDY AND IMPLICATIONS FOR REGULATION

Summary of the Dissertation

Environmental quality is not just a function of emissions from large smokestacks. Small sources, regardless of whether they are manufacturing or service-oriented businesses, collectively contribute significantly to environmental degradation. In 2001, small- and medium-sized firms together accounted for over 90% of all businesses, and 50-60% of employment, worldwide (UNIDO 2002). Consequently, even when small firms' share of total pollution is low, their wide geographic dispersion amplifies adverse environmental and health effects (Geiser & Crul 1996). Nonetheless, small businesses have long been located at the margins of regulatory decision making.

Squeezed by their suppliers and fearful of regulation, small firms present a difficult set of issues for regulators (Gottlieb 2001). Presumably, the most serious problem regulators confront is compliance. Despite increased regulatory enforcement efforts in recent years, small firms' rule compliance rates continue to be low, exposing the limits of the current regulatory system.

The dry cleaning industry is a frequently cited example. As a neighborhood-based, customer-service-oriented industry that currently generates more political conflict than any other small firm sector, the dry cleaning industry has become symbol and substance of the small business dilemma facing urban environmental policymakers (Gottlieb 2001). This dissertation told the story of two dry cleaning communities to uncover small firms' motivations for compliance with formal regulations.

Unlike scholarly works in traditions of deterrence theory and the theory of norms which depicted compliance behavior as a function of either a strict cost-benefit calculation or a sense of moral obligations to obey the laws, respectively, this dissertation portrayed compliance as a configuration of regulatory relationships between regulated entities and regulators, with trade associations playing a steering role. The argument was

developed through in-depth storytelling in a somewhat untraditional manner. The story started at the end (trends in rule compliance). It then went to the beginning, reached the middle, and finally returned to the end. It continued moving back and forth through time, even within each stage of the narrative. This storytelling method was intended to elucidate the importance of *ongoing* systems of social relations. Rather than explain compliance behavior by way of linear causalities (as pursued by a significant number of existing studies), the dissertation told a nuanced story of how outcomes varied as actors defined and interpreted their past and present, and extrapolated these into their future differently (Piore 1995). This differentiated approach identified multiple layers of motivations underlying compliance behavior.

The surface tier comprises economic factors quite distinct from those identified by deterrence theory. In contrast to deterrence accounts that emphasize the perceived probability of detection and the severity of formal sanctions, the dissertation revealed that it is the perceived cost/benefit of compliance that explains outcomes. Critically, these economic facts are themselves shown to be variable, demonstrating a wider array of estimations than deterrence theory can provide.

Though useful, this finding alone did not provide satisfactory answers to the primary research question. It naturally pushed the inquiry further: Given the almost identical regulatory requirements, why did members of the two communities have wide variations in perceptions of economic facts? Put another way, why are regulatory requirements associated with costs and burdens in southern California and not in Massachusetts? It became evident that economic facts cannot be assumed; compliance costs/benefits must not be taken at face value. This realization prompted me to ascertain what determines the meaning of economic facts to the regulated entities. In this investigation I discovered the middle tier, comprising the perceived legitimacy of a rule and its enforcement. In other words, the ways in which the regulated entities defined the current regulations and regulators affected their perceptions of economic facts. As a result, perceived legitimacy was a behavioral guide instructing one how to act.

While this claim was tenable from an empirical point of view, it posed additional questions with respect to the formulation of perceived legitimacy: Why did two communities with identical cultural attributes have different perceptions of legitimacy

under similar regulatory conditions? How can we explain variations in compliance behavior *within* a community?

These questions led to a search for the fundamental forces shaping perceived legitimacy in particular socio-historical contexts in which actors are embedded. In contrast to the orthodox theory of norms, the dissertation demonstrated that the perceived legitimacy results neither from individuals' independent evaluation of regulatory structures nor from life-long socialization. Instead, legitimacy is determined by ongoing relations with regulators, with trade associations strategically coordinating and directing members' behavior. The dissertation showed that different regulatory relationships helped form different identities of the self and the other actors, with corresponding changes in preferences, and thus probable choices of actions. In this way, regulatory relations laid the basis of interests that are now endogenous. The dissertation concomitantly revealed that the conceptual demarcation between economic and social factors is, in fact, blurry, and thus suggested their integrated role in reality. The interplay of these two seemingly contradictory groups of factors was explained by the notion of contextual embeddedness in Chapter 4.

In summary, the traditional compliance theories view rule compliance as a journey through a predetermined behavioral path. As we have seen, however, compliance behavior does not follow such a course. The observed differences in rule compliance in the two dry cleaning communities cannot be explained by economic factors or normative factors alone. They are best explained through close examination of patterns of associational activities and relations with formal regulators. These social factors affect the way economic factors are perceived and, in turn, expand the array of the strategic choices of behavior differently. This implies that the success in Massachusetts should not be attributed to chance, but rather viewed as containing lessons applicable across other small business sectors. The relational approach thus retains significant implications for the principles underlying formal regulations that target small firms. We now turn to a discussion of that theme.

Implications for Regulation

Existing strategies for regulating industrial pollution are based on three components: theories of firm decision-making, hypotheses regarding state capacities and well-defined state roles.[52] Traditional command-and-control (CAC) and market-based regulations, although in conflict on a number of issues, share the same assumptions of the first two as follows: Small firms, just like all other actors, act independently to maximize self-interest; and state regulators perfectly understand this logic of decision-making and are capable of collecting the information required for changing firms' behavior. CAC and market-based regulations diverge in the roles they ascribe to the state. While CAC presupposes paternalistic state intervention, market-based regulation argues against it. The latter claims that state responsibility must be restricted to enforcing contracts critical to a properly working market mechanism. Yet despite disagreement over the state's role, the two regulatory frameworks agree that in order to change firm behavior, government is responsible for implementing policies that change prices (*only* prices) associated with behavior.

I will not reiterate the fundamental flaws in the claims mentioned above as both the theoretical analysis and empirical evidence in preceding chapters provided the rationales for refuting them. Instead, I will present the essence of the research findings that counter the traditional theoretical assumptions point by point. First, small firms do not decide independently how to act. Rather, their actions are coordinated and guided by trade associations. Whether or not actors sense that they have a correct choice to make is to a large extent socially determined in a particular context. Second, self-interest is in no way the sole motivating factor. Overemphasis on disembedded self-interest dogma risks missing the actuality of socio-historical contexts and thus, all important contextual meanings evaporate. Third, without proper communication channels, regulators lack knowledge of whether firms receive regulatory messages as such, and thus cannot unambiguously interpret the latter's response. Consequently, regulators face tremendous difficulty securing the behavior they seek.

If one accepts the validity of the research findings that emphasize the role of trade associations and regulatory relationships (ignored by the existing theories), policy

[52] I am indebted to Prof. Dara O'Rouke for this statement.

implications become clear. To enhance mutual understandings and to facilitate information flows, it is necessary to build institutional arrangements that generate and sustain trust. This does not completely deny the influence of price change (i.e., change in penalties) on firm behavior. However, what we are concerned about is not only the direction of response but also its magnitude (Ehrlich 1972). Overdependence on neoclassical logic stunts the possibility of helping small firms move toward socially desirable behavior. For substantial increases in rule compliance, fundamental changes in regulatory structure are needed. Such changes require a redefinition of government's role.

Stimulating Coordination of Collective Interests among Small Firms

Dominant environmental regulatory strategy targeting small firms has traditionally focused on direct control *vis-à-vis* individual firms, with increased oversight and sufficient sanctioning power, as is the case with southern California. This approach might have significant effects in a highly concentrated industry (e.g., the oil industry) where a few actors account for a large portion of total pollutants, and thus regulators need only deal with a small number of firms (Wallace 1995). In the case of small firms, however, operational realities differ significantly from idealized models. Much research has revealed that this strategy failed due to technical problems (i.e., monitoring) and regulators' cognitive limits derived from the system itself (i.e., difficulty in understanding and collecting information relevant to shortcomings in existing strategy). Put simply, government does not have capacity to continually monitor numerous small firms. The system also lacks channels for translating useful field information into new forms of regulatory structures that would facilitate improvements in compliance (Fiorino 2001).

Regulators must recognize that individual small firms are less likely than large firms to be self-reliant when interpreting regulatory messages, defining images of regulators, and making behavioral choices. Indeed, these semantic fields are frequently, if not always, influenced by trade associations. The MADEP took advantage of this influence. In May 1994, the MADEP invited industry actors from across the state to discuss impending regulatory issues in Concord, Massachusetts. Approximately 7,500 people attended, most participating as individuals. The MADEP confessed outright that it did not have the capacity to converse with all individual firms and instead, asked them to

form coherent, collective opinions by particular industries. The agency stated that once this prerequisite was met, fruitful regulatory discussions could take place. Participants recognized the MADEP's inability to deal with all firms individually. Some industries responded to the call for internal coordination of collective interests. This experience appears to have contributed to successful regulatory negotiations in the MP2 and ERP cases.

The Massachusetts case leads to a first general lesson: An enforcement strategy that first encourages the coordination of collective interests, rather than direct control over individual small firms, will yield higher compliance. Trade associations would likely be receptive to this strategy because it increases associations' influence within their communities. Consequently, they will be vigilant in monitoring members' performance to ensure their authority over members and demonstrate their influence to the state. On the regulatory side, the strategy would deploy limited regulatory resources more effectively. With help from trade associations, regulators can obtain detailed information about individual firms that was previously unattainable. For example, working closely with associations would help distinguish between firms that have genuine difficulties and those that are simply recalcitrant. The distinction would enhance the effectiveness of strategic oversights.

Identifying Helpful Intermediaries (in the Absence of Trade Associations)

A second issue concerns circumstances under which the above guidance cannot be materialized. The guidance is based theoretically on the relational approach, emphasizing the combination of existing trade associations and cooperative regulatory relations. The importance of trade associations stems from a tendency that the majority of the members of social, political, economic systems discovers, develops, and expresses their feelings and interests in the intimate groups of the broader community (Campbell et al. 1970). Trade associations are themselves the "intimate groups" and play a role of significant others to small firms. However, what if there is no pre-existing association? Without them, can regulators stimulate industry-wide cooperation? If not, what should government do?

A plausible solution is to identify helpful intermediaries who can aid regulators in outreach and communication with the regulated. We have already seen that the lack of information (and its resulting uncertainty) is one of major barriers to small firms' compliance. Even in situations where compliance is deemed desirable, we cannot ensure that small firms have the capacity to undertake the task. For this reason, existing studies unanimously suggest increasing the quality and sources of information as a solution. Although there is nothing wrong with this suggestion, provision of information and technical assistance alone is insufficient to resolve the problem. The plethora of information sources and advice may result in greater uncertainty for small firms (Patton & Worthington 2003).

As demonstrated throughout this dissertation, small firms' environmental behavior is not tailored to a given regulation *per se*, but rather to an interpretation. In the absence of reliable trade associations, therefore, there is a functional need for identifying intermediaries who have the capacity to facilitate communication between the regulated and regulators. Establishing this communication channel through which small firms wish to address their concern will help government construct regulations and its enforcement strategies that are perceived as fair and legitimate by the regulated.

Building Trust

A third general lesson concerns the importance of crafting trust between regulated entities and regulators. In the U.S., the relationship between the two is characterized by "legal formalization" (or rationalization) and "distrust" (Bardach & Kagan 1982b, Wallace 1995), making collected information suspect. Regulators have typically viewed firms (regardless of size) as objects for regulatory coercion, as opposed to important participants in policy making. This ethic was a response to agency capture evidenced in economic regulations. To avoid capture, environmental policymakers deliberately built regulatory systems based on adversarial legalism (Kagan 1995), under which prescriptive legislation authorized agencies to issue rules backed by formal sanctions (Kagan & Scholz 1984). These regulatory instruments, based on deterrence (or rationalist) approach, were considered the primary drivers of compliance behavior (Fiorino 2001).

Adversarial regulatory institutions were, to some degree, successful at regulating large firms during the first stage of the development of environmental problem solving in the 1970s. However, when an adversarial institution is combined with the rationalist approach, it gives birth to problems that compromise or negate the effectiveness of regulations in later stages. Specifically, this type of regulatory system is built on an entrenched epistemological assumption that essential information and knowledge for regulation come from external truth that can be discovered by regulators' expertise. Under this positivist view, regulators are considered finder and transmitter of objective truth, overlooking that new regulatory knowledge can be created and expanded through continual interactions with the regulated. As a result, this system forecloses space for collaborative problem solving, issuing imperatives without the possibility of industry feedback. This is where collateral mistrust arises.

This tendency leads ultimately to the government as a controller and, in turn, locks regulators and regulated entities into grossly asymmetrical power relationships. Consequently, regulations become arbitrary, only reflecting the regulators' whims. Such arbitrariness leads directly to the perceived illegitimacy of regulations on the part of the regulated and generates resistance in one form or another. Here, regulators' possibilities for winning societal agreements on regulations are lost.

In sum, given our core argument that cooperative regulatory relations facilitate compliance behavior, the problems prevalent in an adversarial regulatory system preclude the potential to encourage small firms' compliance by shutting out the new knowledge and evaluative criteria needed to meet the challenges resulting from constantly evolving environments.

It is empirically convincing that building trust is a prerequisite for increased compliance. The issue is "whether" and "how" to build it. It must be noted that here, "trust" does not mean blind trust, such as the unconditional belief in someone that children may have for their parents. Nor do I mean the lexicographic definition of "assured reliance on the character, ability, strength, or truth of someone" (Merriam-Webster), that is essentially a personal attribute. Instead, our discussion of trust utilizes Gambetta's notion defined as "the belief that when offered the chance, he/she is not likely to behave in a way that damages us" (Gambetta 1988, quoted in Locke 2001). In

this definition, trust is derived neither from affection nor from purposive-rational utility, but rather from "grounding in open dialogue" among actors (Habermas 1990, quoted in Adler 2001). Its nature is "situational and/or relational, something that develops between two or more actors in a particular context or relationship" (Locke 2001). This alternative notion of trust is well-suited to the relational approach.

Liberals are overly pessimistic about crafting trust. From a liberal viewpoint, trust can be found, but never created in the short term (Sabel 1992). Conversely, recent studies of economic development present evidence of trust creation even under adverse conditions. This is demonstrated in Richard Locke's case study of the cheese industry in the Italian South and the agricultural industry in Northeast Brazil. In the study, Locke argues that trust can be built "through a sequential process that mixes together self-interested action, government policy, and the development of self-governing mechanism" (Locke 2001). Although the three sequential components are not perfectly matched with our discussion—in the sense that Locke's main focus is on the construction of trust within industries, rather than between government and industries—his argument still provides an important insight into the trust-building process.

By combining Locke's argument with my research findings, I suggest practical guidance to initiate and sustain trust in regulatory settings. It comprises: 1) identifying collective interests, 2) maintaining consistency or predictability of behavior within a mutually reasonable range, and 3) maintaining formal/informal communication channels. These guide rules are not necessarily sequential, but must be followed throughout the trust-building process.

First, interacting entities must clarify their collective wants in order to properly understand the meanings of their own and the other's actions. Because to give meaning is to make sense of the situation with respect to what "they" as well as "we" did and why, this is a prerequisite for sowing seeds of trust on bare ground. At this stage, it does not matter whether the pursued interests are economic or normative in nature, only that one side perceives them as agreed-upon interests of the other.

At the outset of the interactions, both KDA and the ERP staff appeared to cooperate in pursuit of their own interests, but not of the other's. KDA recognized the need for cooperation to increase the association's influence over individual members. For

their part, the ERP staff needed to cooperate to ensure maximal results of the new regulation and to convince the opponents within the MADEP. Regardless of the nature of their interests, both parties understood what "we" wanted and what "they" expected from "us". In this way, the two groups of actors minimized the possibility of disagreements over interpretations of future events. Obviously, the southern California dry cleaning community failed to form and articulate coordinated interests, as did their counterpart in Massachusetts. As the first lesson indicates, if the SCAQMD had helped them to identify their collective interests, the relationship between regulators and the regulated would have changed for the better.

Second, regulators need to recognize that unexpected or sudden changes in requirements will almost certainly diminish trust on the part of the regulated, should any trust exist. Because most small firms (and even associations) have no full-time environmental staff and thus lack the capacity to prepare for unexpected regulatory changes, they would be hard-pressed to comply should the situation arise. Small firms are comfortable when regulations are stable and changes in requirements are known well in advance through informed dialogue. Southern California drycleaners insist that the Rule 1421 amendments were so abrupt that they have no time to adapt. For example, the 2002 amendment mandated a total ban on Perc use, beginning in 2020. The rationale for this amendment was based on concrete evidence of low compliance throughout the second half of the 1990s. The SCAQMD believed that this shock therapy would change drycleaners' compliance behavior and accelerate technology shifts. The agency also believed that drycleaners had reasonable time to adapt.

At present, it is impossible to verify the SCAQMD's predictions. Nevertheless, it is clear that the drycleaners' negative, angry reaction was entirely unanticipated by the regulators. Many interviewees stated that they would shut down their dry cleaning business after 2020 and open a restaurant, grocery or other business instead. Because they felt threatened and furious at regulators and the unstable business environment, the interviewees made no further efforts to change behavioral routines. One interviewee commented, "Why should I maintain my Perc machine in good condition? I can't use it after 2020 anyway." Drycleaners thought that the SCAQMD was moving too fast without consulting with them. This perception led the community to view even minor changes as

radical. For them, the actual time period for compliance preparation was immaterial because the change was imposed abruptly and unilaterally.

Without a doubt, the shock therapy exacerbated drycleaners' prevailing hostility toward the SCAQMD and foreclosed the possibility of the community's cooperation. KDLA stopped conversing with compliance officials and appealed to Governing Board members of SCAQMD, a majority of whom are elected officials representing the District's four counties. From the perspective of the SCAQMD compliance officials, this unexpected KDLA action was a typical industry lobbying tactic to avoid the reasonable regulation. As a result, the agency's distrust toward the drycleaners also deepened.

In contrast, the MADEP discarded this traditional approach and instead sought input from KDA before making a change. For example, the agency consulted with KDA as long as a year before the implementation of e-filing. The purpose of the talks was not to ask the association whether the new filing method was feasible but to obtain KDA's help in persuading its members to accept changes in requirements. As we have seen in detail in Chapter 4, KDA responded positively to the agency's request and consequently, the MADEP successfully implemented e-filing and began seeing substantial administrative savings.

It should be noted that stable regulation does not imply immutability. Rather, it connotes a predictable business environment in which small firms enjoy open, informed communication. It is understood that change is a feature of social interactions. Fossilized policies cannot meet the regulatory demands emerging from complicated and shifting webs of interactions. To be effective, regulatory policy must be capable of evolving in pace with a continuously changing context. However, I have observed that at the trust-building stage, regulatory changes must be perceived as reasonable by regulated entities. Once this seemingly incremental methodology builds trust, it will aid the implementation of more drastic future changes, often deemed necessary in the environmental arena.

Finally, ongoing communication between regulators and regulated entities is essential. Prior to enacting a new regulation, regulators are generally open to dialogue with industries in order to legitimize their planned action. After enactment, regulators all too often stop conversing with the regulated and communication channels break down. This terminates any seeds of trust that may have begun germinating. Therefore,

institutionalizing communication channels is a crucial element for creating and sustaining trust, whether such channels are formal or informal.

The Massachusetts case is illustrative. In addition to establishing a hotline, Paul Reilly, the ERP dry cleaning sector manager, has attended KDA's ERP seminars and New Year's parties. KDA officials thought that Reilly's attendance would be short-lived, but it has continued to the present. In the 2004 ERP seminar, I asked the manager why he attended. He responded, "We never expected the ERP seminars would last this long, but now we see how sincere KDA is. I feel an obligation to come to see if there is anything I can do for them." Furthermore, along with some KDA board members, he was always among the last people to leave the event. He remained even after the seminars ended in order to respond to additional questions. When I told him it was 10:00 p.m. and time to leave, he said, "There are still one or two people here with questions that I might help answer." KDA officials and most members interviewed stated that Reilly's consistent attendance led them to view the agency as responsible and reliable. It appears that this small gesture contributed greatly to advancing simple cooperation into so-called "reflexive trust" (Adler 2001) or "studied trust" (Sabel 1992).

This section has offered guidance for regulators to create trust within formal regulatory settings in order to secure large gains in small firm compliance. The main theme is consistent with what Glasbergen (1996) termed social learning, focusing on interactions and communications among actors. With a redefinition of the role of government, it argued for institutional arrangements that expand the array of possible strategies regulated entities may pursue. Of course, even within such a rearranged institution, actors still retain a range of options. Thus, the application of this general guidance must be tailored to the particular socio-historical context associated with each industry/locale.

Future Research and Concluding Remarks

I am certain of the relative advantages of cooperative institutions for small firm regulation, but there still remain three crucial issues to be addressed. Although not directly related to the dissertation's central research question, they need to be mentioned to further future research on small firm regulation.

First, what concerns advocates of adversarial institutions is agency capture, which is a fair misgiving. Although an individual small firm does not have the capacity to capture an agency, small firms' collective efforts can lead to this result. How can we ensure that government maintains pressure on industries while fostering cooperative relations?

One promising method is "outsourcing" regulation (O'Rourke 2003), which refers to third party involvement in policymaking and monitoring processes. This does not imply a discarding of government accountability to the public or a weakening of its authority. Rather, it must be understood as taking advantage of external resources and utilizing government capacity more effectively.

Recent regulation studies provide strong support for this approach. In their game theoretic model, Ayres and Braithwaite (1992) showed that public interest group involvement in regulation helps prevent agency capture by increasing industry's lobbying costs with no change in benefits. O'Rourke (2003) introduces the notion of "social regulation" that focuses on the role of independent third party monitoring to improve the effectiveness of labor practice governance, particularly in sweatshops. Esbenshade (2000) documents that non-governmental monitoring raises compliance with labor standards in the apparel industry.

The central feature of third party involvement is an emphasis on transparency to catalyze public scrutiny, accountability, and competition among firms, while maintaining a system of sanctions. This strategy offers the encouraging alternative regulatory model, by moving beyond conventional CAC regulation based solely on deterrence theory and overcoming the limits of voluntary regulation implicit in the theory of norms.

In this scenario, identifying which third party is most likely to affect small firms' polluting behavior, and considering what information will best generate motivating pressure are among regulators' principal tasks. For example, small firms, not being well known to the public in terms of their brand names or the goods and services they produce, may be immune to the pressure national media attention or international environmental groups may exert. In our dry cleaning cases, it is difficult to evaluate whether public pressure affected the drycleaners' compliance behavior, as they have not been confronted with direct pressure from third parties. Nevertheless, some interviewees

stated that they were concerned about complaints from the landlord and neighboring stores, rather than the general public. Therefore, the success of a third party involvement strategy largely depends on selecting the right source of pressure according to the characteristics of each particular industry and its locale.

A second issue concerns the impacts of the number of actors or community size on sources of respect and coordinating common interests, which was not addressed in the dissertation. How important of a variable is community size?

One of the key explanations of Massachusetts drycleaners' compliance behavior lay in KDA's effort to overcome a job inferiority complex. They viewed environmental compliance as a promising way to overcome the inferiority complex by gaining respect from others. How does this compare to the southern California community? Although systematic data are unavailable on this question, both the census data and short comments revealed in interviews with Massachusetts drycleaners help us infer the reason for the divergence.

As of 2000, there were 17,369 Koreans in Massachusetts.[53] This number is far smaller than those of other minority groups in the state.[54] Also, Koreans' distributional pattern differs from other Massachusetts ethnic groups. Chinese, Haitian, Vietnamese and other immigrants are highly concentrated in a small number of cities and publicly demonstrate their cultural heritage. This residential concentration contributes to securing political influence with local politicians. In contrast, Koreans are widely spread across the state. "Together with the absolute small number of population, our residential distribution made us culturally and politically vulnerable. Politicians tended to ignore the Korean community's opinion," Lowe asserted, "This recognition prompted us to outreach to mainstream society.... To raise our voice, we needed to demonstrate that we fulfilled our duties."

Koreans in southern California are located in a different socio-political and cultural environment. Since the mid 1970s, more than 600,000 Koreans have resided in southern California and they established a large "Korean colony" in Los Angeles (Light

[53] Of 17,369, approximately 5,900 (34%) were Korean students whose visa status is F1 (international student) or J1 (visiting scholar) – Source: The Boston Korean (03/10/05).
[54] The 2000 census data reveals that 84,392 Chinese, 43,801 Indians, 33,692 Vietnamese, and 19,696 Cambodians settled down in Massachusetts.

& Bonacich 1988). Koreans in this region enjoy diverse ethnic resources and benefits resulting from a large and rapidly growing population. For example, most private companies as well as public agencies provide Korean language service. The Korean community bore a mayor (City of Diamond Bar) and a member of the Federal House of Representatives in the 1990s. There was therefore no urgent need for them to extensively engage in the mainstream society. This enabled them to reside in an ethnic enclave that was large enough to provide all the commonly expected conveniences of life. In this social environment, drycleaners might not need to seek respect from non-Korean ethnic groups. For them, compliance and cooperation with the SCAQMD might not be considered a viable strategy for gaining respect. Currently, however, the explanation above remains speculative, since it is inferred from insufficient data.

With regard to coordinating common interests, the issue shares the similar concern with collective action problem, though not exactly the same. In his classic work, *The Logic of Collective Action*, Olsen (1965) argued that "unless the number of individuals is quite small, or unless there is coercion or some other special devices to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests." In a similar vein, Axelrod and Dion (1988) assert that increasing the number of actors who simultaneously interact tends to make coordinating behavior more difficult. Obviously, southern California has far more drycleaners than Massachusetts (There are approximately 2,000 Korean drycleaners in southern California and 400 in Massachusetts). Does the relatively large number of drycleaners in southern California inhibit shaping collective behavioral guidance? While this idea seems convincing, it cracks when we note that the Massachusetts community outnumbers the one in Connecticut, yet the latter nevertheless exhibits no coordinated behavior. As Ostrom (1990) pointed out, group facilitation of collective interests does not seem to depend on the absolute number of actors, but rather on how noticeable each actor's actions are within the group. This is an open question that requires further scrutiny.

A final issue concerns a paradoxical phenomenon observed in the final stage of the dissertation research. From a societal viewpoint, high compliance is not only a blessing but also a curse in certain industries consisting of numerous small firms. This

situation arises because although high compliance reduces toxic waste, it simultaneously locks regulators and industries into existing technologies. In other words, as a result of high compliance, regulators and industries are satisfied with the status quo and make little effort to further technological innovation. For example, in 2003, the Massachusetts House of Representatives attempted to outlaw Perc, but the MADEP objected in hearing sessions. The MADEP's objection does not seem to be derived from agency capture. Rather, the agency was afraid that the new regulation would destroy drycleaners' trust in the agency, which had been built up over the preceding few years. Regardless of the reason, high compliance sustained technological lock-in by providing a strong rationale for continuing Perc use. To accelerate regulatory shift from reactive pollution control to proactive pollution prevention, studies on how to stimulate innovation and diffusion of advanced technologies are necessary.

The three issues addressed in this section require careful study to advance more effective environmental policies. Nevertheless, they do not detract from the unique contributions of the relational approach in explaining small firms' compliance behavior. This approach offers a new understanding of small firms' behavioral logic of compliance and an alternative system for creating and managing regulatory relations. The research findings should be carefully considered when designing future environmental governance structures.

APPENDIX: ANOVA RESULTS OF SUERVEY RESPONSES (SUPPLEMENTARY TABLES TO)

Table 9-1. Perceived Certainty of Monetary Penalty Imposition (Response to QS1)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	473.186	1	473.186	259.397	.000
Within Groups	379.428	208	1.824		
Total	852.614	209			

ANOVA results show that there is a difference in average scores of total responses on perceived certainty of monetary penalty imposition between southern California and Massachusetts, and the difference is statistically significant at the level of 0.05.

Table 9-2. Perceived Certainty of License Withdrawal: Response to QS2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.028	1	.028	.035	.853
Within Groups	169.953	208	.817		
Total	169.981	209			

Though there is a small difference in average scores of total responses on perceived certainty of license withdrawal between southern California and Massachusetts, ANOVA results indicate that it is not statistically significant at the level of 0.05.

Table 11-1. Perceived Probability of Detection: Responses to QD1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66.898	1	66.898	42.896	.000
Within Groups	324.383	208	1.560		
Total	391.281	209			

ANOVA results show that there is a difference in perceived probability of detection of total responses between southern California and Massachusetts and the difference is statistically significant at the level of 0.05.

Table 11-2. Perceived Probability of Detection: Responses to QD2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23788.524	1	23788.524	82.058	.000
Within Groups	60299.099	208	289.900		
Total	84087.624	209			

ANOVA results show that there is a difference in perceived probability of detection of total responses between southern California and Massachusetts and the difference is statistically significant at the level of 0.05.

Table 14. Degree of Moral Obligation to Comply: Responses to QM1 and QM2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.295	1	.295	.538	.464
Within Groups	113.972	208	.548		
Total	114.267	209			

Though there is a difference in average scores of responses to QM1 between southern California and Massachusetts, ANOVA results indicate that it is not statistically significant at the level of 0.05.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.402	1	.402	.840	.360
Within Groups	99.621	208	.479		
Total	100.024	209			

Though there is a difference in average scores of responses to QM2 between southern California and Massachusetts, ANOVA results show that it is not statistically significant at the level of 0.05.

Table 15. Degree of Resistance to Unfair Regulation: Responses to QM3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.114	1	2.114	2.606	.108
Within Groups	167.924	207	.811		
Total	170.038	208			

Though there is a difference on average scores of responses to QM3 between southern California and Massachusetts, ANOVA results indicate that it is not statistically significant at the level of 0.05.

Table 16. Degree of Perceived Legitimacy: Average Scores of Responses to QL1 ~ QL5

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	975.938	1	975.938	1545.143	.000
Within Groups	131.376	208	.632		
Total	1107.314	209			

ANOVA results show that there is a difference in average scores of responses to QL1 between southern California and Massachusetts and it is statistically significant at the level of 0.05.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	849.974	1	849.974	1334.806	.000
Within Groups	132.450	208	.637		
Total	982.424	209			

ANOVA results show that there is a difference on average scores of responses to QL2 between southern California and Massachusetts and it is statistically significant at the level of 0.05.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	919.048	1	919.048	1230.662	.000
Within Groups	155.333	208	.747		
Total	1074.381	209			

ANOVA results show that there is a difference in average scores of responses to QL3 between southern California and Massachusetts and it is statistically significant at the level of 0.05.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	787.504	1	787.504	1457.044	.000
Within Groups	112.420	208	.540		
Total	899.924	209			

ANOVA results show that there is a difference in average scores of responses to QL4 between southern California and Massachusetts and it is statistically significant at the level of 0.05.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	797.088	1	797.088	1220.250	.000
Within Groups	135.869	208	.653		
Total	932.957	209			

ANOVA results show that there is a difference in average scores of responses to QL5 between southern California and Massachusetts and it is statistically significant at the level of 0.05.

REFERENCES CITED

Abrams, D. (1999). Social Identity, Social Cognition, and the Self. In D. Abrams and S. Fiske (eds.) *Social Identity and Social Cognition*. Oxford: Blackwell Publishers

Andreano, R. & Siegfried, J. (1980). *The Economics of Crime*. New York: John Wiley.

April, S. & Greiner, T. (2000). *Evaluation of the Massachusetts Environmental Results Program*. Washington, D.C.: National Academy of Public Administration.

Arora, S. & Cason, T. (1996). Why Do Firms Volunteer to Exceed Environmental Regulations? *Land Economics*, Vol.72: 413-432.

Asch, S. (1956). Studies of Independence and Conformity: A Minority of One Against a Unanimous Majority. *Psychological Monographs*. Vol.41: 258-290.

Axelrod, R. (1984). *The Evolution of Cooperation*. New York: Basic Books.

---------- (1986). An Evolutionary Approach to Norms. *The American Political Science Review*. Vol.80, No.4: 1095-1111.

Axelrod, R. & Dion, D. (1988). The Further Evolution of Cooperation. *Science*. Vol.242, No.4884: 1385-1390.

Bardach, E. (1989). Social Regulation as a Generic Policy Instrument. In L. Salamon (ed.) *Beyond Privatization*. Washington, D.C.: The Urban Institute Press.

Bardach, E. & Kagan, R. (1982a). *Social Regulation: Strategies for Reform*. San Francisco: Institute for Contemporary Studies.

---------- (1982b). Going *by the Book: The Problem of Regulatory Unreasonablness*. Philadelphia: Temple University Press.

Becker, G. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, Vol.76: 169-217.

Bentham, J. (1830). *The Rationale of Punishment*. London: R. Heward.

---------- (1987). *The Theory of Legislation*. Littleton: F.B. Rothman.

Berger, P. & Luckmann, T. (1967). *The Social Construction of Reality*. Garden City: Anchor Books.

Bianchi, R. & Noci, G. (1998). Greening SMEs' Competitiveness. *Small Business Economics*, Vol.11: 269-281.

Biller, D. & Quientero, J. (1995). *Policy Options to Address Informal Sector Contamination in Latin America: The Case of Leather Tanneries in Bogota, Colombia.* Washinton, D.C.: World Bank.

Bimmore, K. (1998). The Complexity of Cooperation. *Journal of Artificial Societies and Social Simulation.* Vol.1, No.1. Available at:http://jasss.soc.surrey.ac.uk/1/1/reviewl.html

Blackman, A. (2000). Informal Sector Pollution Control. *World Development*, Vol.28, No.12: 2067-2082.

Block, M., Nold, F., & Sidak, J. (1981). The Deterrent Effect of Antitrust Enforcement. *The Journal of Political Economy*. Vol.89, No.3: 429-445.

Bowles, S. (1998). Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions. *Journal of Economic Literature*, Vol.36: 75-111.

Bowles, S. & Gintis, H. (1975). *Schooling in Capitalist America.* New York: Basic Press.

Braithwaite, J. & Geis, G. (1982). On Theory and Action for Corporate Crime Control. *Crime and Delinquency*, Vol.28: 292-314.

Braithwaite, J. & Makkai, T. (1991). Testing an Expected Utility Model of Corporate Deterrence. *Law and Society Review*, Vol.25, No.1: 7-40.

Brown, C. et al. (1990). *Employers Large and Small.* Cambridge: Harvard University Press.

Brown, D. & Kaplan, S. (1987). Retrospective Cohort Mortality Study of Dry Cleaner Workers Using Perchloroethylene. *Journal of Occupational Medicine.* Vol.29, No.6: 535-540.

Burby, R. & Paterson, R. (1993). Improving Compliance with State Environmental Regulations. *Journal of Policy Analysis and Management.* Vol.12, No.4: 753-772.

Burkett, S. & Jensen, E. (1975). Conventional Ties, Peer Influence and the Fear of Apprehension: A Study of Adolescent Marijuana Use. *Sociological Quarterly*, Vol.16, No.4: 522-533.

Campbell, J., Sahid, J., & Stang, D. (1970). Law *and Order Reconsidered.* Washington, D.C.: National Commission on the the Causes and Prevention of Violence.

Campbell, T. & Low, L. (2002). Hung out to Dry: How the Use of Perchloroethylene in Dry Cleaning Endangers You and Your Family's Health. Los Angeles: Coalition for Clean Air, Inc.

Cardenas, J., Stranlund, J., & Willis, C. (2000). Local Environmental Control and Institutional Crowding-Out. *World Development*, Vol.28, No.10: 1719-1733.

Carroll, J. (1982). Committing a Crime: The Offender's Decision. In V. Konecni & E. Ebbesen (eds.) *The Criminal Justice System: A Social Psychological Analysis*. San Francisco: W. H. Freeman.

---------- (1989). A Cognitive Process Analysis of Taxpayer Compliance. In J. Roth & J. Scholz (eds.), *Taxpayer Compliance: Social Science Perspectives*. Philadelphia: University of Pennsylvania Press.

Cialdini, R. (1989). Social Motivations to Comply: Norms, Values, and Principles. In J. Roth & J. Scholz (eds.), *Taxpayer Compliance: Social Science Perspectives*. Philadelphia: University of Pennsylvania Press.

---------- (1984). *Influence: How and Why People Agree to Things*. New York: Morrow.

Cooper, T. (1992). *City Managers as Citizens: A Source of Legitimacy in the American Administrative State*. Presented at American Society for Public Administration.

Culler, J. (1986). *Ferdinand de Saussure*. Ithaca: Cornell University Press.

Dorf, M. & Sabel, C. (1998), "A Constitution of Democratic Experimentalism," 98 *Columbia Law Review*, 267.

Douglas, M. & Wildavsky, A. (1982). *Risk and Culture*. Berkeley: University of California Press.

Edelman, M. (1964). *The Symbolic Uses of Politics*. Urbana: University of Illinois Press.

Ehrlich, I. (1972). The Deterrent Effect of Criminal Law Enforcement. *The Journal of Legal Studies*. Vol.1, No.2: 259-276.

Elster, J. (1983). *Sour Grapes: Studies of the Subversion of Rationality*. Cambridge: Cambridge University Press.

---------- (1989a). *The Cement of Society: A Study of Social Order*. Cambridge: Cambridge University Press.

---------- (1989b). Social Norms and Economic Theory. *Journal of Economic Perspectives*. Vol.3, No.4:99-117.

---------- (1996). Rationality and the Emotions. *The Economic Journal*. Vol.106, No.438: 1386-1397.

Environmental Protection Agency (1993). *National Emission Standards for Hazardous Air Pollutants from Perchloroethylene Dry cleaning Facilities – Final Rule.*

---------- (1995). *EPA Office of Compliance Sector Notebook Project: Profile of the Dry Cleaning Industry*. Washington, D.C.: EPA Office of Compliance.

---------- (1998). *Cleaner Technologies Substitutes Assessment: Professional Fabricare Processes*. EPA 744-B-98-001.

---------- (1999). *RCRA in Focus*. EPA 530-K-99-005.

Etzioni, A. (1988). *The Moral Dimension: Toward a New Economics*. New York: Free Prss.

Feinberg, R. (1979). Schneider's Symbolic Culture Theory: An Appraisal. *Current Anthropology,* Vol.20, No.3: 541-560.

Feyerabend, P. (1975). *Against Method: Outline of an Anarchistic Theory of Knowledge*. London: NLB.

Fiorino, D. (2001), "Environmental Policy as Learning: A New View of an Old Landscape," *Public Administration Review*, vol. 61, no. 3, pp.: 322-334, May/June.

---------- (1995). Regulatory Negotiation as a Form of Public Participation. In Renn et al. (eds), *Fairness and Competence in Public participation: Evaluating Models for Environmental Discourse*. Boston: Kluwer Academic Press.

FSB. (2002). *Lifting the Barriers to Growth in UK Small Businesses*. Federation of Small Businesses. London.

Fung, A. & O'Rourke, D. (2000). Reinventing Environmental Regulation from the Grassroots Up: Explaining and Expanding the Success of the Toxics Release Inventory. *Environmental Management*, Vol.25, No.2: 115-127.

Gabel, H. & Sinclair-Desgagné, B. (1993). Managerial Incentives and Environmental Compliance. *Journal of Environmental Economics and Management*. Vol.24: 229-240.

Galbraith, J. (1969). *The New Industrial State*. Harmosworth: Penguin.

Gambetta, D. (1987). *Did They Jump or Were They Pushed?* Cambridge: Cambridge University Press.

Garetano, G. & Gochfeld, M. (2000). Factors Influencing Tetrachloroethylene Concentrations in Residences above Dry Cleaning Establishments. *Archives of Environmental Health*. Available at: http://www.findarticles.com/cf_dls/m0907/1_55/61182075/print.jhtml

Geertz, C. (1973). *The Interpretation of Cultures: Selected Essays*. New York: Basic Books.

Geiser, K. & Crul, M. (1996). Greening of Small and Medium-sized Firms: Government, Industry, and NGO Initiatives, In P. Groenewegen et al. (ed.) *The Greening of Industry Resource Guide and Bibliography*. Washington, D.C.: Island Press.

Glasbergen, P. (1996). Learning to Manage the Environment. In W. Lafferty and J. Meadowcroft (eds.) *Democracy and the environment: Problems and prospects*. Cheltenham, UK: Edward Elgar.

Gottlieb, R. (2001). *Environmentalism Unbound: Exploring New Pathways for Change*. Cambridge: MIT Press.

Gottlieb, R., Goodheart, J, Sinsheimer, P, Tranby, C., & Bechtel, L. (1997). *Pollution Prevention in the Garment Care Industry*. Los Angeles: UCLA/Occidental College Pollution Prevention Education and Research Center..

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*. Vol.91, No.3: 481-510.

Grasmick, H. & Bursik, R. (1990). Conscience, Significant Others, and Rational Choice: Extending the Deterrence Model. *Law and Society Review*. Vol.24, No.3: 837-861.

Grasmick, H. & Bursik, R., & Kinsey, K. (1991). Shame and Embarrassment as deterrents to Noncompliance with the Law: The Case of an Antilittering Campaign. Environment *and Behavior*, Vol.23: 233-251.

Greenpeace. (?). Dressed to Kill: The Dangers of Dry Cleaning and the Case for Chlorine-Free Alternatives. Available at http://archive.greenpeace.org/toxics/reports/dtk/dtk.html

Halogenated Solvent Industry Alliance (1999). *Perchloroethylene: White Paper*. Washington, D.C.

Harrington, W. (1988). Enforcement Leverage When Penalties Are Restricted. *Journal of Public Economics*. Vol.37: 29-53.

Harsanyi, J. (1968). Individualistic and Functionalistic Explanations in Light of Game Theory: The Example of Social Status. In I. Lakatos & A. Musgrave (eds.) *Problems of the Philosophy of Science*. Amsterdam: North Holland.

Hawkins, K. (1984). *Environment and Enforcement: Regulation and Social Definition of Pollution*. Oxford: Clarendon Press.

Hillenbrand, B. (1988). Memorandums of March–April 1988, from State OSHA Administrators to the Director of Federal-State Operations for OSHA, concerning high risk small businesses.

Hoffman, R. (2000). Twenty Years on: The Evolution of Cooperation Revisited. *Journal of Artificial Societies and Social Simulation*. Vol.3, No.2. Available at: http://jasss.soc.surrey.ac.uk/3/2/forum/1.html

International Agency for Reserch on Cancer (1995). *IARC Monographs on the Evaluation of Carcinogenic Risk to Humans: Dry Cleaning, Some Chlorinated Solvents and Other Industrial Chemicals*. Vol. 63. Lyon, France: World Health Organization.

Jick, T. (1979). Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Administrative Science Quarterly*. Vol.24, No.4: 602-611.

Kagan, R. & Scholz, J. (1984). The Criminology of the Corporation and Regulatory Enforcement Strategies, In K. Hawkins & J. Thomas (ed.), *Enforcing Regulation*. Boston: Kluwer-Nijhoff.

Kaplan, T. (1986). The Narrative Structure of Policy Analysis. *Journal of Policy Analysis and Management*. Vol.5: 761-778.

Kunreuther, H. & Easterling, D. (1990). Are Risk-Benefit Tradeoffs Possible in Siting Hazardous Facilities? *American Economic Review*, Vol.80: 252-256.

Karkkainen, , B., Fung, A. & Sabel, C. (2000). After Backyard Environmentalism: Toward a Performance-based Regime of Environmental Regulation. *American Behavioral Scientist*, Vol.44, No.4: 692-711.

Kim,I. (1981). *New Urban Immigrants: The Korean Community in New York*. Princeton: Princeton University Press.

Kinsey, K. (1984). *Survey Data on Tax Compliance: A Compendium and Review*. Chicago: American Bar Foundation.

Klepper, S. & Nagin, D. (1989). The Deterrent Effect of Perceived Certainty and Severity of Punishment Revisited. *Law and Society Review*, Vol.23, No.2: 209-240.

Kraut, R. (1976). Deterrent and Definitional Influences on Shoplifting. *Social Problems*, Vol.23, No.3: 358-368.

Lavelle, M. (1996). *Toxic Deception: How the Chemical Industry Manipulates Science, Bends the Law, and Endangers your Health*. Carol Publishing Group.

Laws, D. & Rein, M. (2003). Reframing Practice, In M. Hajer & H. Wagenaar (ed.), *Deliberative Policy Analysis*. Cambridge, UK: Cambridge University Press.

Lee, Y. (2003). *The Japanese Challenge to the Neoclassical Economic Orthodoxy: Identity and Interest in Japan's Policies toward the East Asian Miracle and the Asian Monetary Fund*. Ph.D. Dissertation. University of Southern California.

Levin, M. (1982). Getting There: Implementing the Bubble Policy, In Bardach, E. & Kagan, R. (ed.). *Social Regulation: Strategies for Reform*. San Francisco: Institute for Contemporary Studies.

Levy, M. (1997). *Consent, Dissent, and Patriotism*. Cambridge: Cambridge University Press.

Lewis, A. (1982). *The Psychology of Taxation*. New York: St. Martin's Press.

Lewis-Beck, M. & Alford, J. (1980). Can Government Regulate Safety? The Coal Mine Example. *The American Political Science Review*. Vol.74, No.3: 745-756.

Light, I. & Bonacich, E. (1988). *Immigrant Entrepreneurs*. Los Angeles: University of California Press.

Locke, R. (1995). *Remaking the Italian Economy*. Ithaca: Cornell University Press.

---------- (2001). Building Trust.

Lubell, M. (2003). Environmental Governance, Belief Systems, and Perceived Policy Effectiveness. *Political Research Quarterly*. Available at: http://www.des.ucdavis.edu/faculty/lubell/research/PerceivedEffectiveness.pdf

Malloy, T. & Sinsheimer, P. (2001). *Pollution Prevention as a Regulatory Tool in California: Breaking Barriers and Building Bridges*. Working Paper.

Mandelbaum, S. (1991). Telling Stories. *Journal of Planning Education and Research*. Vol.10, No.3: 209-214.

Mannheim, K. (1929). *Ideology and Utopia*. London: Routledge.

March, J. (1978). Bounded Rationality, Ambiguity, and the Engineering of Choice. *The Bell Journal of Economics*. Vol.9, No.2: 587-608.

March, J. & Olsen, J. (Forthcoming 2004). The Logic of Appropriateness. In M. Rein, M. Moran, & R. Goodin, *Handbook of Public Policy*. Oxford: Oxford University Press.

---------- (1989). *Rediscovering Institutions*. New York: The Free Press.

Margolis, H. (1991). Incomplete Coercion: How Social Preferences Mix with Private Preferences. In K. Monroe (ed.), *The Economic Approach to Politics*. New York: Harper & Collins.

Markus, H., Smith, J., & Moreland, R. (1985). Role of the Self-Concept in the Perception of Others. *Journal of Personality and Social Psychology*, Vol.49: 1494-1512.

Massachusetts Department of Environmental Protection (1997a). *Evaluation of the Environmental Results Program Demonstration Project*. Boston: MADEP.

---------- (1997b). *Drycleaners Environmental Certification Workbook*. Bosotn: MADEP.

---------- (1997c). *The Environmental Results Program.* Boston: MADEP.

---------- (1997d). *Interim Policy on Compliance Incentives for Small Business*. Boston: MADEP.

---------- (2002). *Compliance and Enforcement Performance Report Fiscal Year 2001*. Boston: MADEP.

---------- (2004). *Compliance and Enforcement Annual Report Fiscal Year 2004*. Boston: MADEP.

McGrow, K. & Scholz, J. (1991). Appeals to Civic Virtue versus Attention to Self-interest: Effects on Tax Compliance. *Law and Society Review*, Vol.25, No.3: 471-498.

Mead, D. & Liedholm, C. (1998). The Dynamics of Micro and Small Enterprises in Developing Countries. *World Development*. Vol.26, No.1

Mill, J.S. (1874). Method of Difference. In *A System of Logic*. New York: Harper & Brothers.

Misztal, B. (1996). *Trust in Modern Society: The Search for the Bases of Social Order*. Cambridge: Blackwell Publishers, Inc.

Moberly, W. (1968). *The Ethics of Punishment*. Hamden: Archon Books.
Murphy, K. The Role of Trust in Nurturing Compliance: A Study of Accused Tax Avoiders. *Law and Human Behavior,* Vol.28, No.2: 187-209.

Moorman, C. Zaltman, G., & Deshponde, R. (1992). Relationships between providers and Users of Market Research: The Dynamics of Trust within and between Organizations. *Journal of Marketing Research*, Vol.29: 314-328.

Munch, R. (1986). The American Creed in Sociological Theory Exchange, Negotiated Order, Accommodated Individualism and Contingency. *Sociological Theory*. Vol.4, No.1: 41-60.

Narotzky, S. (1997). *New Directions in Economic Anthropology*. London: Pluto Press.

National Institute for Occupational Safety and Health (1997). *Control of Health and Safety Hazards in Commercial Drycleaners: Chemical Exposures, Fire Hazards, and Ergonomic Risk Factors*. Publication No. 97-150.

Neighborhood Cleaners Association International (1998). *Cost Comparison for 1998*. NCAI Bulletin.

Nove, A. (1989). The role of central planning under capitalism and market socialism. In J. Elster & K. Moene (ed.) *Alternatives to capitalism*. Cambridge: University of Cambridge Press.

Offe, C. (1984). Chapter 5: Legitimacy versus Efficiency. In *Contradictions of the Welfare State*. Cambridge: MIT Press.

Olson, M. (1965). *The Logic of Collective Action*. New York: Schocken.

O'Rourke, D. & Lee, E. (2004). Mandatory Planning for Environmental Innovation: Evaluating Regulatory Mechanisms for Toxics Use Reduction. *Journal of Environmental Planning and Management*. Vol.47, No.2: 181-200.

Ostman, A. (1998). External Control May Destroy the Commons. *Rationality and Society*, Vol.10, No.1: 103-122.

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.

Patton, D. & Worthinton, I. (2003). SMEs and Environmental Regulations: A study of the UK Screen-printing Sector. *Environment and Planning C*, Vol.21: 549-566.

Peirce, C. (1877). The Fixation of Belief. *Popular Science Monthly*. Vol.12: 1-15. Available at: http://www.peirce.org/writings/p107.html

Pfeffer, J. (1977). Power and Resource Allocation in Organizations. In B. Staw & G. Salancik (eds.) *New Directions in Organizational Behavior*. Chicago: St. Clair.

Phelps-Brown, E. (1977). *The Inequality of Pay*. Berkeley: University of California Press.

Philips, L., Votey, H., & Maxwell, D. (1972). Crime, Youth, and the Labor Market. *Journal of Political Economy*, Vol.80, No.3, Part 1: 491-504.

Piliavin, I., Gartner, R., Thornton, C., & Matsueda, R. (1986). Crime, Deterrence and Rational Choice. *American Sociological Review*, Vol.51, No.1: 101-119.

Piore, M. (1995). *Beyond Individualism*. Cambridge: Harvard University Press.

---------- (1992). Fragments of Cognitive Theory of Technological Change and Organizational Structure. In N. Nohria & R. Eccles (eds.) *Networks and Organizations: Structure, Form and Action*. Boston: Harvard Business School Press.

---------- (1990). United States of America, In *The Re-emergence of Small Enterprises*. ILO.

---------- (1975). Notes for a Theory of Labor Market Stratification. In R. Edwards, M. Reich, & D. Gordon (eds.) *Labor Market Segmentation*. Lexington: Heath.

Polanyi, K. (1944). *The Great Transformation*. Boston: Beacon Press.

Pollution Prevention Education and Research Center (1997). *Pollution Prevention in the Garment Care Industry: Assessing the Viability of Professional Wet Cleaning*. Los Angeles: UCLA / Occidental College.

Portes, A. & Mozo, R. (1985). The Political Adaptation Process of Cubans and Other Ethnic Minorities. *International Migration Review*, No.19: 35-63.

Portes, A. & Sensenbrenner, J. (1993). Embeddedness and Immigration: Notes on the Social Determinants of Economic Action. *American Journal of Sociology*, Vol. 98: 1320-1350.

Poutziouris, P. & Chittenden, F. (2003). Guest Editorial. Environment and Planning C. Vol.21, No.4: 475-477.

Radner, R. (1996). Bounded Rationality, Indeterminacy, and the theory of the Firm. *The Economic Journal*. Vol.106, No.438: 1360-1373.

Raynard, D. & Forstater, M. (2002). *Corporate Social Responsibility: Implications for Small and Medium Enterprises in Developing Countries*. Vienna: United Nations Industrial Development Organization

Rest, J. (1984). The Major Components of Morality. In W. Kurtines & J. Gewirtz (eds.), *Morality, Moral Behavior and Moral Development*. New York: Wiley.

Rokeach, M. (1973). *The Nature of Human Values*. New York: Free Press.

Romo, F. & Schwartz, M. (1995). Structural Embeddedness of Business Decisions: A Sociological Assessment of the Migration Behavior of Plants in New York State between 1960 and 1985. *American Sociological Review*, Vol.60: 874-907.

Rottenberg, S. (1979). *The Economics of Crime and Punishment*. Wasgington, D.C.: American Enterprise Institute.

Rubin, P. (1980). The Economics of Crime. In R. Andreano & J. Siegfried(eds.) *The Economics of Crime*. New York: John Wiley.

Ruder, A., Ward, E., & Brown, D. (2001). Mortality in Dry Cleaning Workers: An Update. *American Journal of Industrial Medicine*. Vol.39: 121-132.

Sabatier, P. (1975). Social Movements and Regulatory Agencies: Toward a more Adequate – and Less Pessimistic – Theory of Clientele Capture. *Policy Sciences*, Vol.6: 301-342.

Sabel, C. (1994). Learning by Monitoring: The Institutions of Economic Development. In N. Smelser and R. Swedberg (eds.) *The Handbook of Economic Sociology*. Princeton: Princeton University Press.

---------- (1992). Studied Trust: Building New Forms of Co-operation in a Volatile Economy. In F. Pyke & W. Sengenberger (eds.) *Industrial Districts and Local Economic Regeneration*. Institute of Labour Studies.

Schneider, D. (1968). *American Kinship: A Cultural Account*. Englewood Cliffs: Prentice-Hall.

Schon, D. & Rein, M. (1994). *Frame Reflection: Toward the Resolution of Intractable Policy Controversies*. New York: Basic Books.

Schutz, A. (1967). *Collected Papers: The Problem of Social Reality*.

Schwartz, R & Orleans, S. (1967). On Legal Sanctions. *University of Chicago Law Review*, Vol.34: 274-300.

Scott, J. (1998). Relationism, Cubism, and Reality: Beyond Relativism. In T. May & M. Williams (eds.) *Knowing the Social World*. Open University Press.

Sennett, R. (1973). *The Uses of Disorder*. Harmondsworth: Penguin Books.

Simon, H. (1959). Theories of Decision-Making in Economics and Behavioral Sciences. *American Economic Review*, Vol.49: 253-283.

Sinsheimer, P., Gottlieb, R., & Farrar, C. (2002). Integrating Pollution Prevention Technology into Public Policy: The Case of Professional Wet Cleaning. *Environmental Science and Technology*. Vol.36, No.8: 1649-1655.

Sjoquist, D. (1973). Ptoperty Crime and Economic Behavior: Some Empirical Results. *American Economic Review*, Vol.63, No.3: 439-446.

Smith, K. (1990). Integrating Three Perspectives on Noncompliance: A Sequential Decision Model. *Criminal Justice and Behavior*, Vol.17, No.3: 350-369.

Sommers, P. & Cole, R. (1988). The Costs of Complying with Government Requirements: Are Small Firms Disproportionately Impacted? In R. Judd et al. (ed.) *Small Business in a Regulated Economy*. New York: Quorum Books

Southe Coast Air Quality Management District. (2002). *Proposed Amendments to Rule 1421: Perchloroethylene Emissions from Drycleaning Systems.*

Stigler, George. (1971). "The Theory of Economic Regulation." *Bell Journal of Economic and Management Science* 2: 3-21.

---------- (1970). The Optimal Enforcement of Laws. *The Journal of Political Economy.* Vol.78, No.3: 526-536.

Sunstein, C. (1990). *After the Right Revolution*. Cambridge: Harvard University Press.

Swedberg, R. (1990). *Economics and Sociology*. Princeton: Princeton University Press.

Swierzbinski, J. (1994). Guilty Until Proven Innocent: Regulation with Costly and Limited Enforcement. *Journal of Environmental Economics and Management.* Vol.27: 127-146.

Tendler, J. (2002). Small Firms, Informal Sector, and the Devil's Deal. *IDS Bulletin*, Vol.33, No.3

Thompson, W. (2001). Policy Making through Thick and Thin: Thick Description as a Methodology for Communication and Democracy. *Policy Science*. Vol.34: 63-77.

Tietenberg, T. & Wheeler, D. (1998). Empowering Community: Information Strategies for Pollution Control. *Working Paper in Frontiers of Environmental Economics Conference*, Virginia.

Titmus, R. (1971). *The Gift of Relationship: From Human Blood to Social Policy*. New York: Pantheon Books.

Tullock, G. (1974). Does Punishment Deter Crime? *The Public Interest*, Vol.14: 103-111.

Tversky, A. & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *American Association for the Advancement of Science*. Vol.211, No.4481: 453-458.

Tyler, T. (1990). *Why People Obey the Law*. New Haven: Yale University Press.

Tyler, T., Rasinski, K, & Griffin, E. (1986). Alternative Images of the Citizen: Implications for Public Policy. *American Psychologist*, Vol.41: 970-978.

Ullmann-Margalit, E. (1977). *The Emergence of Norms*. Oxford: Clarendon Press.

Uzzi, B. (1997). Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness. *Administrative Science Quarterly*, Vol. 42: 35-67.

Waldinger, R. (1990). Immigrant Enterprise in the United States. S. Zukin & P. DiMggio (eds.) *Structures of Capital: The Social Organization of the Economy*. Cambridge: Cambridge University Press.

Weber, M. (1968). *Economy and Society: An Outline of Interpretive Sociology*. New York: Bedminster Press.

---------- (1947). *The Theory of Social and Economic Organization*. New York: Oxford University Press.

---------- (1904). Objectivity in Social Science and Social Policy. In M. Weber (ed.) *The Methodology of the Social Sciences*. New York: Free Press.

Weiss, K. & Gallagher, J. (1993). Charting a Compliance Course through the Clean Air Act Amendments of 1990. *Unpublished Report*. Boston: The ERM Group.

Wentz, M (1995). The Evolution of Environmentally Responsible Fabricare Technologies. *Am Drycleaner*. Vol.62, No.7: 52–62.

Wilson, J. Q. (1993). The Moral Sense. *American Political Science Review*, Vol.87, No.1:1-11.

Winter, S. & May, P. (2001). Motivation for Compliance with Environmental Regulations. *Journal of Policy Analysis and Management*. Vol.20, No.4: 675-698.

Wrong, D. (1961). The Oversocialized Conception of Man in Modern Sociology. *American Sociological Review*, Vol.26, No.2: 183-193.

Zimering, F. & Hawkins, G. (1973). *Deterrence: The Legal Threat in Crime control*. Chicago: University of Chicago Press.

Zukin, S. & DiMaggio, P. (1990). Introduction (pp.1-36). In S. Zukin & P. DiMggio (eds.) *Structures of Capital: The Social Organization of the Economy*. Cambridge: Cambridge University Press.