17 After the gold rush: the role of professionals in the emergence and configuration of organizational fields

Lianne Lefsrud and Roy Suddaby

INTRODUCTION

Institutional theory acknowledges the intimate relationship between professionals and profound social change (Hwang & Powell, 2005). Most research, however, has focused on understanding how professionals transform themselves, that is, create new forms of professional organizations (Suddaby & Greenwood, 2005), create new areas of practice (Anand, Gardner, & Morris, 2007), or expand their professional jurisdiction (Greenwood & Suddaby, 2006). A key observation of this research is that, when professionals transform themselves, they tend to produce, as a consequence, a reconfiguration of the organizational fields in which they are embedded. While interesting, this focus on how professionals change their own institutions or reconfigure fields tends to treat field-level change as the somewhat accidental byproduct of more deliberate changes in the professions. It overlooks the possibility that field-level change occurs in tandem with and as a deliberate result of efforts to change professions. Similarly, such research has focused on change in established fields and professions rather than attending to the process by which nascent professions and fields are originally established (see also Chapter 16).

Suddaby and Viale (2011) argue that field-level organizational change should be reconceptualized as a process composed of an ecology of multiple, often overlapping "projects" of both professionalism and institutionalization. The "professional project" is a well-established and powerful conceptual explanation for understanding both the motivations and the processes of professionalization (Larson, 1977). Professional projects are also projects of institutionalization in which professions exchange resources and commitments with other institutional actors, such as the nation state, in order to establish and maintain positions of hegemony and power (Johnson, 1973; Larson, 1977; Macdonald, 1995).

Missing from these accounts is a clear explanation of the dynamics through which professions and institutional fields become *initially* co-constituted (see Montgomery & Oliver, 2007, and Oliver & Montgomery, 2008, as exceptions). What is the role of institutional entrepreneurs who are effectively pre-professional, pre-organizational, and even pre-nation state in the creation of a *de novo* organizational field? How do shared logics of practice, forms of organizing, and field-level governance mechanisms become co-established as taken-for-granted cognitive structures within both the profession and the organizational field?

Similarly, entrepreneurship literature has often assumed an equilibrium orientation based on stability and stasis (Eckhardt & Shane, 2003). It is assumed that information

can be reduced to a current price for resources, these prices efficiently direct resource use, and all decisions are to optimize. Further, researchers have tended to take a person-centric perspective, in which entrepreneurship depends on stable, enduring differences among people rather than differences in their information about opportunities.

Yet entrepreneurialism benefits most from disequilibrium (Schumpeter, 1942). Eckhardt and Shane (2003: 336) define entrepreneurial opportunities as those "situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, or means–ends relationships." Similarly, institutional entrepreneurialism is most likely to occur if actors are able to identify the opportunities offered by contradictions and disequilibrium. For example, Greenwood and Suddaby (2006) found that embedded entrepreneurs could affect institutional change by identifying adverse performance, bridging boundaries, and leveraging boundary misalignment and resource asymmetry.

To address these oversights, in this chapter we seek to explore the institutional work associated with the mutual constitution of professional and organizational fields in a disequilibrium or even pre-equilibrium context. We argue that the processes of institutional entrepreneurship and processes of professionalization are reciprocally linked and occur simultaneously. As professions create and extend their jurisdictional boundaries, they engage in the institutional work processes of advocacy, definition, vesting, and constructing normative associations and identities (Lawrence & Suddaby, 2006; Lawrence, Suddaby, & Leca, 2009). These processes focus on the position and role of the individual actors: who is legitimately able to act upon institutions, what their status and identity are, what their rights and interests are, and how they make the connections between their practices and the moral or cultural foundations for those practices. Our aim is to outline the reciprocal roles of professionalization projects in the creation of an organizational field. Following Suddaby and Greenwood (2009) we note that institutional processes tend to be most visible when viewed from a historical distance and, therefore, adopt a historical lens for this analysis.

We use the context of a "gold rush" to capture these historical dynamics. The gold rush is a well-known historical phenomenon of capitalism in which a broad range of social actors converge on an open and undefined territory in order to exploit it commercially. Gold rushes are typically characterized by an absence of institutional rules, norms, and established social actors such as professions. As a prominent historian of the California gold rush has observed, "[b]ecause of the chaos and disorder that the world's first great gold rush unleashed, it is tempting to think of California in 1848 as still a paradisiacal place untouched by lawyers and venereal disease" (Fetherling, 1997: 11). This makes the California gold rush a particularly useful empirical context. Although a narrow interpretation of the term captures the eight gold rushes that occurred in the world in the nineteenth century, a broader interpretation incorporates all varieties of unleashed capitalist expansion, including economic bubbles and speculative mania (Garber, 2001). Given this, we contend that this case study may be considered as theoretically generalizable to other "gold rush"-type contexts. While some economists have seen the gold rush phenomenon as a useful empirical site for understanding the evolution of institutions (e.g. Umbeck, 1977a, 1977b), the role of professionals in creating institutions has not yet been explored by organizational theorists.

We present our argument in three steps. We begin by discussing processes of field

emergence and configuration. Next, we draw on the California gold rush phenomenon as a particularly useful empirical context through which we may observe these field configuration and professionalization processes at play. We then outline the role of professionals as institutional entrepreneurs integral to the unfolding of these processes, presenting illustrative examples of the institutional work of individual professionals. We conclude with a discussion of some of the implications of this view of field emergence and professionalization and outline a program of future research.

THE ROLE OF PROFESSIONALS IN FIELD EMERGENCE AND CONFIGURATION

DiMaggio and Powell (1983) identify four indicia of field structuration: increasing interaction, emerging inter-organizational structures of domination and patterns of coalition, increasing information load, and a mutual awareness among actors that they are involved in a common enterprise. Increased organizational interaction, in turn, requires the formation of new forms of governance to minimize transaction costs (Scott, 1994, following Williamson, 1975, 1985). New forms of governance, similarly, produce inter-organizational structures of domination and patterns of coalition (DiMaggio & Powell, 1983) and increasing evidence of status values or rankings associated with varying organizational forms in the field (Scott, 1994). Increasing field structure leads to centralization and unification of decision making (Scott & Meyer, 1983) and increasing agreement as to the common meaning system, shared symbolism, and institutional logics that guide activities (Scott, 1994) that define "successful" ways of operating within the field (Whitley, 1992). Increasing field structuration also leads to increasing clarity of field boundaries owing to more sharply defined and enforced state regulation and professions' jurisdictions (Scott, 1994).

We observe that the stages of field structuration identified above map relatively closely onto reciprocal stages of professionalization as observed by historians and sociologists. So, for example, the increased interaction of actors that DiMaggio and Powell (1983) note as a precursor to field formation approximates the observation made by historians and sociologists of the professions that the creation of formal institutions of the professions, such as professional associations, is the inevitable result of increasing concentration of, and competitive interaction between, professionals (see Gidney & Millar, 1994; Halliday, 1987). In an extension of this argument, the emergence of professional associations and norms of professional control, which is a key stage of professional projects (Larson, 1977), roughly approximates the "emerging structures of domination" identified by DiMaggio and Powell (1983). Sociologists have also identified the establishment of status hierarchies and elite firms as a progressive stage in professionalization projects (Heinz & Laumann, 1982; Powell, 1988), and the creation of common logics and meaning systems as key indicia of institutionalization of professional power (Wilensky, 1964).

In sum, we suggest that the close similarity of processes of field structuration and stages of professionalization is no accident. Field configuration, we argue, occurs in tandem with professionals' efforts to consolidate and advance their own professionalization projects. Our interest, thus, is to understand the causal relationship between

professionalization and field configuration in a historical context—that is, as nascent fields (and professions) emerge.

THE HISTORY OF GOLD RUSHES

In this section, we briefly justify our use of the gold rush as both an empirical context and a theoretically generalizable metaphor for analyzing the co-evolution of professionals and fields. We quickly sketch the history, societal drivers, and patterns of development of gold rushes. Then, in the following section, we describe the mechanisms by which organizational fields and professions co-evolve as logics of practice, forms of organizing, and field-level governance systems become established through the institutional work of individuals. We illustrate each of these mechanisms with empirical examples drawn from the California gold rush.

The gold rush is an appropriate context for studying the co-evolution of professional and institutional projects for several reasons. First, DiMaggio and Powell's (1983) proposition—that fields form around resources—has largely been neglected by institutional theorists. To redress this oversight, a gold rush is an intuitively accessible example of a field emerging around a valuable resource. Second, promises of abundant wealth promote a mythological culture of adventurism and the exploration of new territory—both physical and symbolic. Third, a gold rush is typified by a mad stampede of accelerated development, an apparent lack of social structure, and a suspension of prior rules (Pisani, 1999). "Because [a gold rush] consists of individuated actions taken in pursuit of particularistic goals, adventurism undermines disciplined, organized group activity" (Hamilton, 1978: 1466). Given this, the sub-text of a gold rush is a struggle between order and chaos, authority and lawlessness (Fetherling, 1997). Fourth, ambiguity about the meaning of events leads to many possible interpretations which become available to create new meaning systems. Fifth, the negotiation of meaning from within this ambiguity leads to the formation of new governance structures and rules, akin to nascent markets (Santos & Eisenhardt, 2009). While there may indeed be no externally imposed regulation, industry actors often take collective action to self-regulate and buffer the extreme financial and technological uncertainty (Clay & Wright, 2005). Sixth, a gold rush context can be interpreted more broadly to include other varieties of unleashed capitalist expansion and regulatory uncertainty, like the current exploitation of the oil sands in Alberta or the high-tech bubble of the mid-1990s. For these reasons a gold rush context offers an opportunity, as Lawrence and Suddaby urge, for "researchers to focus on the interstitial elements of institutions: the gap between structure and action . . . [and] begin to unpack the relational and interactive moments of institutional production" (2006: 249).

Gold has been discovered on every continent (Fetherling, 1997), and discovery started with Siberia in 1719 and Brazil in the 1750s. Yet these discoveries were controlled by a tsar (as in Siberia) or the Portuguese Crown and Catholic Church (as in Brazil) and did not lead to the mass migration and hyper-development associated with a gold rush. Indeed, the stampede of gold prospectors is a relatively modern and short-lived phenomenon, which lasted only 80 years. The first great gold rush started with an accidental discovery of gold in California in 1848, with the rush starting in 1849.

"Gold has been found in significant quantities . . . . California, no doubt is rich in mineral wealth; great chances here for scientific capitalists. Gold has been found in almost every part of the country" (*Californian*, San Francisco, March 13, 1849). Public announcements such as these prompted a worldwide stampede of prospectors eager to find wealth. In 1849, the total population of California totaled 15 000, excluding the native Americans (Wright, 1940: 323). By the end of 1849, California's population was 90 000, and by 1852 it was over 220 000 (Hamilton, 1978). While the federal government had a clear claim to the gold of California, Congress was unable to impose its jurisdictional authority over this rampant, remote development. Thus it did not survey the lands in preparation for sale, levy fees, or enforce regulations (Rawls & Orsi, 1999). While the lack of regulation was due to Congressional weakness, it was positioned as a means to best serve the public good by opening government lands to private use and development.

The California gold rush triggered momentous economic changes. "In many ways, the California Gold Rush precipitated a veritable economic revolution in the state, the nation, and the world. Production of precious metals affected price levels, labor, wages, capital investment, the expansion of business, finance, agriculture, service industries, and transportation" (Nash, 1999: 288). To put it in perspective, between 1849 and 1854 California's gold mines produced more than $300 million, with the annual production value equaling the value of federal currency in circulation in the 1830s (Pisani, 1999). The California population migration was one of the largest occupational migrations in American history (Cornford, 1999), even stimulating the building of the Panama Canal (Nash, 1999).

The gold rush in California was followed by discoveries in Australia in the early 1850s, Colorado in 1858, Nevada in 1861, South Africa in the 1880s, and the Klondike in 1896—Dawson, Yukon in Canada and Skagway, Alaska in the US. From 1849 to 1929, gold fever drove international migrations of every nationality, chasing the latest gold find, eager to seek their overnight fortune. The development of these gold fields followed very similar dynamics, led to the eventual settlement of remote lands, and laid the foundation for many contemporary societies (Fetherling, 1997; Pisani, 1999).

ROLE OF PROFESSIONALS IN THE EMERGENCE OF ORGANIZATIONAL FIELDS

In this section, we outline the role of professionals during processes of field emergence and configuration using illustrative gold rush examples. To foreshadow our findings, we find that there are five processes by which field emergence and professionalization are co-constitutive. First, professionals shape the direction of societal-level change, while not causing it themselves. Second, professionals act as "behind the scenes" ringmasters, rather than as "center stage" musclemen. Indeed, most of the wealth and influence did not come directly from mining activities, but from the ancillary businesses. Third, by introducing old rule structures into new contexts, professionals are able to legitimate certain actions and technologies, establish governance mechanisms, and institute themselves as expert authorities. Fourth, as professionals establish themselves, they populate the field with new organizational actors and systems of field governance. Lastly,

professionals act as global diffusers of practices and principles, as happened when the wave of gold rushes spread internationally. We discuss each of these processes and give gold rush examples in the remainder of this section.

Professionals Shape the Direction of Change (but Do Not Cause It)

Professional entrepreneurs, while not causing societal-level change, are often able to shape the direction of change during field emergence. Several studies demonstrate this principle. DiMaggio (1991) finds that societal-level drivers "swelled the ideological, human, and financial resources available to aspiring professionals in and around museums" (p. 274) and drove the co-evolution of professionalization and field structuration. In a similar manner, Rao, Monin, and Durand (2003) consider changes to French gastronomy within the broader societal-level shifts of the French Revolution in the 1700s and anti-authoritarian movement in the 1950s and 1960s.

Likewise for gold rushes, professionals may be able to shape field-level change, while not causing it themselves. Gold had been known to exist in these locations prior to any rush; however, the known presence of gold alone is not enough to precipitate a rush. The stampede-like rush also requires several social conditions (Fetherling, 1997). The economy must be expansive: migrants escaped a stagnant industry to join a booming one, only to find that gold rushes suffered as much as other sectors of the economy. "Americans at midcentury imposed on California the mainstream values of a highly materialistic, expansionist, overly optimistic society" that created an unimpeded stream of "expectant capitalists" (Limbaugh, 1999: 26–7). There must be an unregulated frontier to rush to. This fuels the sense of adventure, exploration, and chaotic development rates. News must be able to be spread quickly and exaggerated, yet difficult to act upon—so that international pressure and hysterical competition mount. For example, the California gold rush of 1849 was during the time of the telegraph and steamship, but before transcontinental railroads. Lastly, a gold rush requires individuals who are seeking adventurism and the attainment of rapid wealth, and prepared for over-exertion (Hamilton, 2002).

Professionals such as lawyers and engineers were particularly capable of recognizing and taking advantage of the opportunities that a gold rush offered. Most of the migrants to California's gold rush were urban, upper-class, highly educated, and professionals (Fetherling, 1997). This upper-class bias was due to the fact that migrants had to pay their own way to the gold fields (Hamilton, 2002). One observer noted that "everyone cannot afford such a trip . . . . Engineers are in good company with scholars, professors, artists, men of letters, doctors, captains who have left their ships, officers who have abandoned their rank, and lawyers their cases" (Nasatir, 1970: 122). These migrants often had the pedigree of being upper-class, but lacked the wealth. Thus, they viewed the adventurism of the gold rush as an opportunity for individuated action taken to satisfy their particularistic goals (Hamilton, 2002). During this period, "lawyers were upwardly mobile men, seizers of opportunities . . . for many young lawyers, the West seemed like a golden opportunity" (Friedman, 2005: 227–9). Given their knowledge of law, science, and technology, these professionals were able to shape the direction of change from within, as embedded institutional entrepreneurs. These processes of institutional entrepreneurship are elaborated in the following sections.

Professionals as "Behind the Scenes" Agents of Change

For the most part, professionals are not "hyper-muscular actors" (Suddaby, 2010). Rather than being the center ring strongmen, instead they act behind the scenes as the ringmasters and choreographers. Professions are particularly adept at this behind the scenes entrepreneurship. "[T]he professions . . . exercise control by defining reality—by devising ontological frameworks, proposing distinctions, creating typifications, and fabricating principles or guidelines for action" (Scott & Backman, 1990: 290). Some scholars, such as Scott (2008a), argue that professionals are the most influential group in modern society. The professions "have become the great rationalizers of the second half of the twentieth century" (DiMaggio & Powell, 1983: 147) and are the "lords of the dance" providing the choreography for individuals and organizations (Scott, 2008a). To accomplish this, professions create new institutional frameworks by recombining cultural-cognitive ideas and theorizing new cause–effect formulations, advocating their positions through social suasion, promulgating standards and constructing normative frameworks, defining and vesting regulatory frameworks, and constructing the identities of new actors within the field (Lawrence & Suddaby, 2006; Scott, 2008b). Indeed, 45 percent of the framers of the 1789 American constitution were lawyers and 65 percent of Senators and over half of Congressmen have been lawyers (Burnham, 2002).

Professionals initially acted as covert institutional entrepreneurs within the miners' groups, given the bias towards practical knowledge and manual labor. Miners were egalitarian. They embraced the principles of "democracy in production" and "equality in fortune" (McWilliams, 1949: 27). "The wondrous influence of gold seems to have entirely obliterated all social distinctions" (Clappe, 1998). This egalitarianism was expressed in their similarity of dress: a workman's uniform of "heavy boots, sturdy trousers, checked shirt, large belt, slouch hat, and gloves" (Rohrbough, 1997: 152) that they wore with soldiers' pride. It was also expressed in their work practices. Miners worked side by side in the muck, doing work akin to ditch digging (Paul, 1947). Working by hand was considered honorable and dignified, and "the man who did not live by actual physical toil was regarded as a sort of social excrescence or parasite" (Hittell, 1879: 179). As a means of distinguishing themselves as the "real workers" of the gold rush, they exhibited hostility towards other occupations upon whom they depended, such as merchants, teamsters, boardinghouse keepers, doctors, lawyers, and others (Rohrbough, 1997). Miners also displayed a surprising amount of hostility towards outside lawmakers, with some districts banning lawyers or prohibiting them from practicing their trade (Caughey, 1948; Paul, 1947; Pisani, 1999). In 1850, the California Senate Committee on the Judiciary noted that it is:

> doctrine . . . [that] the man who is entirely ignorant of a multifarious subject, is more competent to form a just and correct judgment concerning it, than the man who has made it the business of his life to comprehend it in theory and understand it in its minute and practical details.

However, this "equality in fortune" quickly became "equality in misfortune." Within a year, the number of prospectors had overrun the number of discoverable and high-paying surface claims. Luck and practical judgment became increasingly inadequate. Individual earnings fell quickly: from $20 per day in 1848 to $16 per day in 1849, $10 per

day in 1850, less than $8 per day in 1851, and $3 per day between 1856 and 1860 (Paul, 1947). Gold prospecting became an increasingly risky business. "Gold mining is Nature's great lottery scheme . . . . It is a mere matter of chance . . . . And yet, I cannot help remarking, that almost all with whom we are acquainted seem to have lost" (Clappe, 1998: 113). It is estimated that only one in 20 California miners returned home richer than when they arrived (Lewis, 1971; Mann, 1982). Given this, the salary of most miners was, on average, less than that of people in ancillary support businesses.

The real value of a gold rush was in the associated activity that its production generated. Indeed, the history of the world's gold rushes shows that the total cost of the supply of gold exceeds the value of the output by several hundred percent (McWilliams, 1949). For example, women could wash shirts for more money that the shirts had cost in the East (Fetherling, 1997) and had greater economic independence during a gold rush than elsewhere (Barnhart, 1986; Goldman, 1981). In California, many of the best-known fortunes were made in businesses related to mining, not in mining itself. Examples include Levi Strauss, a dry goods merchant who created strong canvas trousers for miners. Profits on goods were often more than 50 percent (Rohrbough, 1997). The most astute entrepreneurs recognized these opportunities and branched out to these support businesses.

As the easy earnings quickly dwindled, mining became even less profitable and more legally contested and technically complex, while ancillary businesses became even more profitable. Miners became more willing to engage professionals such as lawyers to interpret and represent prospectors' interests regarding mining codes, and geologists and mining engineers to interpret geological findings and develop mining technologies. Hence, those miners who were themselves professionals and found the physical labor too difficult, uncertain, or unprofitable quickly began to practice their profession in providing "behind the scenes" ancillary services (Clay & Jones, 2008). In doing so, perhaps unintendedly, they also shaped the emerging field more broadly. Practicing professionals were relatively few; thus, the prices for their services were high. For example, the services of a lawyer for an hour or two before an alcade would cost a hundred dollars or more (Root, 1850). The first professionals to establish professional practices in California found wonderful opportunities. One young lawyer, William Daingerfield, stated that "there is nothing more certain . . . we will make a fortune in a few years. You have no idea of the extent of litigation in this city or the size of fees" (Rohrbough, 1997: 128). Another San Franciscan lawyer stated, "lawyers are doing by far the best business here now" (McCracken, 1849).

Not only did professionals such as lawyers and engineers have valuable technical knowledge, but they also had the ability to recognize the most profitable opportunities, and valuable social connections to best take advantage of these opportunities. Through these social connections they were able to advocate for themselves and their interests, define rule systems that conferred status and identity, vest property rights, and construct status hierarchies and elite firms. They acted, in effect, as institutional workers (Lawrence & Suddaby, 2006; Lawrence et al., 2009).

The work of Frederick Billings illustrates this institutional entrepreneurialism leading to configuration and professionalization of this emerging field. Billings was a young Vermont lawyer who arrived on one of the early ships (Winks, 1991). He quickly realized that his fortune could be better made in litigating contested claims than in the gold fields,

so Billings became the first lawyer to practice in San Francisco. The journey to the gold fields forged valuable friendships amongst the travelers. Through a shipmate friend, Dr. George Turner, Billings was introduced to the Brigadier General Bennet Riley, who had just arrived as commander of the Pacific Division in order to establish civil government. On May 1, 1849, Riley appointed Billings commissioner of deeds for the city. Then, on August 14, Billings was appointed as the territorial legal advisor and attorney general. His tenure lasted only until Californians ratified their state constitution on November 13. However, during this time Billings advised Riley to eject trespassers on Rincon Point, which would set the precedent effectively to vest the federal government's claims to lands assigned to it. In doing so, they were also able to set aside lands for the Presidio and the Golden Gate National Park.

Billings's legal practice grew quickly, and he took on partners Henry Halleck and Archibald Peachy. Their law firm—Halleck, Peachy and Billings (HPB)—began on January 1, 1850. At that time, there were 19 other lawyers practicing in San Francisco, but HPB quickly became the most successful practice. Previously, Halleck had been Secretary of State and so had detailed knowledge of all land grants, surveys, and maps, and the crazy jurisdictional mix of American, Mexican, and Spanish laws. Peachy was especially effective in court. And Billings brought in clients through his social connections. Over the life of their firm, from January 1850 to April 1861, HPB handled over half of the land claims in California courts. They rarely lost. In doing so, HPB shaped California legal precedence and field-level practices. Also through Billings's social suasion and knowledge of the federal Land-Grant College Act and the intricate California land laws, he was integral in clearing land titles and establishing the University of California Berkeley. In sum, Billings was central to establishing the role of lawyers, California's emerging legal system, and its relationship to the federal government.

In a parallel manner, engineers found greater opportunity in providing ancillary professional services than in mining the gold fields themselves. By leveraging their specialist knowledge and social networks, they were also able to advocate for themselves and their interests, define rule systems, vest property rights, and construct status hierarchies. An example is Theodore Judah, a young engineer who migrated from Connecticut (Nash, 1999). Following work on the Sacramento Valley Central Railroad he became convinced a transcontinental railroad would end California's geographic and economic isolation, so he completed preliminary surveys of routes and costs at his own expense (Wheat, 1924). Judah was a tireless orator and skilled rhetorician. He outlined his business case in a pamphlet that he distributed to members of Congress. Judah described the Pacific Railroad as "the most magnificent project ever conceived," yet it had been stymied by geographic politicking that prevented a comprehensive survey of any one specific route (Judah, 1857):

> Our wisest statesmen, most experienced politicians, scientific engineers, and shrewdest speculators, have each and all discussed the subject in nearly every point of view, and given the results of their wisdom and experience to the world.
> Yet—
> Their projects have proved abortive. Their schemes have failed. The world has listened with attentive ears to the words of eloquence and wisdom—from the lips of wise and great men.
> Yet—

> This project has not been consummated. The road has not been finished. It has not been begun. Its practicability has not been established. A survey has not been made. It has simply been made the subject of reconnaissance.

Judah attended three sessions of Congress from 1856 to 1859 at his own expense to lobby for the Pacific Railroad project and the federal granting of lands. When he was unsuccessful with Congress, he advocated the Legislature of California to pass the following resolution, on April 5, 1859, that constructed the normative cause–effect associations and the identities of Western states relative to the federal government:

> RESOLVED, By the Assembly, the Senate concurring, that to promote the interest and insure the protection and security of the people of the States of California and Oregon, and the Territories of Washington and Arizona, and especially to consider the refusal of Congress to take efficient measures for the construction of a Railroad from the Atlantic States to the Pacific, and to adopt measures whereby the building of said Railroad can be accomplished, it is expedient that a Convention be held on the twentieth day of September, A.D., eighteen hundred and fifty-nine, at the City of San Francisco, in the State of California, composed of Delegates from said States and Territories.
>
> RESOLVED, That the people of the several Counties of the said States and Territories are hereby especially requested to send to said Convention, Delegates equal to the number of the members of the Legislature of the said States and Territories, to which they are entitled, to represent them in said Convention.
>
> RESOLVED, That His Excellency, the Governor of this State, be requested to send copies of the foregoing Resolutions to the Governors of the State of Oregon, and the Territories of Washington and Arizona, respectively. (Legislature of California, 1859: 391)

The Pacific Railroad Convention of 1859 resulted in several resolutions that proposed roles for the federal government, rule systems for selection of the route, and systems of property rights for ownership and stockholding of the railroad. Notably, Judah's own words were adopted as representing the Convention as a whole. Judah was also formally appointed as the accredited agent to the Convention to carry its resolutions to Congress. Once in Washington, Judah prepared a bill to reflect these resolutions and another bill for the granting of federal lands. Controversies over the proposed route again stymied the discussion. Meanwhile, the Senate was dealing with larger issues of slavery and succession.

Rather than be disheartened by this delay, in 1860 Judah approached successful merchants to finance the surveying of potential railroad routes. In June 1861, Judah and four men incorporated the Central Pacific Railroad and then again lobbied the federal government for aid. In direct response to Judah's lobbying, a wartime Congress enacted the Pacific Railroad Act of 1862, which granted lands and loans so that the work on the transcontinental railroad could begin. Of Judah and his efforts, John C. Burch, the California Congressman of the time, stated: "T.D. Judah, who not only conceived the idea of the early and speedy construction of the Pacific Railway, but by unrepulsed and unwearying exertion and perseverance in the field, in the library and drafting room, before public meetings, in committees and with individuals, did more than anyone man" (Burch, 1875). In summary, through the institutional work of Judah, the nation-building role of engineers was highlighted, the geographical isolation of California was ended, and its relationship to the Federation was clarified.

Professionals Introduce Old Rule Structures and Technologies into New Contexts

The emergence and evolution of a profession is inseparable from a re-definition of the rules governing an organizational field. Once established, such rule systems become part of the institutional fabric of a field—defining property rights, conferring status on actors, and so on. However, because the professionals who construct the rules are often the only ones with the expertise and legitimacy to interpret and apply them, these rules consolidate the power and status of the professions. Thus, the promulgation of new rules by professionals also serves as an extension and objectification of the power of the profession.

The California frontier was considered to be "free enterprise at its freest" (Fetherling, 1997: 7). Much attention towards the gold rush has focused on the romantic, individualistic, and disorganized aspects, while neglecting the institutionalization of rules, the rise of corporations, widespread ownership of and trade in corporate securities, the formation of stock exchanges, and the co-establishment of professions (Jung, 1999). California's legal profession became established in tandem with mining law and the necessity for dispute resolution (Jung, 1999). In a parallel manner, the mining engineering profession emerged quickly and developed in tandem with increasing technological and geological complexity (Limbaugh, 1999; Mehdahl, 2007). A quotation from the *Alta California* on September 23, 1851 stated that "the miners are beginning to discover that they are engaged in a science and a profession, and not in a mere adventure" (Paul, 1947: 66). In this section, we discuss the emergence and structuration of the gold rush as an organizational field as co-established with the professions of law and engineering.

Institutionalization of rules

In the absence of any other type of government or communities, miners quickly formed mining districts, committees and meetings, elaborate regulations and laws, and ruthless vigilante enforcement. Mining districts were the basic political unit in California's gold fields (Jung, 1999). Miners in each district would have miners' meetings and form their own codes to self-regulate their social behavior and establish mineral rights (Umbeck, 1977a, 1977b). By 1860, over 500 mining districts had been established with codes "so similar to each other as to rule out the possibility that they were separately and spontaneously invented" (Bean, 1973: 121). Indeed, in California and other states, mining codes predated the criminal codes (Fetherling, 1997), which federal and state regulators refused to supersede for over two decades (Jung, 1999; Umbeck, 1977a, 1977b). The two fundamental principles common to all mining codes were rules of discovery and rules of work. The man who "discovered" the claim would mark the boundaries according to the size limitations, record its location, and acquire the associated mineral rights. Most codes limited the claim size to that which a man could work alone, usually 100–150 square feet. The rules of work often required that miners work a claim steadily, often 20 days out of every month. These rules on claim size and work established the logics of practice of "democracy in production" and "equality of fortune" (McWilliams, 1949: 26–9) and prevented the monopolizing of claims and absentee ownership—both of which were strongly opposed by miners.

The mining codes also established the mechanisms of dispute resolution, usually by an alcade, council, or jury (Bean, 1973; Pisani, 1999). Alcades were appointed magistrates who were established in Spanish colonies and continued in their role when California

came under American occupation in 1837 (Grivas, 1961). These miners demanded control over local administrative and law enforcement agencies (Steffan, 1983). Justice needed to be quick and cheap, for the business of mining camps was prospecting gold and not arguing legalities. The establishment of miners' meetings, codes, and other systems of self-governance was drawn from broader societal logics of "individualism, equality, respect for property, and rewards commensurate to work" (Zerbe & Anderson, 2001: 138). On this basis, mining code principles included majority rule, election of officials, trial by jury, allocation on a first-come first-served basis, and rules for working claims. Israel Lord, a missionary who traveled through the gold fields in 1849–50, stated that "there were no lawyers to delay—no petty technicalities to obstruct the course of justice" (Rohrbough, 1997: 88).

Yet Clay and Wright (2005) demonstrate that the "order" provided by mining districts and codes did not result in secure and certain property rights. Gold prospecting was a game of search and race. Time was money. Miners would spend enough time on a claim to determine its value, and then abandon efforts and "jump" to the next promising claim. Thus, claim jumping was a common and a legitimate means of entry. This insecurity in claims resulted in a high number of disputes.

Even though lawmakers were mistrusted by miners, ironically lawyers became instrumental at the configuring of this emerging field in creating the legislative structure of California, instituting mining law, and even establishing broader legal principles such as the Field Code (Sullivan, 1925). Stephen J. Field was the first lawyer and alcade of Marysville in 1849 (Black, Pomeroy, & Smith, 1881). He advocated for "free mining" whereby the gold fields were a common field, "open to the enterprise and industry of all citizens" (Californian Congressional Globe, 1851: 4), which was sanctioned by the California legislature at the beginning of 1851 (Pisani, 1999). The law he sponsored stated that, in actions respecting "Mining Claims," "proof shall be admitted of the customs, usages, or regulations established and in force at the bar, or diggings, embracing such claim; and such customs, usages, or regulations, when not in conflict with the Constitution and Laws of the State, shall govern the decision of the action" (Pisani, 1999: 129).

Field's simple words became the foundation for mining on public domain throughout the American West. Perhaps ironically, when Field instituted these free mining principles preferred by miners, he made lawyers a necessity for resolving claim disputes. "[E]very good claim has to pay toll to the legal profession and that every two or three claims supported at least one lawyer" (Martinez & Drummond, 1936: 4). It was not until 1865, however, that the US Supreme Court acknowledged that free mining had an "implied sanction" and contributed to the development and prosperity of the country (Pisani, 1999). In the fall of 1857, Field was elected to the State Supreme Court, later appointed chief justice, and then served the longest term in history of the US Supreme Court—from 1863 to 1897 (Sullivan, 1925).

The Field Code was created by David Dudley Field to cut through the morass of common law to codify and create reformed law that was "clear, predictable, simple in operation, and simple in application" (Friedman, 2005: 294). While the Field Code was not accepted in the East, it was readily adopted across the West—by Missouri in 1849 and California in 1851 and across all Western states by 1900. This Western adoption was likely due to a younger Western bar and that Stephen Field, David Dudley Field's brother, was such an influential lawyer in California (Friedman, 2005; Sullivan, 1925).

Further, law reform could be presented as a service to society, to improve the tarnished image of lawyers and justify their monopoly of practice (Friedman, 1969). Lawyers began establishing city bar associations in San Francisco and Cincinnati in 1872, with the American Bar Association being founded in 1878 (Bar Association of San Francisco, 2010; Friedman, 2005). Lawyers continue to be predominant in California. The state was one of the first to unify its bar in 1927 (State Bar of California, 2010), which means that membership is mandatory for all attorneys who are licensed to practice law in the state. Only half of states in the country have unified bars. Further, California has the largest state bar in the country (State Bar of California, 2010).

The logics of practice in the gold fields changed quickly (Jung, 1999). The decline of surficial lode mining was replaced by more technological and capital intensive mining techniques such as hydraulic mining, dredging, and hardrock mining in the early 1850s. To meet the greater resource requirements for these mining techniques, miners began to form partnerships and joint stock associations. Increasingly, mining codes allowed for claim holdings by companies (Clay & Wright, 2005). These partnerships and associations could be formed and dissolved quickly, as claims turned over quickly. As corporations became increasingly common during the 1850s, the logics of practice began to shift from "democracy in production" to "protection of capital." An example of this is the legal principle of "priority of discovery," with first discoverers having rights over the whole. Another example is the "follow the vein" principle, which permitted miners to follow a gold bearing vein or lode downward to any depth and direction, even under adjoining claims (Pisani, 1999). These evolving principles caused rather than prevented disputes over claims. As an attempt to address these disputes, Congress (as dominated by lawyers) further specified that only prospectors at the "apex" or highest point of a lode could follow the vein under adjoining claims (Pisani, 1999). Ironically, this caused even more disputes (Jung, 1999; Pisani, 1999). Would-be plaintiffs would buy property next to prosperous mines. Then they would retain high-powered lawyers and a multitude of expert witnesses such as geologists and mining engineers to argue that they had priority of discovery and the apex geology. During one five-year period, the lawsuits in the Nevada courts cost 20 percent of the total output of Comstock Lode (Pisani, 1999). "No industry in any country was ever subject to as much or as complicated legal activity as mining in western America" (Spence, 1983: 107).

Water rights became similarly contested. Water laws followed the principle of prior appropriation (first in time, first in right), which specified that the first to use the water could carry it anywhere for any purpose, as long as it was "beneficial" (Pisani, 1999). There were also riparian rights, which allowed adjacent landowners to divert water for their livestock. Some mining districts had codes that further prohibited water diversions that benefited some miners at the expense of others, such as diversion dams that backed up water onto others' claims or that took water needed by other miners. Despite these codes and dispute resolution alternatives, there were often clashes amongst miners and with riparian owners. Individuals would often resort to violence and dynamite each other's diversion dams or burn each other's flumes. Only with large-scale, corporatized, hydraulic mining operations—which required vast quantities of water to be diverted—did soft-law mining codes become calcified into hard law and property rights become more precisely defined and enforced (Libecap, 1977).

In a manner similar to the professional project of lawyers, the engineering profession

developed in tandem with the increasing geological and technological complexity (Limbaugh, 1999). Extracting gold from previously uneconomic or unavailable sources required increasingly advanced technologies and professional expertise, initially supplied by foreign-trained engineers. High-grade surficial placer deposits could be mined with hand digging, panning, and screening. Early gold rush technology was characterized by "enterprising amateurs altering or upgrading traditional techniques to meet local conditions" through digging, panning, and screening (Limbaugh, 1999: 43). By the late 1850s, the mining of deeper, lower-grade deposits required "corporate organization and consolidation, substantial capital investment, increased professionalization of management and engineering, hired miners working for wages instead of partners working for profits, and new technologies" (Limbaugh, 1999: 32). As the concentrations of gold declined, miners processed larger volumes of soil using hydraulic mining. Entire rivers were diverted through over a hundred miles of ditches, forcing enormous volumes of water through nozzles to erode the mountains. Initial attempts at hardrock, also called lode or quartz, mining failed owing to over-enthusiastic mining promoters and an overbuilding of surface plant before understanding the ore body and character, labor costs, scarcity of materials, and climate conditions (Limbaugh, 1999; Raymond, 1873). As the technological complexity and investor reticence increased, mining became increasingly professionalized. Rather than relying on "enthusiastic amateurs," mining increasingly sought mining engineers to provide the necessary expertise and legitimacy.

Yet engineering as a profession was in its infancy in the US in the mid-nineteenth century, while European engineering training was already well grounded in theoretical science and mathematics (Layton, 1971; Rae, 1960; Reynolds, 1991). "Our mines and mills are practically managed by foreign experts; we furnish the labor and mechanical ingenuity, but they furnish the scientific skill" (Browne, 1868: 8–9). These foreign mining engineers imported, revised, and implemented the most effective technologies. The Commissioner of Mines, J. Ross Browne, even stated: "[w]ith all the genius and enterprise of the American people, no important discovery in the way of machinery for mining was made which had not been long in use in South America, Mexico, or Europe" (Browne, 1868: 8).

The status of mining engineers improved as they organized themselves—both in response to industry needs and as a counter-response to Eastern elitism. Thus, effectively, the California gold rush acted as the cradle for the emergence of mining engineering as a profession (Smith, 1999). The first efforts to form a national engineering society were in 1839, but were stymied mostly by geographical disagreements (Layton, 1971). The American Society of Civil Engineers (ASCE) finally became established in 1867 and claimed to represent all non-military engineers, yet was almost exclusively Eastern. The ASCE then established rules of membership that further alienated local groups of engineers, industrial specialists, and younger engineers. These ideals were directly challenged by mining engineers, who believed that engineering should be a more integral part of business (Layton, 1971). This caused a split and the formation the American Institute of Mining Engineers in 1871 (Reynolds, 1991). Rossiter Raymond, the US Commissioner of Mining Statistics (Browne's successor), praised the engineers of San Francisco as successfully meeting the needs of Pacific slope mining (Smith, 1999). "There is no country where so much money and effort has been expended in so short a time in experimenting with, and perfecting, the various machines used in mining" (Raymond, 1873). The

institutionalization of engineering education followed the establishment of the land-grant colleges of the 1860s (Calhoun, 1960).

In summary, "[p]erhaps the greatest legacy of the Gold Rush, was not its ability to attract gold miners, but its ability to attract entrepreneurs who seized the opportunities that gold offered" (St. Clair, 1999: 206). Many of the ancillary businesses such as law, engineering and technology development, and even banking that sprang up to support the gold rush were more profitable and durable, and could transfer their knowledge into other industries. The field and professions co-emerged as a result of the institutional work of individual professionals—their advocacy, their defining and vesting of rule systems, and their creation of normative networks and identities. In this manner, the gold rush acted as a catalyst for creating American resource law and the technological base to support other mining operations, irrigation and agriculture, hydro-electric turbines, ship building, and the cable and wire industry (Pisani, 1996, 1999; St. Clair, 1999).

Professions Populate the Field with New Organizational Actors

Another process through which professionals configure an organizational field is by populating the field with new categories of social actors. There is a wide variety of illustrations of this process in which the actors range from new categories of individual to new forms of organization. Most studies of institutional change have focused attention on the way in which professionals engage in the institutional work necessary to generate new categories of organization. For example, accountants promoted the multidisciplinary partnership as a new form of organizing professionals (Greenwood & Suddaby, 2006; Suddaby & Greenwood, 2005). Similarly the health maintenance organization (HMO) emerged in the field of US healthcare as a consequence of a readjustment between the jurisdiction of the nation state and the medical profession (Strang & Bradburn, 2001). The new organizational form was created to accommodate mutually the new incentive structure created by the federal government between physicians and insurance companies. The key observation within this body of work is that processes of professionalization tend to generate new types of actors or legitimate formerly marginalized actors into dominant roles. What remains understudied in this stream of research is a clear understanding of how field-level processes construct new actors.

In instituting themselves as professionals in the gold rush, lawyers and engineers established themselves as a population of legitimate and necessary actors within the field. Besides this, they configured the emerging field to their advantage by revising the mining codes, created other organizational actors such as corporations, and instituted stock exchanges. Next, we discuss this institutional work.

The rise of corporations

Rather than a mass migration of individuals to California, most traveled as members of companies (Jung, 1999). Most companies purposefully included professionals such as physicians, lawyers, and engineers: "of professional men there were always an abundance" (Howe, 1923: 5). Within a month of the gold rush news breaking, as an example, 47 companies had been newly incorporated in New York with a total of 2499 members, ready to embark for California (*New York Herald*, 1849). Companies from the East coast were more likely to sail south around Cape Horn or through the Isthmus of Panama,

while companies from Western states were more likely to travel overland by wagon train. Few companies were properly prepared for the six-month journey. Those that successfully arrived in California often were quickly disbanded upon arrival (Rohrbough, 1997), yet such companies served as important models for the establishment of new mining companies. These professionals were integral to the formation of new organizational actors—corporations—as an effective means of gold rush migration and production. "Lawyers contrived or adapted institutions (the corporation), tools (the railroad equipment trust certificate), and patterns of action (the reorganization of corporate financial structure or the fashioning of a price structure for a national market)" (Hurst, 1950: 337).

Corporatization also facilitated widespread ownership and trade in corporate securities. Prior to 1851, sufficient capital was generated by the miners' own gold production, yet fighting lawsuits and developing large-scale mining operations required an increasing amount of capital (Jung, 1999). Outside investment was required for the gold mining industry to grow. Rich hardrock or quartz mining captured the imaginations of miners and outside investors. In 1850, just two public mining corporations were formed. In 1851, 26 companies were formed, with a stock value from $100 000 to $1 million (Jung, 1999). In 1852, 53 public companies were incorporated. To raise capital, these companies issued elaborate prospectuses that drew legitimacy from lawyers and engineering—directly quoting from the law and technical reports and emphasizing "proper scientific knowledge of mining" (Cumming, 1976: viii). Some of these companies held hundreds of claims (Manhattan Quartz Mining Company, 1852), which was a significant departure from one claim per miner.

Formation of stock exchanges

This corporatization of mining became complete with the discovery of the Comstock Lode in 1859 (Jung, 1999). While prospectors had been mining the area for over a decade, the Comstock Lode was a phenomenally rich deposit of gold and silver. The prospectors of the Lode quickly formed a partnership, but news spread quickly, and miners, especially from California, quickly swarmed the area. A lively trade in mining claims developed immediately. The original claim holders in the Comstock Lode lacked the expertise and capital to develop a large-scale hardrock mining operation and sold out to the Ophir Mining Company. Initial ore assays indicated that this claim was quite valuable. California miners and financiers bought up Comstock claims and had established 37 more public companies by the end of 1862. This also triggered an unprecedented wave of incorporations; more than 1000 mining companies were incorporated in California in 1862 (Cross, 1927). The increased speculation in mining stocks led to the establishing of the San Francisco Mining Stock and Exchange Board on September 1, 1862. By 1864, six more mining stock exchanges were established in San Francisco, and nine were established near Comstock, Sacramento, Stockton, and Marysville (Sears, 1973). In 1863, the value of transactions on the San Francisco Mining Stock and Exchange Board was $15.5 million, approximately equal to the produced value of California gold ($23.5 million) or of Comstock gold and silver ($12.4 million) (Jung, 1999). The value of transactions quickly increased—to double the value of production of California or Comstock in 1865 and ten times the value in 1868. It became common for citizens of every social class to hold mining stock (Shinn, 1980). The institutionalization of the gold rush field had become taken for granted.

Professionals as Global Diffusers of Practices and Principles

Much research has explored the role of organizations or institutions such as business schools, consulting practices, and media as carriers in the globalization of business practices (e.g. Sahlin-Andersson & Engwall, 2002). The micro-level carriers are individuals' knowledge, textbooks, or media reports.

Yet the gold rushes predated such large-scale, transnational organizations. It was solely individuals who themselves acted as carriers. In addition to technology and mining law, California exported capital, manpower, and expertise (Smith, 1999). As news of subsequent gold rushes became known, miners migrated from gold rush to gold rush: from California to Colorado and Nevada, Australia, and the Klondike (Fetherling, 1997). "And so we find the young California engineer, or mine manager, going to-day to take up well-paid mining positions in Australia and South Africa" (Curle, 1905: 249). As they migrated, they carried their logics of practice, technologies, and governance systems with them (Pisani, 1999). Given that the "massive influx of immigrants established the miners as the primary constituency in the colony [of Victoria in Australia], the rules in Victoria converged with those in California" (La Croix, 1992: 225). "Wherever he went, the California miner carried his newly acquired lore of mining, his rapidly developing technology, and his mining rules and regulations which became the cornerstone of the American law of mines" (McWilliams, 1949: 32).

CONCLUSION

In this chapter we have sought to explain how professions and institutional fields become initially co-constructed. Following Suddaby and Viale (2011), we assert that professionalization projects are inherently associated with projects of institutionalization. Professional projects and nation state projects were once closely connected, but have more recently been replaced by projects of trans-nationalization or globalization (Suddaby, Cooper, & Greenwood, 2007). Professionals have similarly co-opted the institutionalization projects of universities (Abbott, 1988; Kraatz & Zajac, 1996), corporations (Brint, 1994; Cole, 1989; Suddaby, Gendron, & Lam, 2009), and meta-projects of rationalization (Meyer, 2008). We contend, however, that there is still a lack of a clear explanation of the role of institutional entrepreneurs in creating a *de novo* organizational field that is pre-professional, pre-organization, even pre-nation state.

To explore the connections between the emergence of an organizational field and the professions, we use the gold rush phenomenon as a particularly useful and theoretically generalizable context. It is an intuitively accessible example of a field emerging around a valuable resource and typifies the transition from ambiguity to meaning, chaos to order, and lawlessness to governance. This disequilibrium or pre-equilibrium offers an excellent opportunity to understand the entrepreneurialism of lawyers and engineers in establishing their professions while constituting the emerging field. We outline five processes by which institutional entrepreneurs configure an emerging field while constructing themselves as authoritative professionals within the field. First, institutional entrepreneurs shape the direction of societal-level change, while not causing it themselves. This leads to

our second observation: that these entrepreneurs act as "behind the scenes" ringmasters, rather than as center stage musclemen. By leveraging their specialist knowledge and social networks, professionals are able to advocate for themselves and their interests, define rule systems, vest property rights, and construct status hierarchies. Third, by introducing old rule structures into new contexts, entrepreneurs are able to legitimate certain actions and technologies, establish governance mechanisms, and institute themselves as professional authorities. Fourth, as entrepreneurs establish themselves as professionals, they populate the field with new organizational actors and systems of field governance. Our final finding is that these entrepreneurs act as global diffusers of practices and principles, as happened when the wave of gold rushes spread internationally.

In conclusion we observe an interesting phenomenon—that, just as the sociology of the professions appears to be a settled, if not dying, subject in departments of sociology around the world, professions are emerging as an exciting new subject amongst management scholars interested in issues of institutional change. We note, however, that management scholars study professional organizations (i.e. professional service firms) in relative isolation from the extant knowledge of sociologists who study professions. We hope this chapter will bring these two solitudes together. Sociologists should consider the prominence of professional service firms and the logic of professionalism in contemporary market societies. Reciprocally, management and institutional scholars should not neglect the impressive body of knowledge of the professions amassed by sociology.

REFERENCES

Abbott, A.A. 1988. *The System of Professions*. Chicago, IL: University of Chicago Press.

Anand, N., Gardner, H.K., & Morris, T. 2007. Knowledge-based innovation: Emergence and embedding of new practice areas in management consulting firms. *Academy of Management Journal*, 50(2): 406–28.

Bar Association of San Francisco. 2010. Available at: http://www.sfbar.org/about/index.aspx (accessed September 29, 2011).

Barnhart, J.B. 1986. *The Fair but Frail: Prostitution in San Francisco, 1949–1900*. Reno: University of Nevada Press.

Bean, W. 1973. *California: An Interpretive History*, 2nd edn. New York: McGraw-Hill.

Black, C.F., Pomeroy, J.N., & Smith, S.B. 1881. *Some Account of the Work of Stephen J. Field as a Legislator, State Judge, and Judge of the Supreme Court of the United States*. California: S.B. Smith.

Brint, S. 1994. *In an Age of Experts: The Changing Role of Professionals and Politics in Public Life*. Princeton, NJ: Princeton University Press.

Browne, J.R. 1868. Report of J. Ross Browne on the mineral resources of the states and territories west of the Rocky Mountains. In U.S. Treasury Department, *Reports on the Mineral Resources of the United States*. Washington, DC: Government Printing Office.

Burch, J.C. 1875. On Theodore D. Judah. Speech delivered before the Association of Territorial Pioneers of California, April 13.

Burnham, W. 2002. *Introduction to the Law and Legal System of the United States*, 3rd edn. St. Paul, MN: West Group.

Calhoun, D.H. 1960. *The American Civil Engineer: Origins and Conflict*. Cambridge, MA: Technology Press, Massachusetts Institute of Technology.

California Congressional Globe. 1851. 32nd Congress, 1st Session, Appendix.

California Senate Committee. 1850. Report on Civil and Common Law. *California Reports*, February 27: 588–9.

Caughey, J.W. 1948. *Gold Is the Cornerstone*. Berkeley: University of California Press. (Retitled *The California Gold Rush*, 1975).

Clappe, L.A.K.S. 1998. *The Shirley Letters: Being Letters Written in 1851–1852 from the California Mines*. Berkeley, CA: Heyday Books.

Clay, K., & Jones, R. 2008. Migrating to riches? Evidence from the California gold rush. *Journal of Economic History*, 68(4): 997–1027.
Clay, K., & Wright, G. 2005. Order without law? Property rights during the California gold rush. *Explorations in Economic History*, 42(2): 155–83.
Cole, R.E. 1989. *Strategies for Learning*. Berkeley: University of California Press.
Cornford, D. 1999. "We all live more like brutes than humans": Labor and capital in the gold rush. In R.J. Orsi (Ed.), *A Golden State: Mining and Economic Development in Gold Rush California*: 78–104. Berkeley: University of California Press.
Cross, I.B. 1927. *Financing an Empire: A History of Banking in California*. San Francisco, CA: S.J. Clarke.
Cumming, J. 1976. *The Gold Rush Letters of Dr. James Delavan from California to the Adrian, Michigan, Expositor, 1850–1856*. Mount Pleasant, MI: Cumming Press.
Curle, J.H. 1905. *The Gold Mines of the World*. New York: Engineering and Mining Journal.
DiMaggio, P.J. 1991. Constructing an organizational field as a professional project. In W.W. Powell & P.J. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis*: 267–92. Chicago, IL: University of Chicago Press.
DiMaggio, P.J., & Powell, W.W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2): 147–60.
Eckhardt, J.T., & Shane, S.A. 2003. Opportunities and entrepreneurship. *Journal of Management*, 29(3): 333–49.
Fetherling, D. 1997. *The Gold Crusades: A Social History of Gold Rushes, 1849–1929*. Toronto: University of Toronto Press.
Friedman, L.M. 1969. Law reform in historical perspective. *St. Louis University Law Journal*, 13(3): 351–72.
Friedman, L.M. 2005. *A History of American Law*, 3rd edn. New York: Touchstone.
Garber, P. 2001. *Famous First Bubbles: The Fundamentals of Early Manias*. Cambridge, MA: MIT Press.
Gidney, R.D., & Millar, W.P.J. 1994. *Professional Gentlemen: The Professions in Nineteenth Century Ontario*. Toronto: University of Toronto Press.
Goldman, M.S. 1981. *Gold Diggers and Silver Miners: Prostitutes and Social Life on the Comstock Lode*. Ann Arbor: University of Michigan Press.
Greenwood, R., & Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The Big Five accounting firms. *Academy of Management Journal*, 49(1): 27–48.
Grivas, T. 1961. The nature of local government in Spanish and Mexican California. *California Historical Society Quarterly*, 40(1): 11–32.
Halliday, T.C. 1987. *Beyond Monopoly: Lawyers, State Crises and Professional Empowerment*. Chicago, IL: Chicago Bar Association.
Hamilton, G.G. 1978. The structural sources of adventurism: The case of the California gold rush. *American Journal of Sociology*, 83(6): 1466–90.
Hamilton, G.G. 2002. The structural sources of adventurism: The case of the California gold rush. In N.W. Biggart (Ed.), *Readings in Economic Sociology*: 133–53. Malden, MA: Blackwell.
Heinz, J.P., & Laumann, E.O. 1982. *Chicago Lawyers: The Social Structure of the Bar*. Chicago, IL: Russell Sage Foundation.
Hittell, T.H. 1879. *History of California*, vol. 3. San Francisco, CA: Stone and Company.
Howe, D.T. 1923. *Argonauts of '49: History and Adventures of the Emigrant Companies from Massachusetts 1849–1850*. Cambridge, MA: Harvard University Press.
Hurst, J.W. 1950. *The Growth of American Law: The Law Makers*. Boston, MA: Little, Brown and Company.
Hwang, H., & Powell, W.W. 2005. Institutions and entrepreneurship. In S. Avarez, R. Agarwal, & O. Sorenson (Eds.), *Handbook of Entrepreneurship Research: Interdisciplinary Perspectives*: 201–32. New York: Springer.
Johnson, T.J. 1973. Imperialism and the professions. In P. Halmos (Ed.), *Professionalization and Social Change*: 281–309. Cambridge: Cambridge University Press.
Judah, T.D. 1857. *A Practical Plan for Building the Pacific Railway, San Francisco, January 1*. Washington, DC: Henry Polkinhorn, Printer.
Jung, M.A. 1999. Capitalism comes to the diggings: From gold-rush adventure to corporate enterprise. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 52–77. Berkeley: University of California Press.
Kraatz, M., & Zajac, E. 1996. Exploring the limits of the new institutionalism: The causes and consequences of illegitimate organizational change. *American Sociological Review*, 61(5): 812–36.
La Croix, S.J. 1992. Property rights and institutional change during Australia's gold rush. Explorations in Economic History, 29: 204–27.
Larson, M.S. 1977. *The Rise of Professionalism: A Sociological Analysis*. Berkeley: University of California Press.

Lawrence, T.B., & Suddaby, R. 2006. Institutions and institutional work. In S.R. Clegg, C. Hardy, T.B. Lawrence, & W. Nord (Eds.), *Sage Handbook of Organization Studies*, 2nd edn: 215–54. London: Sage.
Lawrence, T.B., Suddaby, R., & Leca, B. 2009. *Institutional Work*. Cambridge: Cambridge University Press.
Layton, E.T. 1971. *The Revolt of the Engineers: Social Responsibility and the American Engineering Profession*. Cleveland, OH: Press of Case Western Reserve University.
Legislature of California. 1859. *Statistics*.
Lewis, O. 1971. *Sea Routes to the Gold Fields: The Migration by Water to California in 1849–1952*. New York: Ballantine Books.
Libecap, G.D. 1977. *The Evolution of Private Mineral Rights: Nevada's Comstock Lode: A Dissertation in Economic History*. New York: Arno Press.
Limbaugh, R.H. 1999. Making old tools work better: Pragmatic adaptation and innovation in gold-rush technology. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 24–51. Berkeley: University of California Press.
McCracken, J. 1849. Letter from John McCracken to Lottie McCracken. April 30, November 26. Letters. Bancroft Library, University of California, Berkeley.
Macdonald, K.M. 1995. *The Sociology of the Professions*. London: Sage.
McWilliams, C. 1949. *California: The Great Exception*. New York: Current Books.
Manhattan Quartz Mining Company. 1852. *Facts Concerning Quartz and Quartz Mining: Together with the Charter*. New York: W.L. Burroughs.
Mann, R. 1982. *After the Gold Rush: Society in Grass Valley and Nevada City, 1849–1870*. Stanford, CA: Stanford University Press.
Martinez, T., & Drummond, F. 1936. *The Early Mining Laws of Tuolumne and Calaveras Counties*. Berkeley: University of California Press.
Mehdahl, K.H. 2007. *Hard Road West: History and Geology along the Gold Rush Trail*. Chicago, IL: University of Chicago Press.
Meyer, J.W. 2008. Reflections on institutional theories of organizations. In R. Greenwood, C. Oliver, K. Sahlin, & R. Suddaby (Eds.), *The Sage Handbook of Organizational Institutionalism*: 790–811. London: Sage.
Montgomery, K., and Oliver, A.L. 2007. A fresh look at how professions take shape: Dual-directed networking dynamics and social boundaries. *Organization Studies*, 28(5): 661–87.
Nasatir, A.P. 1970. *A French Journalist in the California Gold Rush*. Georgetown, CA: Talisman.
Nash, G.D. 1999. A veritable revolution: The global economic significance of the California gold rush. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 276–92. Berkeley: University of California Press.
New York Herald. 1849. January 24.
Oliver, A.L., & Montgomery, K. 2008. Using field-configuring events for sense-making: A cognitive network approach. *Journal of Management Studies*, 45(6): 1147–67.
Paul, R.W. 1947. *California Gold: The Beginning of Mining in the Far West.* Lincoln: University of Nebraska Press.
Pisani, D.J. 1996. *Water, Land, and Law in the West: The Limits of Public Policy, 1850–1920*. Lawrence: University Press of Kansas.
Pisani, D.J. 1999. "I am resolved not to interfere, but permit all to work freely": The gold rush and American resource law. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 123–48. Berkeley: University of California Press.
Powell, M.J. 1988. *From Patrician to Professional Elite: The Transformation of the New York Bar*. Chicago, IL: Russell Sage Foundation.
Rae, J.B. 1960. The "know-how" tradition: Technology in American history. *Technology and Culture*, 1(2): 139–50.
Rao, H., Monin, P., & Durand, R. 2003. Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in French gastronomy. *American Journal of Sociology*, 108(4): 795–843.
Rawls, J.J., and Orsi, R.J. 1999. *A Golden State: Mining and Economic Development in Gold Rush California*. Berkeley: University of California Press.
Raymond., R.W. 1873. Conditions of the mining industry: California. In *Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains*. Washington, DC: Government Printing Office.
Reynolds, T.S. 1991. The engineer in 19th century America. In T.S. Reynolds (Ed.), *The Engineer in America: A Historical Anthology from Technology and Culture*: 7–26. Chicago, IL: University of Chicago Press.
Rohrbough, M.J. 1997. *Days of Gold: The California Gold Rush and the American Nation*. Berkeley: University of California Press.
Root, R. 1850. *Journals of Travels from St. Joseph to Oregon with Observations of that Country together with Some Description of California, Its Agricultural Interests and a Full Description of Its Gold Fields*. Galesburg, IL.
Sahlin-Andersson, K., & Engwall, L. 2002. Carriers, flows, and sources of management knowledge. In

K. Sahlin-Andersson & L. Engwall (Eds.), *The Expansion of Management Knowledge: Carriers, Flows, and Sources*: 3–32. Stanford, CA: Stanford University Press.
St. Clair, D.J. 1999. The gold rush and the beginnings of California industry. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 185–208. Berkeley: University of California Press.
Santos, F., & Eisenhardt, K. 2009. Constructing markets and shaping boundaries: Entrepreneurial power in nascent fields. *Academy of Management Journal*, 52(4): 643–71.
Schumpeter, J.A. 1942. *Capitalism, Socialism and Democracy*. New York: Harper & Bros.
Scott, W.R. 1994. Conceptualizing organizational fields: Linking organizations and societal systems. In H. Derlien, U. Gerhardt, & F. Scharpf (Eds.), *Systemrationalität und Partialinteresse*: 203–21. Baden-Baden: Nomos Verlagsgesellschaft.
Scott, W.R. 2008a. Lords of the dance: Professionals as institutional agents. *Organizational Studies*, 29(2): 219–38.
Scott, W.R. 2008b. *Institutions and Organizations*, 3rd edn. Thousand Oaks, CA: Sage.
Scott, W.R., & Backman, E.V. 1990. Institutional theory and the medical care sector. In S.S. Mick (Ed.), *Innovations in Health Care Delivery: Insights for Organization Theory*: 20–52. San Francisco, CA: Jossey-Bass.
Scott, W.R., & Meyer, J.W. 1983. The organization of societal sectors. In J.W. Meyer & W.R. Scott (Eds.), *Organizational Environments: Ritual and Rationality*: 129–53. Beverly Hills, CA: Sage.
Sears, M.V. 1973. *Mining Stock Exchanges, 1860–1930*. Missoula: University of Montana Press.
Shinn, C.H. 1980. *Story of the Mine as Illustrated by the Great Comstock Lode of Nevada*. Reno: University of Nevada Press.
Smith, D.A. 1999. Mother Lode for the West: California mining men and methods. In J.J. Rawls & R.J. Orsi (Eds.), *A Golden State: Mining and Economic Development in Gold Rush California*: 149–73. Berkeley: University of California Press.
Spence, C.C. 1983. Western mining. In M.P. Malone (Ed.), *Historians and the American West*: 96–122. Lincoln: University of Nebraska Press.
State Bar of California. 2010. Available at: http://www.calbar.ca.gov/ (accessed September 29, 2011).
Steffan, J.O. 1983. The mining frontiers of California and Australia: A study in comparative political change and continuity. *Pacific Historical Review*, 52(4): 428–40.
Strang, D., & Bradburn, E.M. 2001. Theorizing legitimacy or legitimating theory? Neoliberal discourse and HMO policy. In J. Campbell and O.K. Pedersen (Eds.), *The Second Movement in Institutional Analysis: Neoliberalism in Perspective*: 129–58. Princeton, NJ: Princeton University Press.
Suddaby, R. 2010. Challenging institutions. *Journal of Management Inquiry*, 19(1): 14–20.
Suddaby, R., Cooper, D., & Greenwood, R. 2007. Trans-national regulation of professional services: Governance dynamics of field organizational change. *Accounting Organizations and Society*, 32(4–5): 333–62.
Suddaby, R., Gendron, Y., & Lam, H. 2009. The organizational context of professionalism in accounting. *Accounting Organizations and Society*, 34(3–4): 409–27.
Suddaby, R., & Greenwood, R. 2005. Rhetorical strategies of legitimacy. *Administrative Science Quarterly*, 50(1): 35–67.
Suddaby, R., & Greenwood, R. 2009. Methodological issues in researching institutional change. In D.A. Buchanan & A. Bryman (Eds.), *The Sage Handbook of Organizational Research Methods*: 176–95. London: Sage.
Suddaby, R., & Viale, T. 2011. Professionals and field-level change: Institutional work and the professional project. *Current Sociology*, 59(4): 423–42.
Sullivan, J.H. 1925. Seventy-five years of law in California: How adventurous gold miners won immortal fame as lawmakers told in graphic story of legal development of West. *Bulletin*, Diamond Jubilee edn., September 8.
Umbeck, J. 1977a. California gold rush: Study of emerging property-rights. *Explorations in Economic History*, 14(3): 197–226.
Umbeck, J. 1977b. Theory of contract choice and California gold rush. *Journal of Law and Economics*, 20(2): 421–37.
Wheat, C.I. 1924. A sketch of the life of Theodore D. Judah. *California Historical Society Quarterly*, 4(3): 219–71.
Whitley, R. 1992. The social construction of organizations and markets: The comparative analysis of business recipes. In M. Reed & M. Hughes (Eds.), *Rethinking Organizations: New Directions in Organization Theory and Analysis*: 120–43. Newbury Park, CA: Sage.
Wilensky, H.L. 1964. The professionalization of everyone. *American Journal of Sociology*, 70(2): 137–58.
Williamson, O.E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
Williamson, O.E. 1985. *The Economic Institution of Capitalism*. New York: Free Press.

Winks, R.W. 1991. *Frederick Billings: A Life: From Gold Rush Lawyer to Railroad Builder to Conservationist*. Berkeley: University of California Press.
Wright, D. 1940. The making of cosmopolitan California. *California Historical Society Quarterly*, 19(4): 323–43.
Zerbe, R.O., Jr., & Anderson, C.L. 2001. Culture and fairness in the development of institutions in the California gold fields. *Journal of Economic History*, 61(1): 114–43.