

Socialization to the Academic Culture: a Framework of Inquiry

POR PILAR MENDOZA*

FECHA DE RECEPCIÓN: 23 DE JUNIO DE 2008
FECHA DE ACEPTACIÓN: 21 DE JULIO DE 2008
FECHA DE MODIFICACIÓN: 25 DE AGOSTO DE 2008

ABSTRACT

The purpose of this article is to provide a theoretical framework and methodology for the understanding and study of the academic culture. It is based on previous works on organizational culture with emphasis on sociological and cognitive perspectives and applicable to all types of organizations. In particular, this article describes the application of socialization and sensemaking perspectives to the formation and development of the organizational culture in academic departments with emphasis on how new faculty members socialize and engage in sensemaking as they gain full membership in their entering department. It also provides a specific methodology to systematically assess potential cultural shifts in academic departments as incoming faculty interact with faculty in the entering academic unit.

KEY WORDS:

Organizational Theory, Organizational Culture, Academic Culture, Higher Education, Faculty, Sensemaking.

Socialización para la cultura académica: un marco de investigación

RESUMEN

El propósito del presente artículo es proporcionar un marco teórico y metodológico para el estudio y comprensión de la cultura académica. Esta propuesta se basa en trabajos previos sobre la cultura organizacional, con énfasis en las perspectivas sociológica y cognitiva, y es aplicable a todo tipo de organizaciones. En particular, este artículo describe la aplicación de los enfoques de socialización y producción de sentido a la formación y desarrollo de la cultura organizacional en departamentos académicos, y se centra en la forma en que los nuevos miembros de la facultad socializan y participan de la producción de sentido mientras obtienen una completa membresía en los departamentos que los reciben. Asimismo, ofrece una metodología específica para evaluar sistemáticamente el potencial de los cambios culturales en los departamentos académicos, cuando los nuevos profesores de la facultad interactúan con la facultad en las unidades académicas a las que ingresan.

PALABRAS CLAVE:

Teoría organizacional, cultura organizacional, cultura académica, educación superior, facultad, producción de sentido.

Socialização para a cultura acadêmica: um marco de investigação

RESUMO

O propósito do presente artigo é proporcionar um marco teórico e metodológico para o estudo e compreensão da cultura acadêmica. Esta proposta baseia-se em trabalhos prévios sobre a cultura organizacional, com ênfase nas perspectivas sociológica e cognitiva, e é aplicável a todo tipo de organizações. Em particular, este artigo descreve a aplicação das perspectivas de socialização e produção de sentido à formação e desenvolvimento da cultura organizacional em departamentos acadêmicos, e centra-se na forma em que os novos integrantes da faculdade socializam e participam da produção de sentido enquanto obtêm uma completa parceria nos departamentos que os recebem. Assim, oferece uma metodologia específica para avaliar sistematicamente o potencial das mudanças culturais nos departamentos acadêmicos, quando os novos professores da faculdade interagem com a instituição nas unidades acadêmicas nas quais foram aceitos.

PALAVRAS-CHAVE:

Teoria organizacional, cultura organizacional, cultura acadêmica, educação superior, faculdade, produção de sentido.

* Egresada del programa de física, Universidad de los Andes, Bogotá, Colombia. Maestría en física y doctorado en liderazgo y políticas educativas, Universidad de Massachusetts Amherst, Estados Unidos. Entre sus publicaciones más recientes se encuentran: *Academic Capitalism and Doctoral Socialization*. (Saarbrücken, Germany: VDM Verlag Dr Mueller Publishers), 2008; Academic capitalism and doctoral student socialization: A case study. *Journal of Higher Education*, 78, 1, 71-96, 2007; Mendez, Jannette y Mendoza, Pilar. (2008). The implications of financial aid packages on African American student retention. *National Association of Student Affairs Professionals Journal*, 11, 1. Actualmente se desempeña como profesora asistente del Department of Educational Administration and Policy College of Education, University of Florida, Estados Unidos. Correo electrónico: pilar.mendoza@coe.ufl.edu

New faculty members are likely to shape the shared meaning and responses to the task demands and performance requirements of the entering department. For example, junior faculty who want to pursue research in areas that would reflect their backgrounds and past research experiences in graduate school might be able to introduce new research areas and courses in their new departments. These examples illustrate the essential role of graduate education in the socialization process of future faculty members and the character of the academic profession, as new recruits bring new values and perspectives (Austin y Barnes, 2005; Gardner, 2008; Mendoza, 2007; Tierney y Rhoads, 1993; Weidman, Twale y Stein 2001). Based on socialization and sensemaking perspectives, the purpose of this article is to provide a theoretical framework and methodology for the study of how the academic culture is shaped as new faculty members enter academic units. First, I start by setting the foundations of socialization to the academic culture using sociological perspectives. Then, I continue the discussion presenting the foundations of sensemaking as the cognitive process involved in the learning of an organizational culture. Then, I linked sensemaking with socialization within the context of the academic profession. Finally, I present a framework useful to study cultural change brought by junior faculty, based on the theoretical framework developed and also on ethnographic interviewing techniques. Although the focus of this manuscript is academic departments, the framework presented here can be generalized to any organizational setting.

SOCIALIZATION TO THE ACADEMIC CULTURE

Tierney and Rhoads (1993) define organizational socialization as a “ritualized process that involves the transmission of culture” (p. 21) through a mutual adaptive process between the organization and individuals. During socialization processes individuals acquire the values, attitudes, norms, knowledge, and skills needed to exist in a given organization (Merton, 1957). For new members, socialization is the process of learning what is important and expected in their entering organization (Schein, 1968). Socialization processes occur both formally and informally. Formal socialization is explicit and includes faculty development programs as well as promotion and tenure processes. However, most of the time, socializa-

tion occurs informally. Informal socialization is difficult to observe and analyze since it can occur through informal contacts, such as conversations with senior faculty members over coffee or by observing the actions of faculty in leadership positions. For example, junior faculty members learn how to act in meetings from the behavior of older colleagues or may always hear their peers talk about the importance of publishing while never mentioning service, which would contribute to the notion that service is not as valued (Tierney y Rhoads, 1993). Based on the work of Van Maanen (1976), Tierney and Rhoads (1993) offer a two-stage framework of faculty socialization. The first stage is identified as the anticipatory socialization and takes place during graduate school. In this process, prospect faculty learns about the attitudes, actions, and values of his or her discipline and the profession at large. During the anticipatory socialization, “as young scholars work with professors, they observe and internalize the norms of behavior for research as well as supporting mechanisms such as peer review and academic freedom” (Anderson y Seashore-Louis, 1991, p. 63; Gardner y Barnes, 2007). For example, faculty members learn from mentors and peers in graduate school about how to interact with students and colleagues, as well as about the types of journals and books to read and conferences to attend.

The second stage is the organizational stage and occurs as faculty members enter academic careers. This stage is built upon the anticipatory socialization stage in graduate school and consists of two phases: initial entry and role continuance. During the entry phase, individuals go through the formalities of the recruitment and selection process and early stages of organizational learning starting upon employment. The continuance role begins once the new member is formally established in the organization. Given that the organizational socialization stage is framed by the experiences during anticipatory socialization, the learning process during the organizational stage might be at odds with what entering faculty experience at the chosen institution. Therefore, the organizational socialization stage might reaffirm what a new faculty member learned during the anticipatory socialization if his or her graduate school and entering setting hold similar cultures and structures; otherwise, both the entering organization and the individual engage in a mutual adaptive process where both sides strive to modify their respective cultures. In extreme cases, when cultural differences are significant, entering faculty might leave the organization during this stage. For example, a new faculty member who has been trained in a research university and goes to a liberal-arts college could have

socialization mismatches at the organizational stage given the differences in teaching and research values at both types of institutions. In the same vein, Braxton and Berger (1999) found that faculty adjustment to the role of teaching or research depends on what they learned in graduate school and the prevailing expectation of the institutions they are entering, regardless of discipline. This trend might be explained by faculty members' self-selection into the type of institution that best fits their abilities and preferences. In similar ways, institutions select applicants according to institutional expectations. Also, academic disciplines vary in the level of consensus their members show in terms of theoretical orientations, research methods, and questions to be advanced in the field. For example, physics is a high-consensus field and education is a low-consensus field. Based on this classification of disciplines, Braxton and Berger found that faculty in high-consensus fields tend to adapt more to their entering institutions than faculty in low-consensus fields. This finding suggests that faculty in high-consensus fields face less ambiguity in making decisions regarding research topics, methods, and curriculum than do faculty in low-consensus fields.

SENSEMAKING AND ORGANIZATIONAL CULTURE

In learning the culture of an organization during socialization processes, new members develop culture-specific schemes to interpret everyday events and respond with appropriate behaviors (Berger y Luckman, 1966; Schutz, 1964). The development of such cognitive schemes by new members is guided by a process known in the literature as sensemaking (Louis, 1980; Weick, 1977). Based on previous studies of cognitive sensemaking (Morgan, Frost y Pondy, 1983; Weick, 1977), Weick (1995) defines sensemaking in organizational settings as the ongoing thinking process of individuals with the goal of creating order and making retrospective rational accounts of the situations in which they find themselves. As a result of sensemaking, individuals develop cognitive scripts to predict event sequences and outcomes (Louis, 1980; Weick, 1977). If the outcomes of a given situation occur as the scripts predict, then sensemaking is not evoked; however, when scripts do not predict the outcomes, individuals' cognitive integrity is threatened (Festinger, 1957), producing a state of tension that calls for a need to restore equilibrium (Lewin, 1951). In these situations, individuals must develop explanations to make sense of the unpredicted events or outcomes, which is known in the literature as sensemaking (Scott y Lyman, 1968).

Organizational culture guides sensemaking in organizations (Ott, 1989) through the vocabulary used by its members: "Sense is generated by words that are combined into the sentences of conversations to convey something about our ongoing experience" (Weick 1995, p. 106). However, words never map a situation exactly, and this causes the process of sensemaking to be never ending. According to Weick (1995), a cue in a frame is what makes sense. Usually, frames tend to be past moments of socialization and cues present moments of experience. In other words, the substance of sensemaking is embedded in cues, frames, and connections between the two. Therefore, the process of sensemaking is an effort to tie beliefs (frames) gained from previous socialization processes with actions (cues) in the present.

As an illustration of sensemaking, Weick (1995) appeals to the analogy of the task of cartography, in which cartographers have to represent a new terrain without a pre-determined order. What cartographers map depends on how and where they look and what they want to represent. They also use several modes of projections to make this representation. Thus, for any terrain, there is an indefinite number of maps. Similarly, sensemakers have to convert the terrain of reality into an intelligible world in order to make sense of their experiences. When viewing sensemaking as cartography, many maps are possible for a given terrain. However, the terrain for sensemakers is even more complex because it is always changing, and thus the sensemaker has to capture some momentary stability in order to create sensemaking maps. Another distinctive feature of sensemaking is that, unlike cartography, it is mostly social. From this perspective, individuals do not live in a wider reality and act in relation to it, but create images of a reality in part to rationalize their actions. In other words, "individuals realize their reality by 'reading into' their situation patterns of significant meaning" (Morgan *et al.*, 1983, p. 24). During the process of sensemaking, people discover their own inventions imposed in their world by their own beliefs. Weick (1995) provides the following characteristics as a rough guideline for the inquiry into sensemaking. These characteristics suggest what sensemaking is and how it works:

1. **Grounded in Identity Construction:** Individuals' identities are formed and modified according to how they believe others view the organization to which they belong by projecting their identities into an environment and observing the consequences. Therefore, individuals are interested in preserving a positive image of their organization. Members are even willing to alter the sense they

make in order to preserve a positive image. In this way, events in organizations are given meaning (e.g. that it promotes self-enhancement, efficacy, and consistency). Controlled and intentional sensemaking is triggered by a failure to confirm oneself. Thus, sensemaking occurs to preserve a consistent and positive self-conception. Individuals act according to their own identity, which has embedded the identity of the organization. In other words, individuals act in behalf of the organization and as the organization itself. The meaning of a situation depends on the identity an individual adopts in dealing with it or what the person represents. People try to simultaneously react and shape the environment they face. They take the cue for their identity from the conduct of others, but also they make an effort to modify such conduct.

2. **Retrospective:** People are always aware of what they have done and not of what they are doing. Actions are known only when they are completed. People use the outcomes of past history to interpret more recent events. However, most of the time these stories are reconstructed differently depending on whether the outcomes are seen as good or bad. For example, if the past story is perceived as bad, the reconstruction will emphasize the errors and flaws. In other words, the past is reconstructed knowing the outcome, and this alters the actual chain of casual events. Meaning is given to the kind of attention that is paid to a situation in relation to past experiences. There are many possible meanings, and the process of sensemaking synthesizes all these through reduction of equivocality. Clarity of values helps during this process. Once a feeling of order, clarity, and rationality is achieved, sensemaking stops.
3. **Enactive of Sensible Environments:** People create their own environments, and these environments constrain their actions. Therefore, there isn't an objective, fixed environment independent of people because people are part of the environment; there are no outcomes but, rather, relationships with the environment. For example, when two people meet, neither of them can influence the other because both influence each other at the same time; in reality, they become something different, and this process begins even before they meet, during the anticipation of meeting. Sensemaking embodies the concept of enacting, which has an emphasis on noticing. For example, an object exists independently of our cognition; however, we enact it by noticing

it or bracketing it. Thus, to notice or bracket an object or situation gives character to such a thing or situation according to what the individual confronts. Therefore, there is a creation of objects or situations in sensemaking according to their social relationships. Sensemaking creates a social world that constrains actions and orientations. Actions create meaning; but actions can be controlled, constrained, inhibited, abandoned or redirected. However, those modified actions also create meaning without having direct physical consequences on the environment.

4. **Social:** People in organizations make decisions in the presence of others or with the knowledge that they will have to be implemented, understood, or approved by others. Therefore, sensemaking is never an individualistic process.
5. **Ongoing:** Sensemaking never really starts because people are always in the middle of projects that make sense after completed: they extract cues from a continuous flow in order to make sense. The reality of flow becomes apparent when there is an interruption, which typically invokes an emotional reaction followed by sensemaking (that is why sensemaking is infused with feeling). Past events are reconstructed in the present to give explanations to past events not because they look the same but because they feel the same.
6. **Focused on and by Extracted Cues:** Sensemaking interprets what the cues mean in a given frame. What an extracted cue will become depends on the context that affects what is extracted as cue in the first place; moreover, context affects how such a cue is interpreted.
7. **Driven by Plausibility Rather than Accuracy:** Having an accurate map is less important than having some map that brings order to the world and prompts action. Sensemaking does not rely on accuracy but on plausibility, coherence, reasonableness, creation, invention, and instrumentality. What is believed as a consequence of action is what makes sense and guides behavior. Accuracy is not the issue: what matters is a good story to guide action and allow people to make retrospective accounts that are socially acceptable and credible. Sensemaking cannot be accurate for many reasons: people need to filter data to avoid being overwhelmed and extract the relevant; cues are linked to general ideas according to contexts; a present cue is associated with a similar cue in the past, but the past cues are reconstructions with emotions and desires, which are not accurate; sensemaking

has to be fast, which does not allow much room for accuracy; and reality changes, is interactive, interpersonal, and interdependent, and thus it is complex to portray reality accurately.

THE DYNAMICS OF SENSEMAKING

Cognitive schemas are a useful construct to understand more in depth the dynamics of sensemaking. Cognitive schemas that guide behavior are the result of sensemaking. Markus (1977) defines schemas as the dynamic cognitive knowledge regarding concepts, entities, and events used by individuals to encode and represent information. These schemas serve as mental maps of reality that guide individuals' interpretation of past and present actions and events as well as expectations for the future (Weick, 1979). Moreover, schemas also guide the search, acquisition, and processing of information (Neisser, 1976; Weick, 1979). Schemas help reduce the amount of information to be processed in organizations by providing ready-made knowledge about situations and others (Lord y Foti, 1986). For example, an event schema is a cognitive structure that specifies a typical sequence of occurrences in a given situation or process, though it may or may not specify event content (Abelson, 1976).

Each member in an organization has their own schemas that, over time, come to resemble those from others because all members in the organization need to establish a common meaning in order to achieve social order (Harris, 1994). These similar schemas become organizational schemas over time and are developed by sharing experiential space and time, communicating, interacting, and solving problems together (Schein, 1985). Therefore, organizational schemas refer to the shared knowledge regarding organizations as entities abstracted for their individual members. These organizational schemas are the closest knowledge for individuals of their organization's culture (Harris, 1994). Schemas are formed through experiences and face-to-face communication with other members of the organization, which gives sensemaking its social character (Daft y Lengel, 1986; Weick, 1995). Given that organizations are terrains with multiple plausible and conflicting interpretations (Daft y MacIntosh, 1981), people in organizations need rich qualitative information in order to construct organizational schemas. For example, stories are one of the ways in which rich organizational information such as values and expectations is transmitted to new members (Brown, 1985). Weick (1995) identifies the following six vocabularies as forms of activity exchanges and communication in organizations:

1. **Ideology:** Vocabularies of Society. Ideologies refer to the shared values, beliefs, and norms that bind people together and help them make sense of their world (Trice y Beyer, 1993).
2. **Third-OrderControls:** Vocabularies of Organizations. Perrow (1986) suggests that organizations operate with three forms of control: first-order by direct supervision, second-order by programs and routines, and third-order by assumptions and definitions that are taken as given. Third-order controls are deep assumptions that are the foundation of organizational culture (Schein, 1985).
3. **Paradigms:** Vocabularies of Work. These vocabularies refer to standard operating procedures, shared definitions of the environment, and the agreed-upon system of power. In scientific communities, paradigms reflect research methodologies, curriculum, and topical research issues. In the business community, these paradigms are consensus on marketing strategies, profits, and connections between operations and strategies (Pfeffer, 1981). For the purposes of sensemaking, paradigms are sets of recurrent and quasi-standard illustrations that show how theories of action are applied conceptually, observationally, and instrumentally to representative organizational problems. For example, a collection of these illustrations or stories held together by a theory of action provides a frame within which cues are noticed and interpreted.
4. **Theories of Action:** Vocabularies of Coping. Theories are cognitive structures that predict outcomes in given situations. For example, a full schema for a theory of action would be: In situation S, if you want to achieve C, under assumptions $a_1, \dots, a_n$, do A. Theories of action derive from socialization experiences that reflect the ideology of the organization.
5. **Tradition:** Vocabularies of Predecessors. Traditions are patterns, beliefs, or images of actions transmitted at least for three generations, although each transmission can take place in a short period of time. Images of actions across generations become symbols that contribute to the fostering of a stronger culture.
6. **Stories:** Vocabularies of Sequence and Experience. Telling stories about remarkable experiences is one of the ways in which people try to make sense (Robinson, 1981). Stories serve as a means for members to express their knowledge, understanding, and commitment to the organization. Story subject matters reveal the task uncertainty

that accompanied certain events and the means through which activities coordinate to handle that uncertainty (Brown, 1985).

In order to gain a deeper understanding of the mechanisms by which organizational culture is acquired and modified during sensemaking, it is useful to describe Wiley's (1988) model regarding the different levels of sensemaking above the individual level of analysis. According to Wiley, there are three levels for sensemaking: intersubjective, generic subjective, and extrasubjective. This last level refers to the symbolic reality, which includes concepts like mathematics or capitalism. Thus, the intersubjective and generic levels are more relevant to organizational culture.

At the intersubjective level, the self "I" becomes "we" through communication processes between two or more individuals. Thus sensemaking is a process between two or more people of making verbal sense of actions and events at a social level of reality. The generic subjective level of analysis corresponds to organizations. This level is characterized by an abstract concept of generic self—a step further than "we"—leaving behind individualized selves. This perspective supports Mead's (1934) argument about the internalized conversations between self, others, and generalized others that individuals enact to define themselves and make behavioral decisions relative to the social world. The dialogue with the generalized others is individuals' abstraction regarding the attitudes of the social group. This mental dialogue with the abstract other offers a useful perspective on the process by which the broader cultural context of the organization manifests itself in the sensemaking effort of its members. The outcomes of these mental dialogues between themselves and the abstract others guide the behavior and experiences of individuals in organizations. From a mental-dialogue perspective, the arguments supplied for each of the parties to the conversation are basically the verbalization of normative and cultural pressures (Harris, 1994).

When uncertainty increases in organizations due to the presence of a new element or event, intersubjectivity becomes the focus of sensemaking although generic subjectivity does not completely disappear. In other words, the level of uncertainty in organizations determines the emphasis on intersubjectivity and generic subjectivity. In times of stability, generic subjectivity takes the form of organizational schemas that reflect organizations' order and are cued by stimuli originated in the task environment (Ashforth y Fried, 1988). In this case, schemas are subjective theories derived from experience related to what guides perception, memory, inference, and behavior

(Fiske y Taylor, 1984). Weick (1995) believes that the nature of organizations lies between the intersubjective level and the generic subjective. This hybrid nature of organizations becomes clear in the following definition of organizations as entities developed and maintained only through continuous communication-activity exchanges and interpretations among its participants (Schall, 1983):

As interacting participants organize by communicating, they evolve shared understandings around issues of common interest, and so develop a sense of the collective "we" [...] that is, of themselves as distinct social units doing things together in ways appropriate to those shared understandings of the "we". In other words, the communicating processes inherent in organizing create an organizational culture, revealed through its communicating activities ... and marked by role-goal—and context-bound communication constraints—the rules. (p. 560)

Aspects of the intersubjective level are evident in Schall's definitions around the ideas of activity-exchanges and communication of interacting participants. Similarly, hints of generic subjectivity are clear in her references to shared understandings, issues of common interest, and the collective "we". Smircich and Stubbart (1985) offer a parallel description of organizations that suggests sensemaking as an essential element of organizational life. They describe an organization as a "[...] set of people who share many beliefs, values, and assumptions that encourage them to make mutually-reinforcing interpretations of their own acts and the acts of others" (p. 727).

In sum, culture for any given organization can be seen as a shared network of ideologies delivered to members by sensemaking practices. Organizational culture is ultimately manifested in the sensemaking efforts and actions of individuals (Harris, 1994). Sensemaking takes place through mental dialogues between individuals (intersubjective level) and the abstraction of others in the organization (generic subjective level). These mental dialogues reflect the culture of the parties involved:

...the individual-level manifestations and experiences of organizational culture are revealed in the operation of a patterned system of organization-specific schemas held by organizational members. Specifically, I suggest that individuals' organization-specific schemas are the repository of cultural knowledge and meanings and the source of the consensual sensemaking characteristic of culture. In addition, I suggest that the activation and interaction of these schemas in

the social context of the organization creates the cultural experience for individuals (Harris, 1994, p. 310).

SENSEMAKING AND SOCIALIZATION PROCESSES

Sensemaking is evoked especially in those occasions that involve a significant level of uncertainty or surprise. Newcomers in organizations encounter many of these situations that force them to be actively engaged in sensemaking (Harris, 1994; Louis, 1980). Therefore, by analyzing the mental dialogues that new members enact as they cope with their socialization process it is possible to infer the cultures involved in the dialogues between the newcomer and the entering organization. For example, if entering junior faculty expect to find a culture in line with traditional academic values, they might find cultural surprises if they enter a department with significant academic capitalism (Mendoza, 2007). A close examination of the sensemaking processes of entering faculty, evoked by these cultural surprises, provides information about potential cultural tensions in these departments and about the way that these faculties cope with such tensions. However, some junior faculty might encounter more surprises than others in terms of cultural expectations depending on their past socialization experiences in graduate school and on other elements illustrated by Weick (1995) in the seven properties of sensemaking described above.

According to sensemaking and socialization theories, it is clear that new members who hold meanings that are different from those of the existing members of the organization may contribute to the reshaping of the culture in the new setting because they bring new vocabularies designed to interpret surprises. When these vocabularies are shared with insiders, meaning is reshaped (Tierney y Rhoads, 1993; Weick, 1995). In other words, and according to Weick's (1995) perspective, the social character of sensemaking allows new members to contribute to the reshaping of the organizational culture as shared understandings are developed through activity exchanges and communication interaction between new members and insiders. The following section discusses newcomers' sensemaking in detail.

Several authors have offered explanations regarding the circumstances under which people engage in sensemaking. Based on the idea of perceived environmental uncertainty, Duncan (1972) considers environmental determinants such as information overload, complexity, and turbulence as properties of an ongoing flow that

increases the probability that people in organizations note what is happening around them –cues–. These properties are occasions for sensemaking. For example, when the amount of information in an organization is too large to be processed, people start to filter the information by abstraction, omission, and greater tolerance of error or queuing. Thus, information overload is an occasion for sensemaking because it forces cues out of an ongoing flow.

Complexity also calls for cues as perceived uncertainty affects what people notice. Similarly, turbulence, which is a combination of instability and randomness, forces people to notice what they know best, which gives sensemaking its idiosyncratic properties. However, Smith (1988) argues that at least two different conditions must take place in order for a problem or gap to occur and become a cue for sensemaking: the gap must be difficult to close and must matter. Thus, a problem is an undesirable situation that matters and someone can solve –albeit with some difficulty– (Starbuck y Milliken, 1988).

Based on these perspectives, Weick (1995) generalizes occasions for sensemaking into two main categories: ambiguity and uncertainty. On the one hand, ambiguity is an ongoing flow subject to many interpretations, which makes assumptions for rational decision-making unclear. On the other hand, uncertainty refers to a situation where it is not possible to infer future consequences based on present actions. According to Weick (1995), in the case of ambiguity people engage in sensemaking because they are confused by too many interpretations, and in the case of uncertainty, because they are ignorant of any interpretations. This perspective is in agreement with Louis (1980), who argues that surprises are cues that evoke sensemaking as the result of uncertainty and ambiguity in organizations.

As I described above, much of the behavioral activity in organizations occurs with no real conscious awareness due to the existence of cognitive schemas about the self, other people, situations, and events (Ashforth y Fried, 1988). That way, individuals in non-surprising situations operate unconsciously following pre-programmed schemas (Abelson, 1976; Schutz, 1964). In other words, conscious thought is not a very large part of our everyday mode of operating unless a surprise stands out. Similarly, using Harris's (1994) perspective on mental dialogues, it is clear that dialogue is not evoked when previous dialogues about a given stimulus have already taken place, regardless of whether the resolution of the dialogue was agreement or not. If agreement was reached, then that

schema will become part of the shared meaning with others in the organization. If disagreement is the outcome, it will trigger future mental dialogues. Sharing results from mental dialogue agreements between I and the Other is what Harris (1994) identifies as direct cultural sharing. Similarly, indirect sharing occurs in situations when unconscious sensemaking occurs.

Novel stimuli trigger a conscious sensemaking process that leads to the learning of schemas (Harris, 1994). Given newcomers' uncertainty about their particular roles, task competence, and social acceptance, they are eager to learn organizational schemas during their socialization processes and on-the-job experience (Ashforth, 1988; Katz, 1980). Therefore, as newcomers cope with surprises, they are more likely to engage in conscious sensemaking than the older members of the organization. As newcomers gain more experience, they develop more elaborate schemas and sensemaking begins to require less conscious effort (Harris, 1994; Louis 1980; Schutz, 1964).

Louis (1980) proposes a model for understanding the process of newcomers' sensemaking as they enter new settings based on the idea that change, contrast, and surprise constitute key sensemaking elements of the entry experience for new members. By change, Louis means recordable evidence of difference between the old and the new settings that requires adjustment by individuals. Change is publicly noted and knowable—new location, new title, new salary, and new job description—. Contrast is more personal and occurs when individuals experience an emergence of a perception against a general background. For example, a newcomer may or may not notice how people dress in the new setting depending on whether dress codes differ between the old and the new settings.

A special case of contrast is associated with the process of letting go old roles from which newcomers carry memories. For example, a new member might interpret aspects of the new role using old-role experiences as anchors on internal comparison scales. Finally, surprise represents a difference between individuals' anticipations and subsequent experiences on the new setting. Louis (1980) identifies five forms of surprises that newcomers face in the encounter: 1) when conscious expectations are not fulfilled; 2) when conscious and unconscious expectations about oneself are unmet; 3) when unconscious job expectations are unmet or when a feature of the job is unanticipated; 4) when difficulties arise in accurately forecasting internal reactions to a particular new experience; and 5) when newcomers' cultural assumptions are challenged.

Sensemaking depends on individuals' cultural set of assumptions, that is, internalizations of context-specific meanings (Berger y Luckman, 1966). Therefore, cultural surprises occur when newcomers make cultural assumptions, brought from previous settings as "operating guidelines" (Louis, 1980, p 238) that fail to work in the new setting. Once newcomers realize that these assumptions do not work in the new setting because people around them share other assumptions, they go through a cognitive revision of themselves in relation to others and their taken-for-granted assumptions (Van Maanen, 1976). Thus, in learning the culture of an organization during socialization processes, new members develop culture-specific schemes to interpret everyday events and respond with appropriate behaviors (Schutz, 1964; Berger y Luckman, 1966). Given that culture differs between organizations, each setting demands a specific cognitive framework—learned during socialization—for expressing and interpreting meanings in a particular culture through sensemaking processes (Louis, 1980).

Attributing meaning to surprises—sensemaking—depends on past experiences with similar situations and personal characteristics (Louis, 1980). Nonetheless, other factors—such as information and interpretations from others—play an essential role in sensemaking for newcomers. Louis also recalls that the experiences of newcomers differ in three important ways from those of the insiders: 1) insiders normally know what to expect, so the level of surprise they encounter is considerably less; 2) in the event of surprises, insiders have sufficient history within the setting to interpret the event more accurately; and 3) insiders have established a social network within the organization to compare perceptions and interpretations. In sum, these differences make newcomers' sensemaking more difficult and less accurate in relation to insiders' sensemaking. However, with time and experience, as a newcomer's socialization process evolves, they come to understand how to interpret actions of others and events in the new setting and what meanings to attach to different situations.

THEORETICAL FRAMEWORK SUMMARY

Culture in organizations is most commonly defined by the set of shared beliefs, values, and assumptions that guide behavior. New members learn the culture of their organization as well as their role in it during a period known as organizational socialization (Van Maanen, 1976). In learning the culture of an organization during socialization processes, new members develop culture-specific sche-

mas to interpret everyday events and respond with appropriate behaviors through sensemaking. Sensemaking is the ongoing thinking process of individuals purporting to create order and make retrospective rational accounts of the situations in which they find themselves (Berger y Luckman, 1966; Louis, 1980; Ott, 1989; Schutz, 1964; Weick, 1977; 1995). During socialization, newcomers find themselves in an environment with high levels of uncertainty and ambiguity that forces them to engage in cognitive processes to make sense of their new environment at higher rates than the other members of the organization (Louis, 1980; Weick, 1995). As newcomers gain experience and go through their socialization process, they develop more elaborate in-organizational schemas, and sensemaking for these domains begins to require less conscious effort (Harris, 1994).

An important aspect of sensemaking is that it is a social phenomenon in which shared understandings are developed through activity exchanges and communication interaction between new members and insiders. This exchange between newcomers and veterans in organizations also affects the sensemaking process of the senior members (Louis, 1980; Van Maanen, 1976; Weick, 1995). Therefore, junior faculty as new members might contribute to the reshaping of the academic culture as they engage in communication and activity exchanges with senior faculty in their entering department (Tierney y Rhoads, 1993). The process of sensemaking offers an opportunity of inquiry to both the organizational culture individuals are coping with and the set of assumptions they bring from past experiences because individuals make sense by engaging in internalized conversations between self and their abstraction of the organization, and the arguments supplied for each of the parties to the conversation are basically the verbalization of normative and cultural pressures. In other words, new members' mental dialogues with their abstraction of their organization offer a useful perspective on the process by which the broader cultural context of the organization manifests in the sensemaking effort of their members (Harris, 1994; Mead, 1934).

More specifically, new members in stages of early socialization internalize context-specific dictionaries of meaning used by members of the setting as a result of sensemaking processes triggered by surprises (Louis, 1980; Berger y Luckman, 1966). Therefore, graduate students, by being in the anticipatory socialization stage of the academic profession, begin to internalize a series of meanings through sensemaking that would allow them to anticipate outcomes and events once they become

junior faculty. Given that newcomers contribute to the reshaping of the culture in the entering organization, junior faculty has the potential to reshape the organizational culture of their entering departments based on the culture acquired during their anticipatory socialization in graduate school (Tierney y Rhoads, 1993; Vann Maanen, 1976). The mental dialogues graduate students enact in their sensemaking process as they socialize in their entering departments provide insights regarding the culture of the entering department as well as the culture acquired in graduate school.

A METHODOLOGY TO STUDY CULTURAL CHANGE

Based on cognitive anthropology, ethnographic interviews are used to elicit the cognitive schemas that guide participants' worldviews and behavior (Marshall y Rossman, 1994). This methodology consists of a constant comparative analysis that generates a typology of cultural classification schemas resulting from sensemaking, and also it highlights the nuances of the culture. In particular, Spradley's method of ethnographic interviewing starts by assuming that cultural knowledge is divided into categories and ethnographic analysis is the search for these parts and their relationships as conceptualized by participants. This method is designed to identify cultural symbols and the relationships among them based on the assumption that symbols make all cultural meaning. In the remaining of this section, I will highlight the main conceptual components of this methodology; however, for a detailed description refer to Spradley (1979).

In Spradley's methodology, there are four kinds of ethnographic analysis: domain, taxonomic, componential, and thematic. These lead to the discovery of cultural meaning. Thus, before describing the methodology, it is necessary first to discuss the nature of meaning based on a relational theory of meaning (Frake, 1964). Culture is a system of symbols. A symbol is any object or event that refers to something. All symbols involve three things: the symbol itself, one or more referents, and a relationship between the symbol and the referent. A referent is the thing a symbol refers to or represents. Through the relationship the referent becomes encoded in the symbol. Once the encoding takes place we think automatically of the referent instead of the symbol. Many symbols include other symbols and they form a category. Thus, a category is an array of distinct symbols that we treat as if they were equivalent. Cover terms are generic names given to a category of cultural knowledge, while included terms are all the names given to the symbols of a given category.

Any symbolic category that includes other categories is a domain. Therefore, all members of a domain share at least one feature of meaning. All domains have two or more included terms for each category within the domain. When two folk categories are linked together, the link is a semantic relationship. In a domain, the semantic relationship links each cover term to all the included terms in its set. Domains are the first and most important unit of analysis in ethnography. The task of the ethnographer is to identify the coding rules of category of symbols. This can be accomplished by discovering the relationships among cultural symbols.

Domain Analysis: Every culture has many domains but very few semantic relationships. By discovering these relationships, it is possible to uncover most of a culture's principles for organizing symbols and domains. There are mainly two types of relationships, the ones expressed by the informants according to their own folk and the ones that are universal and are used in any culture (Table 1).

Table 1. Universal Semantic Relationships

Strict inclusion	X is a kind of Y
Spatial	X is a place in Y, X is part of Y
Cause-effect	X is a result of Y
Rationale	X is a reason for doing Y
Location for action	X is a place for doing Y
Function	X is used for Y
Means-end	X is a way to do Y
Sequence	X is a step (stage) in Y
Attribution	X is an attribute (characteristic) of Y

Domain analysis consists of discovering these domains from ethnographic interviews based on descriptive and structural questions. Descriptive questions are meant to elicit a large sample of utterances in the informants' native language by encouraging them to talk about a particular cultural scene. Structural questions help the ethnographer to elicit cover terms and test hypotheses from domain analysis. Table 2 illustrates an example of a domain.

Taxonomic Analysis: The meaning of a symbol is revealed by discovering how it differs from other symbols

Table 2. Domain Example

Included Terms	Semantic Relationship	Cover Term
To better		
humanity To		
attract industry		
To discover To		research
obtain prestige	is a reason for doing	
To be cool		

that share some common features and differences at the same time. For example, the sentence "a boy is riding a bike" implies that is not a girl, not a woman, not a man, and not someone else. However, boy, girl, woman, man, and someone else share similarities: for example, they are all people. All these terms form a contrast set. Each domain of a culture consists of folk terms in contrast, and each subset of terms within a domain consists of a contrast set. Contrast questions elicit the different categories within a domain and thus uncover contrast sets.

A folk taxonomy is a set of categories from a contrast set organized on the basis of a single semantic relationship. A taxonomy shows the relationships of all the terms in a domain according to levels of association. A taxonomic analysis uncovers the relationship of all the terms in a domain from data gathered in interviews with descriptive, structural, and contrast questions. Table 3 shows an example of a taxonomy.

Componential Analysis: Componential analysis discovers the attributes associated with each cultural symbol. These attributes are usually related to terms through semantic relationships. A paradigm takes all the terms of a contrast set and tells the attribute by dimensions of contrast. These paradigms represent one small part of the cognitive maps known to informants, which enable them to anticipate future situations, plan for them, and make decisions of various sorts. Table 4 features an example.

Thematic Analysis: Cultural themes are elements in the cognitive maps that make up a culture. They consist of a number of symbols linked into meaningful relationships. It is a common assumption about the nature of experience. Themes are assertions that apply to numer-

Table 3. Taxonomy Example

Cover term: research Semantic Relationship: is a reasonsfor doing	To be cool		
	To attract industry	Funds are a reason for attracting industry	
		Networking is a reason for attracting industry	
		Prestige is a reason for attracting industry	
	To discover	Applications are a reasonfor discovering	Products with
			market value are a
	reason for doing		
	applications		
	Money is a reason		
	for doing		
	applications		
			Improve life is a
		reasonfor doing	
applications			
Contribution to knowledge is a reason for			
	discovering		
To obtain prestige	Funds are a reasonfor obt	obtaining prestige	

Table 4. Paradigm Example

Contrast Set	Dimensions of Contrast			
	Non-profit	Graduate students' desires	Expected by the department	Happens often
To discover	Yes	Yes	Yes	No
To attract Industry	No	No	Yes	Yes
To be cool	Yes	Yes	No	No
To obtain prestige	Yes	Yes	Yes	Yes

ous situations and so recur in more than one domain. Cultural themes sometimes appear as folk sayings, mottos, proverbs, or recurrent expressions. However, most cultural themes are tacit. Themes also serve as a general semantic relationship among domains. For the purpose of ethnographic research, cultural themes are any cognitive principle, tacit or explicit, recurrent in a number of domains and serving as a relationship among subsystems of cultural meaning. According to Spradley

(1979), a thematic analysis is conducted by assuming that every cover term is a contrast set of an overarching domain and conducting a componential analysis of such an overarching domain.

Spradley's methodology can be used to elicit cultural change and sensemaking processes among participants. According to Harris (1994), as new members learn the culture of the organization in their socializa-

tion process, they enact mental dialogues through their sensemaking process between self and the generalized abstraction of the values and expectations of the organization. These mental dialogues reflect the culture of the parties involved, in this case, the self and the abstraction of the organization. Thus, a detailed analysis of graduate students' sensemaking and the mental dialogues they enact in this process can uncover the cultural differences between the values of the entering junior faculty and the ones from departmental culture. Spradley's methodology can be used to obtain cultural schemas of individuals socializing into new settings at different points of time in order to observe the cultural change throughout the socialization stages. Alternatively, cultural schemas at one point of time among new members and senior members can be obtained using this methodology in order to contrast cultural differences between the two.

A HYPOTHETICAL STUDY

Inspired by a study I conducted using this framework, I present in this section a brief description of an application of this methodology to a hypothetical case. Suppose a study meant to investigate potential cultural shifts in a given academic department due to the influx of new faculty members to a culture that embraces business-like values, such as patenting, and applied research for product development from a traditional Mertonian culture that values free dissemination of knowledge and basic science. In this case, by using Spradley's methodology, it is possible to obtain the key cultural paradigms around issues of patenting vs. publishing and applied vs. basic research of incoming faculty and senior members of the department (by senior I mean that are fully socialized into the culture of the department). By contrasting these paradigms, it is possible to infer if there are significant cultural differences between the two groups. Then, in order to determine if a cultural shift took place in the department as new members gain full membership, the same analysis can be conducted with both groups three years later (which is about the time that takes for junior faculty to fully socialize to their new department) and compare these results with the ones obtained three years earlier.

Finally, during the organizational stage of the socialization of junior faculty, tensions between the culture brought by junior faculty and the entering department should be apparent in the mental dialogues triggered by sensemaking processes of the socializing junior faculty. In this case, once cultural paradigms have been esta-

lished using Spradley's methodology, it is possible to elicit participants' sensemaking and their mental dialogues by inquiring how new paradigms are being learned following Weick's (1995) seven properties of sensemaking and Louis (1980) framework of surprises for newcomers. The information highlights the nuances of culture as well as cultural differences between entering faculty and the new setting as well as the potential cultural shifts that might take place as junior faculty exchange vocabularies with senior members.

CONCLUSION

Organizational culture has become a popular framework among scholars from a wide variety of disciplines. This article provides a detailed description of the way in which organizational culture operates at a cognitive level applied to how the academic culture in a department changes as new faculty members enter the academic profession. It is based on previous works on organizational culture with emphasis on sociological and cognitive perspectives. In addition, this article describes a specific methodology to study cultural change in the academic profession, although applicable to organizations broadly speaking. ✎

REFERENCES

1. Abelson, Robert (1976). Script procession in attitude formation and decision making. En: John S. Carroll y John W. Payne (Eds.), *Cognition and Social Behavior*. Hillsdale: Lawrence Erlbaum.
2. Anderson, Melissa y Seashore-Louis, Karen (1991). The changing locus of control over faculty research: From self-regulation to dispersed influence. En: John S. Smart. (Ed.), *Higher education: Handbook of theory and research* (Vol. VII). Nueva York: Agathon.
3. Ashforth, Blake y Fried, Yitzhak (1988). The mindless of organizational behaviors. *Human Relations*, 41, 4, 305-329.
4. Austin, Ann y Barnes, Benita (2005). Preparing doctoral students for faculty careers that contribute to the public good. En: Adrianna Kezar, Anthony Chambers, John Burkhart y Associates (Eds), *Higher education for the public good: Emerging voices from a national movement*. San Francisco: Jossey-Bass.
5. Berger, Peter y Luckman, Thomas. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Nueva York: Anchor Books.

6. Braxton, John y Berger, Joseph (1996). Public trust, research activity, and the ideal of service to students as clients of teaching. En: John Braxton. (Ed.), *Faculty teaching and research: Is there a conflict? New Directions for Institutional Research*, 90. San Francisco: Jossey-Bass Publishers.
7. Brown, Mary Helen (1985). That reminds me of a story: speech action in organizational socialization. *Western Journal of Speech Communication*, 49, 1, 27-42.
8. Daft, Richard y MacIntosh, Norman (1981). A tentative explanation into the amount and equivocality of information processing in organizational work units. *Administrative Science Quarterly*, 26, 207- 224.
9. Daft, Richard y Lengel, Robert (1986). Organizational information requirements, media richness, and structural design. *Management Science*, 32, 554-571.
10. Duncan, Robert (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 17, 313-327.
11. Festinger, Leon (1957). *A theory of cognitive dissonance*. Stanford: Stanford University Press.
12. Fiske, Susan y Taylor, Shelley (1984). *Social cognition*. Reading: Addison-Wesley.
13. Frake, Charles (1964). Notes on queries in ethnography. *American Anthropologist*, 66, 3, 132-145.
14. Gardner, Susan y Barnes, Benita (2007). Graduate student involvement: Socialization for the professional role. *The Journal of College Student Development*, 48, 4, 369-387.
15. Gardner, Susan (2008). "What's too much and what's too little?" The process of becoming an independent researcher in doctoral education. *The Journal of Higher Education*, 73, 3, 326-350.
16. Harris, Stanley (1994). Organizational culture and individual sensemaking: A schema-based perspective. *Organization Science*, 5, 3, 309-321.
17. Katz, Ralph (1980). Time and work: Toward and integrative perspective. En: Barry Staw y Larry Cummings (Eds.), *Research in Organizational Behavior Vol. 2*. Greenwich: JAI Press.
18. Lewin, Kurt (1951). Field theory in social science. En: Dorwin Cartwright (Ed.), *selected theoretical papers*. Nueva York: Harper and Row.
19. Lord, Robert y Foti, Roseanne (1986). Schema theories, information processing, and organizational behavior. En: Henry Sims, y Dennis Gioia (Eds.), *The thinking organization: Dynamics of organizational social cognition*. San Francisco: Jossey-Bass.
20. Louis, Meryl Reis (1980). Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings. *Administrative Science Quarterly*, 25, 2, 226-251.
21. Markus, Hazel (1977). Self-schemas and processing information about the self. *Journal of Personality and Social Psychology*, 35, 63-78.
22. Marshall, Catherine & Rossman, Gretchen (1994). *Designing qualitative research*. Thousands Oaks: Sage Publications.
23. Mead, Gerooge Herbert (1934). *Mind, self and society*. Chicago: University of Chicago Press.
24. Mendoza, Pilar (2007). Academic capitalism and doctoral student socialization: A case study. *Journal of Higher Education*, 78, 1, 71-96.
25. Merton, Robert (1957). *Social theory of science*. Chicago: University of Chicago Press.
26. Morgan, Gareth; Frost, Peter J. y Pondy, Louis (1983). Organizational symbolism. En: Lois Pondy, Peter Morgan y Thomas Dandridge (Eds.), *Organizational symbolism*. Greenwich: JAI Neisser, U.
27. Neisser, Ulric (1976). *Cognition and reality*. San Francisco: Freeman.
28. Ott, Steven (1989). *The organizational culture perspective*. Chicago: The Dorsey Press.
29. Perrow, Charles (1986). *Complex Organizations* (Tercera Edición.). Nueva York: Random House.
30. Pfeffer, Jeffrey (1981). *Power in organizations*. Marshfield: Pitman.
31. Robinson, John (1981). Personal narratives reconsidered. *Journal of American Folklore*, 94, 58-85.
32. Schall, Maryan (1983). A communication-rules approach to organizational culture. *Administrative Science Quarterly*, 28, 557-581.
33. Schein, Edgar (1968). Organizational socialization. *Industrial Management Review*, 9, 2, 1-16.

34. Schein, Edgar (1985). *Organizational culture and leadership*. San Francisco: Jossey-Bass.
35. Schutz, Alfred (1964). The stranger: An essay in social psychology. *Collective papers*, 2, 91-105.
36. Scott, Michael y Lyman, Stanford M. (1968). Accounts. *Sociological Review*, 33, 46-62.
37. Smircich, Linda y Stubbart, Charles (1985). Strategic management in an enacted world. *Academy of Management Review*, 10, 724-736.
38. Smith, Gerald (1988). Towards a heuristic theory of problem structuring. *Management Science*, 34, 1489-1506.
39. Spradley, James (1979). *The ethnographic interview*. Nueva York: Holt, Rinehart and Winston.
40. Starbuck, William y Milliken, Frances (1988). Executives' perceptual filters: What they notice and how they make sense. En: Donald C. Hambrick (Ed.), *The executive effect: Concepts and methods for studying top managers*. Greenwich: JAI.
41. Tierney, William y Rhoads, Robert (1993). *Enhancing promotion, tenure and beyond: Faculty socialization as a cultural process*. Washington D.C.: The George Washington University.
42. Trice, Harrison y Beyer, Janice (1993). *The cultures of work organizations*. Englewood Cliffs: Prentice Hall.
43. Van Maanen, John (1976). Breaking in: Socialization to work. En: Robert Dubin (Ed.), *Handbook of work, organization and society*. Chicago: Rand McNally.
44. Weick, Karl (1977). Enactment process in organizations. En: Barry M. Staw y Gerald Salanick (Eds.), *New Directions in Organizational Behavior*. Chicago: St. Clair.
45. Weick, Karl (1979). *The social psychology of organizing*. (Segunda Edición.). Reading: Addison-Wesley.
46. Weick, Karl (1995). *Sensemaking in organizations*. Thousand Oaks: SAGE Publications.
47. Weidman, John; Twale, Darla y Stein, Elizabeth Leahy (2001). *Socialization of graduate and professional students in higher education: A perilous passage?* San Francisco: Jossey-Bass.
48. Wiley, Norbert (1988). The micro-macro problem in social theory. *Sociological Theory*, 6, 254-26.

