

## Border Patrol: Professional Jurisdictions in Sustainable Urban Environments

Rebecca Henn, Pennsylvania State University, Department of Architecture

### Abstract

According to the United Nations, our world is becoming more populated, more urban, more connected, more globalized, and more complex. With this physical and social complexity comes a need for increased coordination in negotiating our urban futures. Environmental design and planning professionals have worked for decades according to traditional institutionalized role structures. Sustainability—in considering a wider variety of stakeholders—promises not only to include more members in the typical design and construction team (e.g., sustainability consultants, community representatives, technical specialists, etc.), but also to change the jurisdiction of tasks (e.g., project management, decision making, design leadership, etc.) taken on by actors in traditional roles (e.g., owner, architect, contractor, etc.). This paper examines how a wider social concern for environmental and social sustainability has affected the design and construction industry.

Organizational and sociological theories suggest that professions are “bound to a set of tasks by ties of jurisdiction... [P]rofessions make up an interacting system... and a profession’s success reflects as much the situations of its competitors and the system structure as it does the profession’s own efforts” (Abbott 1988: 33). Abbott also suggests that “larger social forces” affect the structuring of professional boundaries. Treating sustainability as a “larger social force,” this paper examines current understandings of professional boundaries in the planning, design, and construction of our environments. It answers questions of how professionals renegotiate roles, responsibilities, and compensation when dealing with an uncertain change in traditional processes.

The qualitative data stem from three university building projects. Each project was proposed ab initio without a mandate to achieve LEED Certification, but this complex criterion was subsequently added at different phases of design for each project. The in situ reconfiguration of existing responsibilities—and assignment of new responsibilities—shows how professionals integrate new practices and processes to achieve both environmentally and professionally sustainable futures.

### Urban Coordination

When we envision urban futures, the first thing we see is more people. While the world population is projected to increase by “only” 18% in the next 20 years, the world’s urban population is projected to increase by

70% in the same amount of time (UN-Habitat, 2008). More people... living, shopping, working, playing, and building... closer together. As already seen in many rapidly developing countries, quick urbanization often results in unsafe conditions and insecure land tenure. Attempts to strictly control this urbanization (rather than guide or influence it) have resulted in the alienation of populations, such as in Algiers, Warsaw, and Mexico City (Pezzoli, 2000), or urban failures, most iconically illustrated by the Pruitt-Igoe complex or Millennium Dome in London (Jencks, 1984: 9; Sudjic, 2005: 199). These failures provide evidence of the need for urban conversations to embrace both environmental and social impacts and influences. As W.M. Adams suggests, “Development ought to be what human communities do to themselves. In practice, however, it is what is done to them by states and their bankers and ‘expert’ agents, in the name of modernity, national integration, economic growth or a thousand other slogans” (Adams, 2001: 381).

Therefore, in the effort to expand stakeholder participation and include stakeholder interests, coordination requirements increase dramatically. Planning of urban environments may happen through a centralized government. Or more likely, our current capitalist system of land ownership will involve individual projects created for individual clients, who provide singular sources of financial support. This financial support, in turn, determines the control over which stakeholders are permitted to speak. Essentially, this is an issue of power, where power is “essentially the power to define” (Czarniawska-Joerges, 1997: 24).

Even development projects which aim to include an expansion of both social and environmental concerns quickly reach limits and barriers: unfamiliar technologies, limited budgets, additional consultants and meetings, and expensive schedule extensions (Hoffman & Henn, 2008). Meanwhile “sustainable” building design and construction is both an emergent and disputed term. Each party involved in development may assume a different definition of sustainability, and in turn he or she may assume that this is a shared definition among the design and construction team.

Amidst this confusion, progress is still being made towards environmental and social sustainability, defined as meeting “the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland & World Commission on Environment and

Development, 1987). In green development, many have settled on the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) program of project certification (2009). Others have developed "best practices" for their organizations or communities. In both of these cases, measurements of physical outcomes are prioritized over process modifications. As illustrated above, processes of organizing must also change in order to better assure the environmental and social outcomes of a development project.

The empirical project of this paper is to determine how the existing process for planning and constructing buildings is affected by attempts to encompass greater social and environmental concerns. The paper draws from sociological theories of organization, the professions, and social movements to understand how sustainability strategies are negotiated, refused, encouraged, dismissed, or implemented. Through this evidence, we can understand promising organizational strategies that may assure more comprehensive and successful development outcomes.

### **The Structure of Fragments**

The existing building design and construction industry currently comprises a larger number of people, organizations, and institutions than most people realize. Howard Davis enumerates a list of these institutions that includes clients, financiers, consultants, governments, contractors, and the public (2006: 127-8). In this list, Davis illustrates the goals and rational agenda for each group of institutions, including individual profits, public goods, protection of rights, reduction of risk, etc. He goes on to suggest that "[t]he fragmentation of the built environment is at least partly a result of the differing and often contradictory agendas of the various institutions of the building culture" (2006: 129). This fragmentation initially developed when building projects grew in size and scope, first requiring work of more than one carpenter or mason, and later exploiting the specialization of skills and expertise. Though the person who designed your 18th century project (i.e., "master builder") was often on site and involved in assembly decisions, craftspeople worked expertly in one material and created only a piece of the project. This guild system heralded the beginnings of claims of expertise and professionalism in creating our built environment (Krause, 1999). The division between design and construction was quickly followed by a division between architecture and engineering. Further divisions followed, from financing splitting off from ownership, to current divisions separating lighting engineering from electrical engineering. This idea of "splitting off," (i.e. specialization) however, is actually a recent conceptualization in the sociological study of professions.

### **Professional Histories**

In 1964, Harold Wilensky suggested that "professionalizing" was a project embarked upon by a group of people with monopolistic intentions, who were out to protect their realm of practice by naming their group and legitimizing it through a sequence of events: full time practice, establishment of a separate university-based training school,

formation of a professional association, political agitation for licensure, and creating a formal code of ethics (1964: 142-5). This group claimed to represent a certain body of material knowledge: of the human body, the law, building materials, etc. Wilensky suggested that even "marginal" professions (those with a looser claim to a coherent body of technical knowledge) would go through such a legitimization process "long before an institutional and technical base ha[d] been formed" (1964: 146). Both Magali Sarfatti Larson and Ivan Illich concurred that this professionalization project was driven by group monopolistic desires within a capitalist system (Illich, 1977; Larson, 1977).

By 1988, Andrew Abbott suggested that this autonomous viewpoint did not account for the near-neighbor border disputes. In other words, he suggested that the legitimizing activities mentioned above were not developed primarily to defend the profession's boundaries from incompetent practitioners. Instead, these efforts were to protect territory from colonization by competent near-neighbors. Abbott called this the "system of professions," wherein:

Each profession is bound to a set of tasks by ties of jurisdiction... professions make up an interacting system... [and] compete within this system, and a profession's success reflects as much the situations of its competitors and the system structure as it does the profession's own efforts. ...tasks are created, abolished, or reshaped by external forces, with consequent jostling and readjustment within the system of professions (Abbott, 1988: 33).

Here, Abbott asserts that for each professional project (such as healing a sick person, filing a lawsuit, or performing an audit), there are a set of tasks to be performed. Each professional group then lays claim not only to a set of project tasks, but also to defining the process by which an individual can legitimately perform these tasks, regardless of whether others are capable of competently performing the work.

When we look at the profession of architecture, there are border disputes in myriad examples. Texas requires licensed architects to sit for a separate interior design exam in order to be considered a "registered" interior designer (Texas Board of Architectural Examiners, 2009). Pennsylvania allows either architects or engineers to design buildings for "human habitation and use" (State Architects Licensure Board, 2000). Both of these examples have a long history of public contention. In more private and everyday circumstances, even though the contention may be reduced to congenial negotiation, the increased coordination of tasks and responsibilities is still required.

Beth Bechky looks at an analogous industry that may be just as fragmented—movie production. What makes both movie production and construction similar is the large, coordinated project that only requires a portion of one professional's working career. The result is that individuals are continually having to work with new teams, which

are in turn constantly shifting in team membership and leadership. Organizational literature has variously referred to this type of organizing as “temporary” or “ephemeral”. Bechky explored the processes by which such a fragmented industry quickly and successfully organizes a project. She suggested that “these organizations are organized around enduring, structured role systems whose nuances are negotiated in situ” (Bechky, 2006: 4). Awkwardly, these “enduring, structured role systems” typically involve individuals whose understandings and expectations of roles were conceptually formed when working with people other than those on the current team. Therefore, the new team is unfamiliar with one another’s specific skills (and role expectations), despite having to work interdependently on a project. This novelty is what requires the in situ negotiation—a need to learn the skills and expectations of your team members while moving the project forward in a timely manner.

### **Driving Jurisdictional Change**

Despite the emergent quality of building projects, many projects are still completed daily, and the in situ negotiations successfully determine—for the most part—who does what at the professional jurisdictional borders. But the relative territory size of professions change over time—either by watershed events (like court cases), or gradually, day by day or project by project. What determines who wins and who loses territory? By what process is territory gained or lost? Abbott suggests that “technology, politics, and other social forces” provide the external forces that jostle and readjust boundaries:

To some extent, these changes [of tasks, the professions, and the links between them] arise beyond the professional world. Technology, politics, and other social forces divide tasks and regroup them. They inundate one profession with recruits while uprooting the institutional foundations of another. ...Thus, larger social forces have their impact on individual professions through the structure within which the professions exist, rather than directly (Abbott, 1988: 35, 33).

So far, this paper has assumed that tasks are static, and professionals merely designate whose jurisdiction the tasks fall within. But reality is much messier than that. As Abbott describes above, the definition of individual tasks are contentious as well. And, contention may arise when a particular task is either overlooked (resulting in finger-pointing) or claimed by multiple parties (resulting in a “land-grab”). These typical skirmishes take on a greater force when external forces begin to set a new agenda. “New” professions may develop “when jurisdictions become vacant, which may happen because they are newly created or because an earlier tenant has left them altogether or lost its firm grip on them” (1988: 3). It is possible that sustainability concerns are either a newly created vacant jurisdiction, or perhaps a re-bundling of diverse tasks that had previously been distributed throughout diverse professional jurisdictions. Environmental sustainability can be viewed as an example of Abbott’s “larger social force” or perhaps even a social movement.

The pressure of social movements on organizations and industries has recently been outlined in the sociological and organizational literature. Various strategies exist to push a movement forward, with movement participants relying primarily on political opportunities, mobilizing structures, and cultural framings (McAdam, McCarthy & Zald, 1996). Each of these strategies engages the system of professions differently. For example, it is within a mechanical engineer’s interest to frame sustainability as primarily a concern for energy efficiency, thereby arguing in favor of additional time and compensation to design a more efficient heating system. Whereas designing the heating system was already within the engineer’s jurisdiction, she may now claim jurisdiction over window specification, since energy conservation relies on a combination of efficient mechanical equipment and low heat emissivity through windows. Meanwhile, a lighting consultant could frame sustainability as a productivity issue, arguing that he should specify the size and location of the windows, since exposure to natural daylight has been shown to both improve employee comfort and productivity and raise student test scores (Wilson, 1999). These framings privilege one profession over another, and both examples take window specification away from its traditional jurisdictional home of architecture where it would be considered an aesthetic concern.

In terms of mobilization, sustainability adherents can leverage power by providing LEED-contingent project funding. This in turn pressures one of the members of the design team to achieve LEED Accreditation. Becoming a LEED Accredited Professional is then an example of a newly created task that was not formed within some “default” jurisdiction. LEED—being external to traditional role structures and professional boundaries of the building industry—set a new foundation for contestation and more vigilant border patrol.

Political opportunities, meanwhile, deal with the issue of power more directly. Well-situated individuals can see vacancies within the system more clearly. Typically, these individuals enjoy a legitimate status in more than one field. In reaching across multiple fields, they hover over a set of tasks that they believe can be carved into a newly-minted and coherent territory within the system of professions. When other professional groups either overlook or battle over a new set of tasks, entrepreneurs see opportunities. Rao, Morrill, and Zald call these territories interstices:

an interstice is a gap between multiple industries or professions and arises when problems or issues persistently spill over from one organizational field to another. ...Initially, many interstices experience a lack of social visibility as they form vis-à-vis a majority of players in relevant organizational fields. Because most social attention and authority tends to concentrate on conventional practices, many people in a given organizational field will tend to be unaware of initial work in the gaps between fields. (Rao, Morrill & Zald, 2000: 252)

A social movement can certainly be the source of the “problems or issues” mentioned above, and often cannot be neatly contained within one jurisdiction. Often, the grassroots nature of social movements finds different adjacent professional fields taking responsibility on a per-project basis for the newly-created tasks. This creates wide variance within the system so that when practitioners work with a new team, their existing task proficiency can be deemed either expert or neophyte, depending on the relative experience of the other new team members.

This section summarized the drivers behind jurisdictional change, demonstrating examples of how border skirmishes can play out when prompted by an external instigation. It also illustrated the ways in which social movements can provide that external force, and more actively modify the ways in which jurisdictional territory is claimed. The next section will examine environmental sustainability in detail, and see how it provides unique demands on the system of professions that goes beyond the mere claiming of tasks. In effect, the interlinked nature of the natural environment fights against the artificial divisions present within the system of professions.

### **Environmental Sustainability Logic**

The Brundtland Commission argued that sustainable development “meets the needs of the present without compromising the ability of future generations to meet their own needs” (1987). This statement involves concern for the broadest possible conception of people, space, and time. The logic of sustainability is one of equality and concern for every current and future person on earth. At the same time, it recognizes that the earth has finite resources, and that our current technology has not yet provided solutions to overcome these limits. Therefore, defining the extents of a project now becomes an uncomfortable practice in drawing a line between Self and Other according to resource use and priorities.

Because of the current implausibility of every project addressing every need for every person now and in the future, sustainability can be conceived of as a constant goal, rather than either a product (“a sustainable building”) or practice (“we built sustainably”). Therefore, projects are judged against both a backdrop of prior practice (Is this better than that was?), and knowledge of what is practicable within today’s institutional constraints (Could we have done better?). Further, as an interlinked system, conservation of environmental resources requires systems of tight coordination—where the color of walls influences the size of a heating unit.

In working towards the goal of more environmentally sustainable building, new organizational systems have been developed that try to facilitate this tight coordination of both physical products and professional processes. The integrated design process is both more formal and more common-sense than it first sounds. Traditional processes of building design and construction entail an “over the transom” practice, where each

professional completes his or her design without consultation of other team members, then hands the “final” design to the next team member in line. The next professional takes the received documents as “given,” even if ground hasn’t yet been broken. Though this illustration is extreme, the reality involves only a few additional coordination meetings, and few requests for changes that go “upstream” in the design process. One source suggests that the specialization, fragmentation, and “splitting off” that continues to happen within the design and construction professions results in a “drastic decline in efficiency compared to other industries—efficiency within our own processes as well as within the buildings that we have created” (Nies, 2008: 55). In effect, combining increased specialization and an industry whose structure and governance rely on temporary organizations is a recipe for abandoned territories and increased misunderstandings of who-does-what.

So to achieve tighter systems integration, initial efforts attempted to just coordinate the design professionals’ work more often. This involved more meetings among more people to keep everyone up-to-date on the current state of design. Project designs and decisions would be developed in concert so that a mechanical engineer relying on white walls did not provide an incorrectly sized system after the interior designer decided that eggplant-colored walls better communicated the corporate identity. Further, the inclusion of contractors early in the process to provide both cost and logistic advice became important when a specific high-performance product was either back-ordered or prohibitively expensive.

However, integrated design goes beyond just additional meetings. It moves all of the stakeholders into the room together—and more often—at earlier stages of the planning process. This includes a meeting that defines “vision, principles, and goals” of the owner and other stakeholders (Nies, 2008: 65). This gathering draws the difficult line circumscribing what the team believes the project can achieve in terms of sustainability. As part of these initial pre-design meetings, the team members also have an opportunity to introduce themselves, as well as describe their skills, experience, and capabilities. Since the tasks involved in sustainability are still renegotiated with each new project team (e.g., there has not yet been a broad cultural “settlement” on jurisdictional boundaries or role structures for sustainable design and construction), the team has an opportunity to start negotiating appropriate task boundaries before conflicting assumptions appear at inopportune times during the project.

Various technology and devices have also been created to facilitate coordination of the project, the most prominent being Building Information Modeling (BIM), where each member of the team can simultaneously work on the same three-dimensional model of the proposed project. Though this has facilitated coordination, it cannot replace the increased interpersonal communication and interaction required for the complexities demanded by environmental concerns.



## Methodology and Background

To examine the foregoing professional boundary conditions, and test where sustainability issues emerge within the system of professions, the researcher examined three university building projects in a small qualitative study carried out from 2009 to 2010. Each project was proposed *ab initio* without a mandate to achieve LEED Certification, but this complex criterion was subsequently added at different phases of design for each project. Each building project had a different start date, making the knowledge and experiences from one project influence subsequent processes.

The research project originally proposed semi-structured interviews of approximately one hour with four team members per project: an owner representative, an architect, a contractor representative, and a fourth member deemed critical to the team (an engineer, consultant, alternative owner representative, etc.). This set of interviewees expanded for two reasons: first, there were more “critical members” to the teams, and second, some additional informants expressed more candor regarding the project. Recruitment was typically via email, and interviews were typically held in the interviewee’s office. Informants were told that the study merely involved “Team Processes in Design and Construction” so that a purported topic of sustainability would not influence the content of answers. Prior to the interview, informants received digital pdf copies of both the informed consent form and list of questions. The interviews were recorded and transcribed.

The interview structure contained three parts: (a) background information and what informants considered a “job well done,” (b) description and examples of team interaction on project X, and (c) speculation on both what would have made the project “better” and other team members’ goals. The questions are listed in Appendix A. However, this was only a guide, as typically the interviewer probed given answers for clarification of meaning and significance (Miles & Huberman, 1994: 37; Patton & Patton, 2002: 372). At exactly one hour, the interviewer noted the time and attempted to conclude the interview by asking if the informant had anything else to add that he or she might feel was relevant to the topic. Some informants continued beyond the one-hour mark, but rarely continued longer than a second hour.

The data was triangulated first through interviewing multiple actors from the same project. Secondly, the researcher received project documents and written or email correspondence in some cases. Data was analyzed through both comparative case and cross-case analysis (Patton & Patton, 2002: 559). Meaning systems and professional jurisdictional claims could be tested for concurrence or compatibility among similar professionals. Concepts of sustainability could be examined for concurrence or compatibility among professions. Finally, additional understandings of the data emerged through grounded theory techniques of grouping data into emergent themes (Glaser & Strauss, 1967).

## Data and results

In considering all of the stakeholders in the building projects, the clearest emergent theme suggested that both students and faculty played a key role as social-movement-activist stakeholders. They used many of the techniques described above (political opportunities, mobilizing structures, and cultural framings). For example, there was an event that happened at a time when two of the projects had already committed to LEED Certification (one was completed the second was under construction), but the dean of the third project (still in the design phase) had resisted committing to LEED, despite requests from student stakeholders. The event was a public talk given by a renowned dean of a similar school—a person whose long career was based on environmental advocacy within his profession. During the question and answer period, a student asked a pointed question about what the visitor believed a professional school should do to provide leadership in environmental concerns. In response—with the host dean standing next to him—the visitor suggested that committing to LEED-Certified green buildings was one of the clearest signals to send. In fact, he noted that his own school was completing a new LEED Platinum building. The host dean’s face reddened, and it took a few moments for him to redirect the conversation after a long silent pause. Clearly, the guest did not know that the student had “set him up” to publicly undermine his colleague. This situation illustrates an example of student stakeholders using a political opportunity to advance their own agenda of securing a LEED-Certified building for the new project.

To coordinate resources, students and faculty used a university-sponsored environmental center which was well-funded by a prominent donor. One faculty member viewed the center as a legitimate way to encourage and organize students to persuade the university administration in adopting more rigorous environmental practices. The center was able to fund students’ time and expenses for organization and engagement with the on-campus issues. This center provided a substantial mobilizing structure to the stakeholders.

The students relied most heavily on cultural framing processes, however. With immense energy and research time, the students argued for LEED adoption using frames of the influential parties’ culture. These frames included legitimacy pressures for isomorphism, resource dependency issues, and even proposing internal incentive structures, as illustrated in the following quotes:

Student (verified by faculty): “The presentation [with the dean and building committee] was great, because it [showed] that since 2000, there had been eight new buildings at [the top 20 professional] schools. All of them had been LEED Certified. So the presentation wasn’t ‘We’re asking you to push the envelope.’ It was basically ‘If you don’t do this, you’re gonna look behind the times.’ The times

have changed. And these are the schools we compete with. So you're gonna have to explain to incoming students and [recruiters] why you decided to build a new building that wasn't Certified. So [the students] made a great case, and then the university architect's office just keeps on harping on the costs."

Student: "The students presented a letter to the dean listing all of the recruiters [who hire the school's graduates] who already had a LEED building or headquarters themselves. We had to frame the argument in a way the dean could understand."

Student: "It is easier to say 'no' than to learn something new, and design a project differently. There are no incentives for [some team members]... Like what if you gave a \$25,000 bonus to the University Architect for achieving a Gold rating?"

These illustrations show the flexibility required by the student groups to accept the framing of those who held power over decisions. In the background to this activism was always the threat to the university that the students could go to the press and cause a public relations issue with both the public and the university's major donors. This situation is what cracked the door open for discussion. As the first example illustrates, there was still resistance within the university, as the "university architect's office" used the framing of finances to dispute the students' claim to the necessity for LEED Certification.

Meanwhile, the "professional" consultants on the project generally took the attitude that LEED was possible, and they could certainly produce a LEED Certified building if required to. But for the most part, the consultants felt that the decision lay primarily in the university's (or in most cases, the dean's) hands. Each dean, in turn, had their own contingent of constituents to please beyond the existing students. So it became evident that decision tasks could shift in responsibility, depending on how the goals of the project shifted, and how decision making power was shared among the "professionals." At this point, the word professional begins to take on multiple meanings. The dean can certainly be considered a "professional" but does he represent this role in relation to a building project? I am going to argue that he does. In fact, I argue that all of the stakeholder groups can be considered groups of professionals interacting within the system of professions. Because the system structure determines essentially who has the "power to define," each group who has influence over decision making can be considered as part of the system.

Diving more deeply into the design of the projects, we can see the professional boundary assumptions and disputes in more detail:

Architect: "[Green building requires] an extra step of consultants. The work gets vetted by the sustainability consultant, rather than [team members]

doing what they are professionally required to do. During construction, the contractor needs to manage and gather more information.

Here we see the architect's opinion on how green building can change the traditional role structures. Not only does the architect see a new jurisdiction being carved out, but views that jurisdiction as the result of professional abandonment of traditional tasks. The view also points out that one professional (the contractor) has additional tasks placed in his or her territory.

Engineer: "We wanted to include a variable frequency drive, to keep energy usage down. The university stated that there were 'too many units to maintain, no negotiation, we're taking it out, we don't care, they will be controlled with a damper.'"

This engineer's struggle happened with other professionals who were not as experienced as he was with newer products and techniques. His frustration resulted from the university personnel using a generalized objection ("too many units to maintain") rather than a specific objection stemming from specific experience that could be addressed through redesign (e.g., they did not say, "We've worked with those units, and find that they are unreliable. Is there another alternative?" or perhaps, "Is the increased maintenance compensated by having other savings elsewhere?"). Instead, the existing client's power to define prevented a more energy-efficient solution.

University project manager: [Interviewer: "You're the perfect person to talk to."] "Of course I am because I'm the one that hires the other ones. I'm a one-man band on that side of the fence - which is why the project happened so efficiently."

Here, the project manager suggested that he was the one who had the power to define the process—deciding on which consultants to hire, or even which audience the students were allowed to speak with. This attitude pervaded the project, where this manager gave little credence to actors' knowledge that went outside of their predetermined role.

Faculty member: [Regarding the green roof] They pushed back with "complexity" and "fire issues" like sedum [a succulent plant] is gonna catch fire... all sorts of stuff. They didn't know what they're doing. ...So the roofing people were pushing back. Architecture was pushing back. And the groundspeople were all pushing back. And we met with them. And they're all opposed to this green roof stuff. Ignorance. The students and I knew more about green roofs than all them put together.

This example regarding the green roof highlights the emergent nature of green building. Expert knowledge is relative. Those with expert knowledge are often not in the situation of having power to define the part of the project over which they have expertise, even if they offer

assistance in the conceptualization. Traditional role systems fight with the surprising and unexpected sources of expert knowledge. These examples highlight basic power issues within the realm of discourse about three simple building projects. For example:

Faculty member: "One of the arguments carrying weight at [another university building] was that recruiters are building Gold or Platinum Certified buildings. That argument doesn't seem to work at [this college in the university]. I'm told that wealthiest donors [for this building] are real estate developers [and they hate LEED]."

In this case, the students can scramble around looking for the correct cultural framing, but until they know which donors the dean is courting for the new building, they often cannot understand where the political resistance comes from—especially resistance to something the students see as self-evidently imperative.

## Discussion

This paper drew from the literature of the professions. In reviewing the data, this paper suggested that the system of professions actually goes well beyond traditionally-defined professions to include the adjacencies of all stakeholder groups. It also drew from the literature of social movements to recognize how groups of activists attempt to effect change. These strategies of social movements provide the "problems or issues" or even "greater social force" that create interstices within the system of professions. By "jostling" the system, professionals have an opportunity to both defend and colonize jurisdictional territory. As a result, professional identities can change based on the daily tasks performed. Professional relevance depends solely on societal need for the group's services. As society's desires change, professional practitioners have no choice but to take a position on the emergent pressures.

Sustainability knowledge is currently an emergent issue, sometimes privileging people with knowledge about promising and effective techniques and solutions. However, if the existing power structure does not overlap with the new and effective knowledge, then sustainability of the project can be limited. Those who have the "power to define" should recognize that knowledge of an emergent topic may lie outside of traditional role structures:

What, however, is a situation of "free" communication, of "discourse" in Habermas's sense? It is a situation in which there is no domination, in which there are no power differentials, in which all participants have equal access to all roles in the dialogue, to start or terminate discourse, to raise questions or submit evidence, a discourse in which the "unforced force" of the superior arguments prevails (Brown, 1989: 46).

The above excerpt highlights the need to address issues of power when trying to integrate concerns for sustainability into the building process.

Restricting contributions to only those tasks available through older traditional role structures limits the team's access to both relevant and experienced voices.

## Conclusion

In the movie industry, Bechky claims that "thanking, admonishing, and joking... seemed central to the process of learning role expectations." (Bechky, 2006: 7) This does not seem to be the case in most of the building industry. Instead, there is a lot of bitterness over power differentials that do not coincide with expert knowledge. One explanation could be that meaning systems among team members in building design and construction are more differentiated than in the movie industry. Joking only works within a unified cultural context, so it's possible that there are few jokes that everyone on a building design and construction team would either understand or appreciate. With the emergence of sustainability's new sets of tasks and jurisdictional delineations, tensions grow with confusion over where one stands in the system structure. Envisioning sustainable urban futures requires much more flexibility than the existing professional system exhibits through specialization norms and jurisdictional defense behavior. Successful practitioners collaborate and see new tasks as colonization opportunities, while achieving positive environmental outcomes. Other practitioners patrol their borders for infractions, not realizing that their territory may soon be glaciated, with their native tasks becoming anachronisms.

## Appendix A

Part One:

- Describe your professional background: what experience you had before this position & how you arrived in this position.
- What do you enjoy about your job & what is frustrating?
- What do you consider a job "well done"? How are you rewarded in your position? How would you like to be rewarded?

Part Two:

- Tell me about your involvement in the (X) project.
- Reconstruct one or two events from this project that required significant team interaction, and tell me about the specific people you worked with on them.

Part Three:

- Tell me about what made this building project unique in your experience.
- What do you believe would have made the project better?
- What would have made the team interaction better?
- Speculate on the reward structures of the other team members. How do you think they define a "job well done"?

## References

- Abbott, A. D. 1988. *The system of professions: An essay on the division of expert labor*. Chicago: University of Chicago Press.
- Adams 2001. *Green development: Environment and sustainability in the third world*. New York: Routledge.

- Bechky, B. A. 2006. Gaffers, gofers, and grips: Role-Based coordination in temporary organizations. *Organization Science*, 17(1): 3-21.
- Brown, R. H. 1989. *Social science as civic discourse : Essays on the invention, legitimation, and uses of social theory* . illustrated ed. Chicago : University of Chicago Press.
- Brundtland, G. H., & World Commission on Environment and Development 1987. *Our common future*.: Tiden Norsk Forlag.
- Czarniawska-Joerges, B. 1997. *Narrating the organization: Dramas of institutional identity*. Chicago: University of Chicago Press.
- Davis, H. 2006 [1999]. *The culture of building*. New York: Oxford University Press.
- Glaser, B. G., & Strauss, A. L. 1967. *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Hoffman, A. J., & Henn, R. 2008. Overcoming the social and psychological barriers to green building. *Organization & Environment*, 21(4): 390–419.
- Illich, I. 1977. *Disabling professions*. London: Marion Boyars.
- Jencks, C. 1984. *The language of post-modern architecture*. 4 ed. New York: Rizzoli.
- Krause, E. A. 1999. *Death of the guilds: Professions, states, and the advance of capitalism, 1930 to the present*. New Haven: Yale University Press.
- Larson, M. S. 1977. *The rise of professionalism: A sociological analysis*. Berkeley: University of California Press.
- McAdam, D., McCarthy, J. D., & Zald, M. N. 1996. *Comparative perspectives on social movements: Political opportunities, mobilizing structures, and cultural framings*. New York: Cambridge University Press.
- Miles, M. B., & Huberman, A. M. 1994. *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks: Sage Publications.
- Nies, B. 1. 2008. *Green BIM : Successful sustainable design with building information modeling* . illustrated ed. Ed. Krygiel. Indianapolis, Ind. : Wiley Pub..
- Patton, M. Q., & Patton, M. Q. Q. E. A. R. M. 2002. *Qualitative research and evaluation methods* . 3, illustrated ed. Thousand Oaks, Calif. : SAGE.
- Pezzoli 2000. *Human settlements and planning for ecological sustainability: The case of mexico city*. Cambridge, MA: MIT Press.
- Rao, H., Morrill, C., & Zald, M. N. 2000. Power plays: How social movements and collective action create new organizational forms. *Research in Organizational Behavior*, 22: 237–281.
- State Architects Licensure Board 2000. *Rosen V. Bureau of Professional and Occupational Affairs 763 A.2D 962 (Pa. Cmwlth. 2000)*. Retrieved February 21, 2010 from <http://www.pacourts.us/OpPosting/Cwealth/out/2166CD99.pdf>
- n.d. *The Struggle for the City*. Retrieved February 20, 2010 from <http://housingstruggles.wordpress.com/>
- Sudjic, D. 2005. *The edifice complex: How the rich and powerful shape the world*. New York: Penguin Press.
- Texas Board of Architectural Examiners 2009. Rules and Regulations of the Board Regulating the Practice of Interior Design. *Texas Interior Designers' Registration Law*. Retrieved February 21, 2010 from <http://www.tbae.state.tx.us/documents/RulesIntDesign2009.pdf>
- U.S. Green Building Council 2009. *LEED Version 3*. <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1970#2>
- UN-Habitat 2008. *Meeting the Urban Challenges*. Retrieved February 20, 2010 from [http://www.unhabitat.org/downloads/docs/5883\\_42389\\_Meeting%20the%20Urban%20Challenges.pdf](http://www.unhabitat.org/downloads/docs/5883_42389_Meeting%20the%20Urban%20Challenges.pdf)
- Wilensky, H. L. 1964. The professionalization of everyone?. *The American Journal of Sociology*, 70(2): 137–158.
- Wilson, A. 1999. Daylighting: Energy and productivity benefits. *Environmental Building News*, 8(9).