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Professional Projects and Institutional Change in Healthcare: The Case of American Dentistry

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Abstract

This paper combines resources from the organization studies and sociology literatures to advance understanding of institutional change processes in healthcare that emerge from the professionalization projects of occupations. Conceptually, we introduce a model that combines the 'archetype' approach to analyzing structural change with a framework for analyzing the agency of emergent professions. We then employ the model to frame a historical case analysis (1972-2009) of the highly contested process by which the occupation of dental hygiene in the US fought to introduce a new organizational form, the alternative practice hygiene (APH) archetype. This archetype challenges the traditional model (the Dentist's Office archetype) that is supported by the dominant dentistry profession. Our analysis contributes two main sets of empirical findings. First, we present a systematic comparison of the APH and Dentist's Office archetypes in terms of their belief systems, formal structures, agents, and policy implications (e.g., access to services). Second, we provide an account of the agency of dental hygienists' attempts to secure the APH model as part of their professionalization project.

Keywords

Organisation theory; medical sociology; health policy; institutional theory; sociology of the professions; USA; dental health

Introduction

The ways in which fields of healthcare organizations can be transformed by the institutionalization of a new structural form that is underpinned by a distinctive belief system (logic) is a primary concern of social scientists, policy-makers and practitioners (Reay & Hinings, 2005). This social phenomenon is of particular concern within fields, such as American dentistry, where existing institutional arrangements help produce chronic social problems including: limited access to care, a disease epidemic, and wide disparities in health status (Mertz & O'Neil, 2002).

While our understanding of institutional change processes in healthcare fields has been advanced by studies framed by organizational studies and sociology, a significant structural hole persists. Within organizational studies, institutional analysts have concentrated on changes in formal structures and logics but have only just begun to explore the agency (strategic action) of occupations pursuing 'projects' to attain professional status

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(Montgomery & Oliver, 2007). In contrast, while the sociology of the professions has analysed the growth in, and nature of, such agency, little attention has been given to its potential as a catalyst for wider institutional transformation (Macdonald, 1995). This paper bridges that gap to advance understanding of institutional change processes in healthcare that emerge from professionalization projects. Conceptually, we introduce a model that combines the 'archetype' approach to analyzing structural change with a framework for studying the agency of emergent professions. We then employ the model to frame a historical case analysis (1972-2009) of the highly contested process by which the occupation of dental hygiene in America fought to introduce alternative practice hygiene (APH) archetype that challenged the traditional model, the Dentist's Office (DO) archetype.

Our analysis contributes two main sets of empirical findings. First, we present a systematic comparison of the APH and DO archetypes in terms of their underpinning logic, formal structures, and policy implications (e.g., access to services). Second, we provide an account of the agency of dental hygienists' attempts to secure the APH model. These findings suggest that our conceptual framework presents a promising basis from which to analyze the interrelationship of structural change and professional agency within processes of institutional change in healthcare.

Institutional Analysis

As noted earlier, while institutional theorists (in organization studies) have developed approaches to studying structural change, little attention has been given to professionalization projects as a form of agency (Reay & Hinings, 2005). Meanwhile, although the sociology of the professions concentrates on such processes, it often focuses on change within an organization, with little attention given to the potential implications for wider institutional transformations (Macdonald, 1995; Montgomery & Oliver, 2007; Salhani & Coulter, 2009, Reay, Golden-Biddle, & Germann, 2006). Thus, for this study, we combine a leading institutional approach to studying structural change with a sociological approach to studying the agency of occupations pursuing professionalization projects.

The Archetype Approach to Institutional Analysis

Within organization studies, there has been a 'growing disenchantment' with analytical perspectives that emphasise the influence of managerial rationality within organisational life (Barley & Tolbert, 1997: 93). Rejecting these tenets of strategic management and classical economic theory, institutionalists examine the significance of institutions or, 'regulative, normative and cognitive structures that provide stability and meaning to social behaviour' (Scott, 1995:33). Contributions to understanding institutional change in healthcare have emerged from analyses conducted at the level of organizational fields defined as, communities of organizations "that partake of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside of the field" (Scott, 1994: 207-8). In a seminal example, DiMaggio and Powell (1983) report that within organizational fields, mimetic, coercive and normative forces combine to produce templates of what constitutes legitimate organizational structure and action. Especially in fields of professional organizations, legitimacy (a generalized perception of appropriateness) is vital for survival (Friedland & Alford, 1991; Suchman, 1995). In one outcome, organizational templates become taken-for-granted; less as a result of managerial concerns for efficiency, and more as a result of interactions among factors including organizations' desire to copy organizations with high degrees of legitimacy, and the stabilizing influence of professional norms and regulations.

In a leading institutional approach to studying change in organization fields, Greenwood and Hinings (1993) advocate the specification and tracking of "archetypes" which are analytical

abstractions of the core normative and structural elements of organizational templates within specific fields. Archetypes are conceived as coherent sets of formal structures and operating systems that are underpinned by a belief system (logic) that specifies appropriate approaches to organization in terms of: (a) domain of operation, (b) principles of organizing, (c) and methods of evaluation. Movement between archetypes is analyzed along three main 'tracks' of change: (1) inertia, or relative stability; (2) proposals for new archetypes that fail to become institutionalized (unresolved excursions), and (3) new archetypes that become institutionalized (transformations).

When compared with alternative approaches to studying institutional change, the archetype approach offers a number of advantages including a socio-historical perspective, and the specification of transformational change as the institutionalization of all three components of a new archetype: logic, structures and systems. Despite these advantages, the archetype framework provides little guidance as to how to understand agency in the process of organizational change (Reay & Hinings, 2005). In contrast, recent developments in institutional theory highlight the need to examine what is involved in the making and re-making of institutions (Lawrence & Suddaby, 2006). This 'institutional work' is conceived to include the activities of individuals and groups who seek to shape (change or maintain) existing institutions to promote their interests.

Analyses of institutional agency in healthcare settings have tended to concentrate on established (powerful) professions that are primarily viewed as agents of maintenance (Currie, Koteyko & Nerlich, 2009). Whilst Hardy and Maguire's (2008) recent review of 'institutional entrepreneurship' provides interesting insights for this study, it does not address the specific nature of agency arising from professionalization projects. In contrast, sociological analysts have long-recognized that professions, and emergent occupations, may help reshape organizational fields through processes such as jurisdiction expansion (Leicht & Fennell, 2008; Montgomery & Oliver, 2007; Scott, 2008). Thus, the next section draws from the literature on "professional projects" to propose a framework for analyzing the context and process by which new organizational archetypes are introduced through the agency of an emerging profession.

The Agency of Professionalization Projects

The actions that professions take to shape the conditions of their work have long been the subject of sociological inquiry (Evetts, 2006). An important element of this work is the examination of how professions distinguish themselves from other occupations through social and economic closure. Macdonald (1995: 34) outlines the professional project as a model for understanding 'how those knowledge-based occupations that aspire to be accepted in society as professions set about achieving their goal'. Six dimensions are identified within this framework of agency. The starting point is emergence as distinct occupation, followed by the emergence of goals including social closure and higher social status. The third component is the project's sub-goals including producing the producers (education), monopolizing professional knowledge, and creating and maintaining a jurisdiction. The fourth component is the occupation's relationship with other actors, including; the state, other occupations, educational institutions, the public, and clientele. The fifth component is the social, cultural and political context in which the project occurs. The final component is the institutional work required to maintain and improve the jurisdiction and ensure social standing.

Table 1 draws from Macdonald's framework to present an analytical model of the context and process of professionalization as driver of archetype change in organizational fields. The outcome is a model of two analytic categories that are under specified within previous archetype analyses. First, our model directs attention to features of the institutional context

(social, political and cultural) in which the agency of an emerging occupation is initiated including the characteristics of the occupation. The second analytical category concerns process. It is comprised of the strategies used by the occupation to affect change within the contextual relationships as part of the ongoing professionalization process and, if successful, jurisdictional maintenance.

Methods

This early investigation of the role of occupational agency as a catalyst for institutional transformation required the use of a case study to generate a foundation of understanding in the area, and to reveal elements of the emergent process (Kitchener, 1998). From the authors' unique dataset on institutional change in the field of American dentistry (complied over ten years from multiple studies), this paper concentrates on materials concerning the agency of dental hygienists in California between 1979 and 2009. This case was selected purposively after initial analysis suggested that it provided an exemplar of the institutional agency of an emergent profession.

The historical case study was developed from the five main sources of information outlined in Table 2. Detailed discussion of these sources, their collection and analysis are reported elsewhere (Mertz, 2008, 2010; Mertz & Bates, 2008). Together, these quantitative and qualitative sources create a uniquely detailed history of the development of the dental hygiene occupation in California. This includes perspectives from dental hygiene, dentistry, the public, and policy makers.

Following standard procedures in archetype analysis, this study first analyzed archival data to identify structural forms within the field of American dentistry, and then traced movement between them. The consistency of data that emerged from our primary (archival data) and secondary sources (literature review) suggests that the traditional dentistry archetype (Table 3) may describe reliably the general form of the field up until the early 2000s. By contrast, the discussion of the new archetype is derived largely from primary data (workforce surveys and interviews).

To examine the context and process of occupational agency in the emergence of the new archetype, the archival and qualitative interview data were coded according to the themes in our conceptual model (Table 1). This coding allowed an evaluation of the fit of the data to each part of the model and compilation of the empirical description and analysis of the case study. The workforce surveys (which included both structured questions and open ended comments) provided data on the current organizational outcomes of the professionalization project of dental hygienists. Our analyses were ‘validated’ (Yin, 1984) through techniques including the examination of multiple participants in multiple settings, prolonged engagement, and participant validation (details provided in Mertz, 2008, 2010; Mertz & Bates, 2008).

Professional Projects and Institutional Change in American Dentistry

This case analysis begins by introducing the field of American dentistry and specifying the traditional (DO) archetype identified in this study. We then present our contextualized account of the process by which the professional project of dental hygienists changed the organizational field of US dentistry by introducing a new archetype. The organizational outcomes of the process are then represented as the new alternative practice hygiene (APH) archetype.

The Field of American Dentistry and the Dentist's Office Archetype

American dentistry is a highly institutionalized field that exists primarily to house the work of approximately 165,000 privately practising dentists (80% are males), and 16,000 dentists who work in related roles such as dental education (American Dental Association [ADA], 2009). The most prevalent organizational form is the independent solo practice, often referred to as ‘the dentist's office’. Unlike the fields of American hospitals, clinics, and physician groups, there are few organizations that mediate the dental patient-provider relationship through bureaucratic means. Instead, the dental profession, as represented by bodies including the ADA, continues to determine the institutional ‘pillars’ (normative, regulatory, and cognitive) of the field (Scott, 1995). The standardized educational pathways constitute the normative pillar. Delineated scopes of practice, licensing and accreditation processes make up the regulatory pillar. The clearly recognizable form of fee for service private practice represents a mimetic pillar.

The institutional pillars of American dentistry have remained relatively resilient to change over the past 50 years. Compounding the professional control of the field is the nature of the American regulatory system, whereby each state legislates professionals' scope of practice and supervision requirements separately. Although this could result in variation in professional regulation by state, few states have chosen to deviate from professionally defined standards. Therefore, the national field of dentistry is both characterized, and dominated, by a template of organization that we term the Dentist's Office (DO) archetype (Table 3).

The traditional DO archetype is underpinned by a distinctive logic concerning (what dentists consider to be) *the* legitimate way to organize ‘full scope’ dental care (Davis, 1980, 1987). Within this logic, the domain of operation of the dental office is that it provides the location for the qualified practitioner to deliver dental services autonomously to clients who present themselves. The key organizing principles reflect a belief in entrepreneurship, professional autonomy, and American exceptionalism (Picard, 2009; Davis, 1980, 1987). These values are intricately connected to the solo private practice that, in line with mainstream American culture, is based on a notion of individual action and personal responsibility. Dentistry, like medicine, has self-regulation by state boards, and ethical standards for practice. Unlike medicine, where performance measures are increasingly common, the dental logic still holds that professional judgment about technical competence is the only acceptable evaluation of dental performance (Bader, 2009). As a result, dental insurers require fewer performance data from contract dentists than medical insurers do from physicians.

Within the DO archetype, the prevailing logic underpins the particular structural form of solo private general practitioner competing in a professionally controlled marketplace. From this model, dentists employ and/or control all other dental occupations (including hygienists, assistants and technicians), rendering it virtually impossible for those occupations to improve their legal or economic status.

The payment system within the traditional DO archetype is comprised of private insurance (64%), out of pocket (31%) and government sources (5%) (Wall & Brown, 2003). Dental benefits were not included in the two major government health plans, Medicare and Medicaid, except to cover children in poverty. Managed care has made only limited inroads in dentistry and where it has emerged, fee scales, contracting, and referrals for speciality care typically remain at the dentist's discretion. Under this system today, it is estimated that one third of the population does not have regular access to dental care (Brown, 2005).

The Project of Dental Hygienists as Institutional Agency

Since its inception in 1913 (Motley, 1988), American dental hygiene has been an organized occupation with a strict gender division between it and dentistry:

> "Dentists feared the effect that the existence of trained women hygienists would have on their own professional fortunes. Some doubted that truly intelligent, well-trained hygienists would be happy being restrained from performing more complicated operations that were technically within the province of the dentist himself." (Picard 2009: 32)

Never seeking to replace the profession of dentists, or its preferred DO archetype, hygienists have instead sought professional status and the capacity to operate *independently* of dentists' control. The international literature on dental hygienists has tracked this professional project through the advancement of the organized profession in securing educational standards, growing numbers, increasing scope of practice, and legal entitlements (Adams, 2003, 2004a, 2004b; Coban, Edgington, & Compton, 2007; Lautar, 1996; Wing, Langelier, Continelli, & Battrell, 2005). Adding to that knowledge–base of the project, the following analysis concentrates upon the context and process of the attempt by dental hygienists in California to transform the institutional field by establishing an organizational archetype from which they could operate independently of dentists' control. Table 4 provides a summary of our case data.

Context

In the 1970s, the environment in which the, primarily female, hygienists began their institutional challenge was strongly influence by the feminist and civil rights movements in America. Emboldened, hygienists began to demand more respect, equality, and rights within the realm of paid work. This ultimately led to calls for independent practice which was consistent with the broader movement for advancement of women as well as the right to free enterprise, considered a basic right of American citizenship.

In contrast to this alignment with changing social conditions, economic conditions of the 1970s worked against hygienists' professionalization project. Specifically, the resource environment of dentistry was devastated by the combination of an over-supply of dental providers, a recession (which reduced demand), and the advent of preferred provider organization (PPO) payment systems that negotiated set fees between dentists and clients (so reducing dentist's income flexibility). Dentists, seeking to reduce their costs, began employing hygienists only part-time and as independent contractors (to avoid paying employment benefits and taxes). These changes created economic instability for hygienists, just as more women were entering the occupation:

> "Hygienists who had worked for dentists for ten and fifteen years were told: 'Go get a different job, another job, in another office.' It was very widespread. So that didn't sit very well!" (Retired APH)

A few pioneering hygienists tried to set up their own practices, only to be shut down by state dental boards.

> "the issue at that point became the right to own my own business. Historically we saw women rise in so many ways and thought 'why can't I own my own practice? Try and stop me!" (Dental Hygiene Leader)

Under the regulatory pillar of the dental field, moving to independent hygiene practice would require changes mandated by either the courts or the legislature. Given hygienists' were employed and regulated by dentistry, they saw no other way to improve their condition without completely breaking free from the control of dentists.

> "We wanted to prove that hygienists could practice independently safely… without supervision because the supervision was what was holding us back. We were very much controlled, and especially in those days. We just really wanted to be able to get free." (Retired APH)

In California, a mechanism for pursing independent practice came from the 1972 passage of the Health Manpower Pilot Projects (HMPP) Act (Robertson, 2003). Since the mid 1960s, legislators in California had been grappling with the issue of licensed nurses working in roles that exceeded the Nurse Practice Act of 1939. The HMPP (AB1503) was passed to provide a legal umbrella for health professions' activities that were widespread but not legally authorized, as well as a mechanism to change health professions practice acts (Robertson, 2003). The HMPP program allows for demonstration of the effectiveness and safety of new or expanded roles for all types of health care professionals through a formal pilot involving didactic and clinical training as well as a period of utilization in the work setting. The legislature encouraged health professions boards and educational institutions to engage in and report on the results of these pilots to inform the process of deciding on new laws to change professional practice regulation.

The first decade of the HMPP (1972-1981) followed a period of national attention and philanthropically-funded projects seeking to expand and advance dental auxiliary skill sets (Lobene, 1979; Powell, Sinkford & Chen 1978; Sisty, Henderson, Paule, & Martin, 1974). In California, a state dental auxiliary taskforce made recommendations to expand the functions of dental hygienists and assistants (Wides & Dower, 2010). The HMPP law provided educational institutions in California a mechanism to actually test out new roles. This resulted in 27 dental auxiliary pilots of which 21 were completed (Robertson, 2003). These pilot projects provided a model for entrepreneurial dental hygienists to emulate.

> "We knew that there was a huge need for our services out there in many different areas, and because of the Restraints of Practice Act there was no way that hygienists were ever going to get to those places... Health Manpower says right up front that it is intended to change the law, so that's the direction we went. Instead of something for profit or any other idea, we thought if we could get material that was academically sound then we could use that to change the law to get us what we wanted, which would be independence". (Retired APH)

Process

In 1981, a group of leaders from the California state dental hygiene association applied to launch a HMPP demonstration project on independent hygiene practice. They partnered with dental and business educators to design and implement the project. While the American Dental Hygienists' Association had not yet formally advocated independent practice, the groundwork had been laid by their professional activities that promoted a strong orientation and identity as prevention specialists. The women who signed up to be participants in the demonstration project were experienced, entrepreneurial, and shared an orientation toward improving access to education and preventive services, all characteristics that continue to define this subgroup.

> "I think a lot of the women that go into this profession -- it's not a money thing. We're caring, we're compassionate... my business card says I'm serving the very young and the very old." (Practicing APH)

The demonstration project was designed in 1980, approved in 1981 but not begun until 1986 due to lack of funding. It entailed training 34 hygienists how to run businesses followed by a period of clinical training for independent practice at a training site. Sixteen hygienists went on to set up an independent practice and collected longitudinal data on patients, referrals,

practice economics, and quality of care (Perry, Freed & Kushman, 1994). While the HMPP was the primary intervention strategy, multiple other efforts surrounded the activities that the pilot involved.

The launch of the demonstration project spurred an institutional struggle that played out between dental hygienists and dentists over the appropriateness of hygienists' efforts, roles and professional status. Dentists claimed that ‘renegade’, ‘militant’ hygienists were breaking up the ‘dental team’ and that the demonstration project was a gross violation of dentists' professional control (Blair, 1980). Dentists warned that hygienists were providing ‘undiagnosed care’ and claimed that to work in any manner except under their direct supervision and employ would have dire consequences for the public's safety (“Devine on dentistry”, 1987). Hygienists countered that they were trained and licensed to do their work, and that the demonstration project would prove independent practice was safe, effective, economically viable, and could improve access to care.

> “Of course the hygienists never felt it was experimental, but the dentists would always make it sound like we were the experiment at how well we could work. Yet we were actually doing the same thing that we did under our existing license.” (Practicing APH)

In resisting hygienists' attempts at institutional change, the California Dental Association took repeated legal action to stop the pilot program, setting off a series of suits and counter suits -- none of which stopped the demonstration project. The political turmoil around the issue was intense. An assemblyman who took up the hygienists' cause in the legislature noted, “this is an access issue, a free enterprise issue, an economic issue, a gender issue. We are breaking up what was before an ‘old boys’ network” (Galbraith, 1992: 1).

To bolster their case, hygienists sought alliances with like-minded groups such as public health dentists who supported community-based prevention, and consumer groups representing elderly, poor and disabled people. The media picked up on the story, engendering support from both the liberal and conservative public. In some accounts they portrayed the ‘Goliath’ of the dental association against the hygienist ‘David's’ who were simply ‘hometown heroes’ trying to help people (Hollitz, 1987). Alternatively, the issue was portrayed as a dental monopoly trying to restrict hygienists' personal liberty and stifle free market competition (“Dentists vs. consumer choice”, 1992).

The media analysis conducted within this study (see Table 2) identified a key shift in the messaging behind the hygienists' project between 1986 and 1996. Media reports moved away from stories of turf battles and hygienists seeking independent practice (more common in the early days of the HMPP), toward stories about the public good of hygienists seeking to expand access to care. As the magnitude of the dental care access problem became more widely known amongst the public and policy makers, hygienists' efforts at institutional change began to garner wider public support. This support was critical to the momentum of the hygienists' challenge to the professional dominance of dentists over two decades.

The 1997 law enacting independent hygiene practice was a final political compromise brokered by legislators weary of the battle that, dating back to 1979, included nine previously failed bills to implement independent practice. Despite widening public and political support, dental hygienists were not successful in gaining unrestricted independent practice rights. Rather, a new type of dental hygiene practitioner was created, the Alternative Practice Hygienists (APH), who are allowed to work independently but only in settings where access to care is problematic (e.g., nursing homes).

The first APH education program did not open until 2003. The process took 23 years from idea inception to actual implementation. Today, there are over 290 APH providers licensed to practice. While the setting restrictions ensure that APHs are expanding dental hygiene care options for underserved populations in California, as a professional group they still struggle for acceptance within the field and with making their new practices economically viable. In order to meet the social and economic demands of their practices, APHs have had to arrange and delivery their services differently, and in doing so, have created a new organizational form of preventive dental care. This new form has been maintained by ongoing political actions of dental hygienists to remove restrictions in the original legislation, and the implementation of a dental hygiene committee that empowered hygienists in California to be self-regulating.

The Alternative Practice Hygienist (APH) Archetype

The (current) organizational outcome of the lengthy and contested process of institutional change described above is represented as the APH archetype in Table 3. The underpinning logic of the APH archetype is distinguished from the traditional DO archetype in its domain of operation, principles of organizing, and evaluation standards. In terms of domain of operations, APHs provide only preventive care services, and refer to dentists when they identify advanced treatment needs. Our analysis of California hygienist workforce survey data (described in Table 2) shows that over 85% of APH practitioners do not have fixed offices. Instead they work primarily in community health settings such as schools (22%), nursing homes (59%), residential care homes (64%) and residences of the homebound (61%). The APH archetype retains the entrepreneurial drive of the DO archetype, but with a social rather than a business orientation. Our survey data also show that APHs express a strong commitment to public service: they report the primary motivations for APH work are serving the underserved (72%) and providing access to vulnerable patients (65%). As well, APHs work collaboratively with dentists and other dental occupations (80%) as well as with medical (45%) and nursing (26%) professionals and other care staff who manage and work in the various settings. Finally, inter-professional evaluation exists, with outcomes and quality of life improvements for patients judged by collaborating providers as much, or more, than technique is judged by dental hygiene peers. A shared theme across archetypes is the professional commitment to ethical standards.

In structural terms, our California hygienist workforce survey data show that APHs work as sole proprietors, contractors or employees either alone (80%) or in partnership with other APHs (20%). They are legally restricted from employing non-APH hygienists and dental assistants, although they can employ an assistant to help with non-clinical activities. Their practices are primarily mobile involving the purchase of portable kits including basic hygiene equipment and chairs. Laptop computers are often used to enter patient data into an electronic dental record while in the community setting, while many APHs use their homes for billing and equipment sterilization. Unlike the traditional dental archetype, most hygienists are female (97%).

The systems that support the APH archetype are the same as the traditional archetype but with a difference in emphasis. Alternative practice hygienists accept patients with public insurance (61%) or work for an organization on salary (e.g. public health clinic) which serves underserved patients; neither of which is common in the traditional archetype. However, both organizational forms rely on fee-for-service and out of pocket payment for services. The private payment systems supporting dental care in America have been slow to adapt to the new archetype, leaving APHs with significant complaints about billing. While the APH archetype is established and growing in California, and variants of this model have been established in other states, it still faces uncertainty as to full institutionalization.

Discussion and Conclusions

This paper advances conceptual and empirical understanding of institutional change processes in healthcare fields that emerge from the professionalization projects of occupations. The conceptual contribution arises from our combination of resources from the organization studies and sociology literatures to frame a historical analysis of the field of American dentistry. Specifically, we introduce a model that combines the 'archetype' approach to analyzing organizational change with a framework for analyzing the agency of emergent professions.

For institutional analysts of healthcare fields, our model offers a means of addressing the agency of actors participating in professionalization projects as a form of institutional agency. For sociologists of the professions, our model provides a way of exploring the institutional implications of professionalization projects. This involves linking the components of those projects to specific types of agency, which can then be mapped to the context and process of change resulting in new organizational forms. Overall, this combination of institutional theory and the sociology of the professions provides a basis for enriching the analysis of professionalization projects and institutional change by making more explicit the interrelationship of organizations and professions to a greater extent that in earlier studies. Future work may further elaborate the model and will likely draw productive empirical comparisons through the model's applications to other healthcare fields that house professionalization projects such as nursing, mental health, social work, and midwifery.

Empirically, we provide two sets of findings. First, we present a systematic comparison of the traditional (DO) and emergent (APH) archetypes in terms of their logics, formal structures, policy implications, and agents. While the logics of the two institutional templates share a belief in entrepreneurship and independent practice, the APH logic expresses a stronger commitment to prevention, collaboration, public service, and bringing care to underserved patients. This differing logic has evolved as the emerging profession's response to the intense opposition by the dominant profession of dentistry. Politically, APHs were only able to achieve autonomy by carving out a jurisdictional niche (Abbott, 1988) as providers of care for less privileged clients in public health settings, therefore not competing with private dentists. Today, this practice opportunity attracts hygienists whose identity and values align with the realities of this new organizational form, yet the relative lack of resources in this niche perpetuates the entrenched status hierarchy that exists between private and alternative practice.

Unlike the male-dominated and owner-operated DO archetype, which provides full scope general dentistry, women are the primary owners of APH practices or employees of public agencies. Crucially, they operate in a scope of practice restricted to dental hygiene education, diagnoses and treatment, and are often mobile in operation. While both archetypes rely on fee-for-service payments, APHs depend far more on public financing than do dentists. One of the main policy concerns associated with the DO model is that while it allows services to be provided to those willing and able to pay, approximately one third of the population does not receive regular dental care (Brown, 2005; Mertz & O'Neil, 2002). It was this void that the APH archetype was, in part, designed to fill.

Our second set of empirical findings concern the context and process of the strategic actions used by dental hygienists in promoting their new archetype and professionalization project. Broadly speaking, we identified two phases of agency. During the first, pioneering agents for change worked to establish the technical ability of hygienists to practice independently. This involved the HMPP and the legal, legislative and media battles. The second phase centred on building the new organizational archetype that would house the independent

practice of dental hygiene While the first phase was a relatively coordinated effort as part of the professionalization project of dental hygiene, the second phase was more disconnected, primarily due to the fragmented adoption of the new archetype. This suggests an important finding regarding the agency of an emerging profession. If hampered by legal restrictions and strongly opposed by the dominant institutional forces, it will face a lengthy, contested and iterative process of trying to institute a new archetype.

The hygienists' relationship with other actors (dentists, public health) and the social and cultural context (economic instability, role experimentation) informs our understanding of their motivations and choice of the primary intervention strategy of a demonstration project for independent practice. This strategy built upon hygienists cultural and professional alliances to advance the sub-goals of the occupational project; by seeking complete autonomy they were advancing both social and economic closure. Advocates for independent dental hygiene used a focus on prevention and access to care to challenge the logic underpinning the traditional archetype, and the promotion of free enterprise to undermine the professional dominance of dentists. Dentists fought back by claiming any change would threaten quality of care, emphasizing the lower educational standards for hygienists (associate degree vs. post-graduate training) and the need for a proper diagnosis by a qualified dentist prior to receiving dental hygiene services. This institutional maintenance work (Lawrence & Suddaby, 2006) focused on reinforcing dentists' professional dominance and avoided debating the access to care problem.

Although the HMPP evaluation provided enough legitimacy to enact legislative change, it may be too early to claim that the archetype is fully institutionalized. Hygienists' associations in other American states have engaged in similar efforts resulting in a trend toward ‘direct access’ to hygienists (today's less politically contentious goal than ‘independent practice’). However, due to state regulatory variation, this does not always result in the same organizational form. Even in states like California where the professionalization project of hygienists is most advanced, the existence of the archetype is fragile to the extent that practitioners remain marginalized and restricted to working with populations who do not have stable funding for care. In 2009, the State of California cut funding for adult dental services from its public insurance program on which many APH clients relied. So far, the APHs have been able to survive by maintaining some employment in traditional hygiene work. However, public policy changes further eroding the structures or systems on which the APH archetype exists could easily represent its death knell. Therefore, today, the APH archetype may be most accurately classified as an ‘unresolved excursion’, rather than an institutional transformation (Greenwood & Hinings 1993). Further expansion of the APH archetype to other states and better alignment of the payment and other systems to support this model are needed before the archetype becomes fully institutionalized and the field can be seen to have transformed. Given that a focus within recent American health care reform is on developing new dental workforce innovations, potential exists for the further transformation of the field.

In contrast to some previous studies of institutional transformation in healthcare fields, this analysis concentrated on an endogenous mode of agency exerted by less powerful actors, rather than the more typically studied external jolts or the imposition of policies by field actors with high levels of structural legitimacy. Those studies have shown that some forms of institutional change can be achieved relatively quickly (Kitchener, 1998). A policy lesson to be drawn from this analysis is that the professionalization projects of emergent occupations cannot be relied upon to quickly achieve institutional transformation in health fields. Rather, in the face of determined resistance from established interests, the projects tend to become highly politicized and disconnected from the pragmatic challenges involved with delivering care services and fulfilling the social missions of health care providers.

Under these circumstances, emerging professions are unlikely to easily or quickly institutionalize new organizational archetypes that help address chronic social problems such as restricted access to care, a dental disease epidemic, and disparities in oral health status.

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Table 1

Analyzing Professional Projects within Archetype Change

Analytic Categories	Features of the Professional Project	
Context		
C1	PP-1	Occupational distinction
C2	PP-2	Objective of social closure (includes pursuit of economic monopoly of knowledge-based services granted by state and status & respectability granted by society)
C3	PP-4	Relations to other actors (market & status consequences)
C4	PP-5	Relations to social, cultural & political context
Process		
P1	PP-4	Relations with other actors (jurisdictional conflicts & alliances)
P2	PP-3	Development of sub-goals (specific strategies to advance social closure)
P3	PP-6	Jurisdictional maintenance

Table 2

Data Sources

Data Source	Details
1. Literature Review	(a) Dentistry including: historical development, dental professions & dental hygiene professionalization (b) Sociology of the professions, institutional theory, organizational change, & institutional entrepreneurship
2. Participant observation	Dental policy meetings in California & 3 alumni meeting of qualified hygienists held in 2007, 2008 & 2009.
3. Interviews	22 comprising 1 focus group of 7 hygienists, plus interviews with: 5 hygienists, 2 evaluators of a pilot qualification programme for dental hygienists, 9 others from organizations including dental & dental hygienist associations, hygiene educators, state dental board staff.
4. Hygienist workforce survey	(a) Quantitative data on hygienists' demographics & practices patterns, collected from authors' 2005 & 2009 California dental hygienists' survey (b) Qualitative comments on practices and experiences
5. Historical and archival data	(a) California legislative records on regulations connected to the development of the hygiene occupation (1979-2009) (b) California Office of Statewide Health Planning & Development (OSHPD) Health Manpower Pilot Project Journal (1972-2007), (c) California Dental Hygienists' Association archive (1979-1998), (d) California Dental Association publications (1978-2009) (e) American Dental Hygiene Association (ADHA) publications (1982-2009) (f) Major newspaper & wire media coverage of dental hygiene issues (1980-2009).

Table 3

Archetypes in US Dentistry

	Dentist's Office (DO)	**Alternative Practice Hygiene (APH)**
Logic		
Domain of operation	Full scope general dental care	Preventive care in restricted settings
Principles of organizing	Business entrepreneurship Professional autonomy	Social entrepreneurship Collaboration
	Employer of other occupations	Employee
	American exceptionalism	Public service
Evaluation	Intra-professional judgment of technical competence	Inter-professional judgment of health outcomes and quality of life
	Ethical standards	Ethical standards
	Technical competence	
Structures	Solo	Solo or partnership
	Private practice	Sole proprietorship, public health systems
	Office-based	Mobile, integrated
	Male	Female
Systems	Self-pay	Public insurance
	Fee-for-service	Fee-for-service
	Limited government	Self-pay
Aligned actors	Dentists	Hygienists
	Private payors	Public payors
	Educators	Public health dentists
	Regulators	Public health officials
	Suppliers	Special needs patients

Table 4

The Institutional Agency of Alternative Practice Hygienists

Analytic Categories		Professional Project		APH Case Study	Key Dates
C1	Context	PP-1	Occupational distinction	* Dental hygienists first trained as a new occupation	1913
				* Dental hygienists as institutional agents were experienced leaders, entrepreneurs, pioneers, and held a concerned for underserved and vulnerable populations	1979
C2		PP-2	Objective of social closure (includes pursuit of economic monopoly of knowledge-based services granted by state and status & respectability granted by society)	* Dental hygiene develops educational standards and accreditation, a professional association, scope of practice, licensure and a body of knowledge, but not autonomy	1913-1979
				* Independent dental hygiene practice was seen as the next step in achieving full professional status as it would afford autonomy	1979-1981
C3		PP-4	Relations with other actors (market & status consequences)	* Dental hygiene was a non-dominant, female occupation.	1913-present
				* Hygienists were economically dependent on dentists so had no market closure	1913-1997
				* Hygienists were regulated by dentists so had weak social closure	1913-2009
C4		PP-5	Relations to social, cultural & political context	* Civil rights	1955-1968
				* Free enterprise	ongoing
				* Second wave feminism	1960s-1970s
				* Economic stagflation	1970s-1983
				* Auxiliary dental provider demonstration projects	1970s
				* Advances in other emerging professions (Nurse practitioners, Physician's assistants)	1960-1970s
P1	Process	PP-4	Relations with other actors (jurisdictional conflicts & alliances)	* Challenge to professional dominance of dentists	1979-present
				* Alliance with public health dentistry, dental education & research, and consumer advocates	1979-present

Analytic Categories	Professional Project		APH Case Study	Key Dates
P2	PP-3	Development of sub-goals (specific strategies to advance social closure)	* Health Manpower Pilot Project (HMPP) to test independent dental hygiene practice	1981-1997
			* Local marketing and media coverage builds public trust (respectability)	1986-1996
			* Billable provider via state and private payment system (market legitimacy),	1987
			* Legislation to gain legal status (jurisdiction),	1997
			* New RDHAP education system (produce the producers),	2003
P3	PP-6	Jurisdictional maintenance	* Legislation to remove prescription requirement (practice autonomy)	2004
			* Create self-regulating dental hygiene board (professional autonomy)	2009