AC 2010-839: INSTITUTIONAL ETHNOGRAPHY: A RESEARCH METHOD TO INVESTIGATE THE WORK-LIFE EXPERIENCES OF WOMEN FACULTY MEMBERS IN STEM DISCIPLINES

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Institutional Ethnography:
A research method to investigate the work-life experiences of women faculty members in STEM disciplines

Introduction

Women and people of color continue to be underrepresented among engineering faculty. A diverse engineering faculty body is important because it increases the likelihood of equitable hiring practices and reduces the likelihood of a hostile workplace climate, among other reasons. In turn, research hypothesizes that a diverse engineering faculty body will attract, recruit, and retain diverse students to the engineering profession. While there are a bevy of research papers published every year to address this persistent concern, there are few new or innovative ideas informing our theoretical groundwork for understanding these underrepresentations.

Institutional ethnography (IE) is a method used in sociology to understand the experiences of marginalized people in different kinds of institutions. Operationalized by sociologist Dorothy Smith, IE allows researchers to examine how institutions' rules and regulations impact the lives and work experiences of people who work in those institutions. The main data collection processes for IE are interviews, discursive analyses of organizational texts and documents, and observations to study institutional members' interactions with these same texts and policies. Researchers focus on how institutional participants understand, perceive, and negotiate institutional rules and how those understandings and negotiations affects their personal and professional successes.

In this paper, we outline how IE is an effective method of investigating the experiences of women in STEM faculty positions. We describe IE's use as a research method within the ADVANCE-Purdue project. ADVANCE-Purdue is a NSF-sponsored project that aims to improve the job success of faculty, with a particular focus on women of color, in the science, technology, engineering and mathematics (STEM) disciplines of Purdue University. Using IE as a method to study the career-based experiences of the women faculty members of the STEM disciplines, we ask how institutionally generated texts (at the departmental, college, and university levels) shape their experiences as faculty members.

We have selected two kinds of policies that are directly related to women faculty members' work lives: a recently implemented parental leave policy (PL), and the promotion and tenure policies situated within colleges (P&T). By conducting in-depth interviews with STEM faculty members and exploring organizational texts such as the PL and P&T document guidelines, or college and university level strategic plans and policies for stopping the tenure clock or granting course relief, we will demonstrate the usefulness of the IE method in engineering education research. This methodology has theoretical and policy implications that address the phenomenon of women's underrepresentation among engineering faculty.

We begin this paper with a discussion of the sociological theory investigating the construct of an "ideal worker" in the context of academia. We then describe some of the theory behind the institutional ethnography research method, and describe our own data collection and some preliminary results in the context of promotion and tenure texts for STEM faculty in our study. Finally, we present some of our conclusions. It is hoped this paper serves engineering education

researchers as an introduction to a new and useful method for investigating the experiences of underrepresented STEM faculty.

Gender and Race: The Ideal Worker in Academic Organizations

This worker is actually a man; men's bodies, sexuality, and relationships to procreation and paid work are subsumed in the image of the worker. Images of men's bodies and masculinity pervade organizational process, marginalizing women and contributing to the maintenance of gender segregation in organizations (p.139)[1]

Work organizations in the United States are primarily male-dominated[1] in that men continue to occupy the important and powerful positions in their workplaces. In large-scale federal/state-sponsored organizations and economic organizations, benefits and power are concentrated in the hands of the male workers,[b] a truth not challenged in academic contexts until second wave feminism in the early 1970s. Eminent feminist scholars questioned and challenged this taken-for-granted phenomenon of women's marginalization in different organizational settings, including in academia.[8; 5; 7; 9] Thus scholars started examining workplace factors like income, rewards, promotion and family related policies from women's perspectives.[13] Findings from these studies suggest that organizations are gendered and the image of the ideal worker reflects that of a white man.

In work organizations, job-related factors such as, rewards and benefits, advantages and privileges, decision-making and control, identity and self-esteem and, performance and job-satisfaction are governed by power relations that continue to favor men over women. Hence, gender is not a factor that initiates unequal power relations in organizations; rather it is an integral part of the organizational structure.[1] West and Zimmerman[13] describe the processes of embedding gender into the organizational structures as "doing gender", and Acker[1] posits that doing gender takes place at four significant structural and behavioral levels of work organizations.

The first manifestation of "doing gender" in organizations takes place in the division of labor between female and male workers. In work organizations, women and men are typically allotted different responsibilities that confirm the normative gender roles. For example, in academia, science, technology and engineering disciplines are male-dominated as compared to the liberal arts and social science disciplines.[2] This is because science, technology and engineering disciplines are considered to be more masculine while those of liberal arts and social sciences are viewed as more feminine. Moreover, male-dominated organizations provide more work-related advantages and privileges (in terms of salary and promotions) than do female-dominated organizations. O'Farrell and Harlan[10] show that female workers in a male-dominated blue-collar

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[1] Scholarship on gender and organization speaks about work organizations in general. In this paper, we use the theories on gender and organization primarily in the contexts of academic organizations

[b] The terms 'female' and 'male' indicate the biological differences between sexes whereas 'women' and 'men' present the social differences between genders. However, in the literature on gender and organization, these terms are used interchangeably. We do the same in this paper.

organization express higher level of job satisfaction (because of salary and promotions) as compared to the female workers who work in the same corporation but in a female-dominated white collar organization. As a result, female-dominated work is devalued in terms of rewards and benefits.[1]

Second, female and male- dominated work (or disciplines) becomes the social and cultural symbol of gendered representation. That is, female and male-dominated jobs are referred as being 'feminine' and 'masculine' respectively.[1]

Third, interpersonal interactions within work organizations are also gendered. Women are more comfortable in socializing with their female coworkers as compared with their male coworkers. Likewise men workers interact more with other men workers than women workers. Acker[1] states that this gendered pattern of interaction that confirms the normative gendered behavior further subjects women workers to situations of discrimination and marginalization in work organizations.

Finally, organizational rules, regulations and, policies primarily cater to the needs of the male workers than the female workers. Job-related policies that appear to be 'gender neutral' do not consider the work-family conflicts that continue to be encountered primarily by women workers. Thus, women encounter more challenges to learn and follow organization's policies compared to men.[1]

Structures of work organizations are primarily defined by their organizational features, with regards to prescribed (often written) work rules, regulations and policies.[1] For example in academic organizations, promotion and tenure policies are often considered one of the most important structural rules for faculty members. Promotion and tenure for faculty members are obtained through the application and evaluation of formal documents that describe the teaching and research-based performances of the applicants. These documents not only represent the organizational structure but also indicate the extent of power that the organizational structure exerts on the faculty members. These power relations in academic organizations create hierarchies among faculty members. Since organizational structures are characterized by the process of "doing gender", the policies are theoretically more favorable to the men employees than the women employees.[1] From this argument it can be said that, just like any other work organization, academic organizations are also gendered. And male faculty members enjoy more privileges and advantages as compared to their female colleagues.

Study of gender in any organizational context is incomplete and partial without the consideration of other forms of social inequalities, such as race and ethnicity.[6] Literature on gender and organization and that from feminist science studies suggest that whereas, women faculty members in the STEM disciplines suffer from many work-related discriminations and subjugations, the situations of the minority women faculty members and women faculty members of color are even worse and more painful in terms of underrepresentation and marginalization.[2; 3] Thus the intersection of gender, race and ethnicity are significant factors in the studies of faculty experiences in the academic disciplines, especially in the STEM disciplines.

In this paper, we use a methodology of "institutional ethnography" to examine the intersection of gender, race and, ethnicity to study the work-life experiences of the STEM faculty members at Purdue University. In so doing, we also highlight the concept of the "ideal worker" as discussed earlier.

The rest of our paper articulates first a background of institutional ethnography as an effective method of doing research on women faculty members. We then describe the details of data collection and methods of analyses. We then detail the findings of this study with regards to discourse analyses and in-depth interviews. Finally, we discuss the findings in terms of the methods used, policies and implications.

Institutional Ethnography: A Research Method to Investigate the Work-life Experiences of Women Faculty Members in STEM Disciplines

Smith[12] describes institutional ethnography (IE) as an analytical method in which the researcher engages herself to initiate and further a course of inquiry in the same world where she lives. In so doing, she primarily focuses on people whom she meets or encounters on a regular basis. Thus, institutional ethnography aids the process of 'knowing the known' and 'understanding the understood' more comprehensively by revealing the underlying truths and ideas that are apparently intangible. As a result, this method of inquiry develops a knowledge system that extends beyond the day-to-day lives of people and offers a deeper perception and appreciation of the otherwise ordinary world.[11; 4] Hence, "[t]he student of institutional ethnography is required, for instance, to see herself as a knower located in the everyday world and finding meaning there, in contrast to reliance on library research and application of theories – what we would see as remaining "in the discourse."" (p. 11)[4]

Institutional ethnography is often referred to as a feminist research method.[4] Inspired by the notion of consciousness-raising during the rise of the Women's Movement in the U.S in the 1960s, Smith[12] envisioned this method primarily as a medium to study and understand women's experiences from different perspectives, especially that of the women workers. By analyzing women's experiences minutely and critically, institutional ethnography is also a powerful method of explaining the intersection of race, class, ethnicity and sexuality-based issues. At the same time it can also offer an understanding of women's experiences from the standpoints of various historical backgrounds.

Researchers do IE by means of interviews, discursive analyses of organizational texts and documents and in-depth observations to study the work and family-based experiences of members of different institutions. They focus on how women understand and perceive their institutional rules and negotiate their lives in the workplaces and what it takes for them to succeed as professionals. Since its conception, IE has become a very popular method of exploring women's experiences within their institutional locations.[4] We believe IE can also be used as an effective method to explore the work-life experiences of women and minority faculty members in the STEM disciplines of academia

In this paper, we are examining the impact of institutional rules and regulations on the survival and success of the STEM faculty members of a large research university, in this case, Purdue University, with special attention to women faculty and faculty of color. Using the method of

institutional ethnography, we ask our key question: how do institutionally generated texts (at university and college levels) impact faculty members' (especially underrepresented minority women in the STEM disciplines) experiences in terms of their career-based survival and success context of the university? For this paper, we focus particularly on promotion and tenure (P&T) policies.

Data and Methods: Discourse Analyses
Empirical examination of P&T policies are based on the discourse analyses of several university and college level texts. P&T policies for the STEM faculty members are derived from both the university and college levels depending upon their availability. The disciplinary structure of the university is divided into 10 colleges/schools.[c] Agriculture, Engineering, Pharmacy, Nursing and Health Sciences, Science, Technology, Veterinary Medicine, Consumer and Family Science, Education, Liberal Arts and Management. Among these colleges/schools, the first 6 colleges/schools are considered as STEM disciplines. However, even in these colleges/schools not all the departments are defined as STEM. Seven out of 11 departments in the college of Agriculture, 1 out of 6 departments/schools in the college of Pharmacy, Nursing and Health Sciences, 7 out of 9 departments in the college of Technology and, 1 out of 3 departments in the school of Veterinary Medicine are denoted as STEM disciplines. All the departments/schools of the colleges of Science and Engineering are described as STEM. In this paper, we focus on the career experiences of the STEM faculty members in the Colleges of Engineering, Technology, and Science.

At our subject university, the P&T policies exist at university level, college/school levels as well as department/school level. College/school level data are obtained from the college/schools of Engineering, Veterinary Medicine, Veterinary Medicine, Science and Pharmacy, Nursing and Health Sciences. These data are obtained upon request to representatives from the Deans Offices of each of the colleges/schools. In these colleges/schools, department/school level documents of P&T policies for the faculty members were not available yet to us. Therefore, for this paper, discourse analyses of the P&T policy documents are based specifically on the aforementioned data.

The P&T documents that we collected as our data from different colleges/schools of the university more-or-less include information about guidelines for tenure document, college/school level of strategic plans, timelines and, bureaucratic procedures regarding the promotion and tenure processes of the STEM faculty members.

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[c] In this university, a group of departments constitute a college. However, in the College of Engineering, the departments are called 'schools' and the colleges of Management, and, Veterinary Medicine are called 'schools of Management and, Veterinary Medicine'. Again in the college of Pharmacy, Nursing and Health Sciences, 3 departments are called 'schools' and 3 departments are called 'departments'. Thus, the terms colleges, schools and departments are often used interchangeably in the context of this university.

Methods: Discourse Analyses of the Promotion and Tenure Policy Documents
We analyzed the data through two specific issues of concern in the P&T documents: (1)
inconsistency in the *structures* of the P&T documents and, (2) inconsistency in the *content* of the
P&T documents. In the following section we analyze the P&T documents in terms of these two
issues of concern. We operationalize the "structure" of the documents as the ways in which the
information about promotion and tenure are presented. (For example, how many sections and
sub-sections of information the documents have to present an easy understanding of the
information, and how do these presentations vary across the STEM colleges/schools?) We
define the "content" of the documents as the extent to which detailed information are provided in
the different college/school level texts with regards to the 'general criteria,' 'different
committees' and, 'timelines' for the processes of promotion and tenure. In the final section of
this paper, we discuss how these inconsistencies can be explained in terms of gender and
race/ethnicity of the faculty members focusing on the notion of the "ideal worker."

Results: Discourse Analyses of the Promotion and Tenure Policy Documents
Inconsistency in the Structures of the P&T Documents
Among the 6 colleges/schools that are defined as STEM disciplines on our campus we obtained
the promotion and tenure documents from 5 colleges/schools: Engineering, Pharmacy, Nursing
and Health Sciences, Science, Technology, Veterinary Medicine. We report here a preliminary
analysis of the university, College of Engineering, Technology and Science. We have not yet
obtained information from the College of Agriculture. There exists a substantial level of
inconsistency in the structures of the P&T documents of the STEM colleges/schools. The
University has its own statements of the criteria for the promotion and tenure policies. The
colleges/schools follow more-or-less similar guidelines. However, the colleges/schools also
modify the university level criteria according to their own requirements. We present the detailed
analyses of the structures of the P&T documents at the university level as well as those in every
STEM colleges/schools. A table summarizes the findings after each subsection.

University Level
The latest (August 1, 2008) memorandum for the promotion and tenure policy is a 5 page long
document. It consists of 3 specific sections. Section 1 provides a "general criteria for
promotion," "recognition of variety in achievement" and "the faculty review system." This
section specifies the expectations of the university authority from the faculty members with
regards to their promotional opportunities.[d] Section 2 includes information about "promotion to
different ranks" for tenure track and clinical/professional faculty. This section details the
different ranks of the faculty members to which promotion is granted. Section 3 presents the
"general procedure" for promotion and tenure. This section offers brief description of the
different committee levels and the timelines for the promotion and tenure processes. It also offers
the information on the 'President's Office Form 36' that the heads of the departments prepare for
all the candidates in their respective departments who are nominated for promotion and tenure.
President's Office Form 36 or Form 36 is one of the key documents in the process of promotion
and tenure for the faculty members.

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[d] In this university, processes of tenure and promotion are not separate from each other. That is,
all the associate professors are tenured.

College of Engineering
The P&T instructional document obtained from the College of Engineering is a Microsoft Word document that consists of 23 pages that elaborately describe the process of P&T in the College. The document is dated May 28, 2008. It starts with a basic idea of the document itself and it consists of 3 distinct sections: "Material prepared by the department head," "Material prepared by the candidate," and "Letters of evaluation." The first section has 2 sub-sections: "President's Office Form 36," and "summary statement. The second section includes 9 sub-sections that are "personal objectives," "professional objectives," "teaching," "research," "publications and presentations," "engagement/technology transfer," "activities on diversity and climate," "service" and "other" (comprises of the information regarding collaborative and outreach activities). In the third section, there are 3 sub-sections: "reviewers external to the university," "supplemental letters" and, "sample letter to external reviewers."

College of Science
The P&T policy document of the College of Science is a 8 pages long document and has 4 specific sections: "university policy," "college of science promotion documents," "college policy on promotion letters" and "sample letters for promotions." The 1st section provides the URL to the university level memorandum for the P&T policy. The 2nd section presents the "College of Science Promotion Document" that is formatted following the university level guidelines. "General information," "teaching," "other contributions to undergraduate education," "creative endeavor, research, scholarship," "service" and, "external referees" are the 6 sub-sections of the 2nd section. The 3rd section includes 2 sub-sections: "definition" and, "policy." This section provides the details of the significances, rules and, regulations for obtaining reviewer letter. The 4th section comprises of the samples of different promotion letters from the reviewers.

College of Technology
The College of Technology offers a 55 pages long document for its P&T policies (dated September 9, 2009). The document resembles the form of a booklet and has a well-defined table of contents. The document has 4 sections: "scholarship and research defined," "promotion and tenure criteria for the college of Technology," "preparation of the promotion document" and, "procedures for consideration of promotion and tenure." The 1st section provides the definitions of the college level expectations from the candidates in terms their scholarship. This section has 8 sub-sections: "introduction," "scholarship defined," "scholarship interpreted," "the scholarship of learning," "the scholarship of discovery," "the scholarship of engagement," "products of scholarship" and, "scholarship summary."

There are 6 sub-sections in the 2nd section: "general criteria for awarding of tenure," "general criteria for academic promotion," "criteria for excellence in teaching and learning activities," "criteria for excellence in discovery activities," "criteria for excellence in engagement activities" and, "service activities." This section details the expectations of the college in terms of the academic and scholastic achievements of the promotion and tenure candidates. Section 3 presents the details of the formal paperwork-based processes that the faculty members should undergo to request for promotion and tenure. This section has 10 sub-sections: "introduction," "relationship between promotion criteria and the document," "how to us this promotion and tenure handbook," "when to start," "promotion document organization," "college of Technology promotion document standards," "redundancy cautions," "consistency and due credit cautions,"

"mentoring" and, "document outline and instructions." The 4th section depicts the details about how faculty members can facilitate the processes of their tenure and promotion by preparing strong documents and following the timeline. This section has 1 sub-section called, "promotion flowcharts."

Table 1: Inconsistency in the Structure of Promotion and Tenure Documents

Structures of P&T Policy Documents	Institutional Levels			
	University Level	College of Engineering	College of Science	College of Technology
Document type	MS Word	MS Word	MS Word	MS Word
Number of pages/slides	5	23	8	55
Number of primary sections	3	3	4	4
Number of primary sub-sections	0	14	8	25

Inconsistency in the Contents of the P&T Documents
The 3 primary content areas of the promotion and tenure policies of this university are: the information about 'the academic criteria' for promotion and tenure; 'different committees' that are responsible for evaluating a candidate and granting the promotion and tenure; and, 'the timelines' that the people should follow in the processes of promotion and tenure. Our examination of the P&T texts from the STEM schools/colleges reveals that the presentation of these contents varies to a substantial extent from the document of one college/school to another. A brief analysis of the inconsistency of the contents of the P&T documents is as follows.

University Level
The university level promotion and tenure memorandum states that, "…faculty members are to acquire, discover, appraise, and disseminate knowledge" (p. 1 of the university level memorandum). Furthermore it highlights the importance faculty member's "variety in achievement" in terms of 'innovation,' 'administrative functions,' 'committee service,' 'leadership in community affairs,' 'participation in scholarly and professional societies,' 'production of scholarly publications,' 'devising curricula' and, 'counseling students' (among others) as significant criteria for promotion and tenure. Although the document presents a number of objective criteria for the faculty members to be eligible for promotion and tenure it is less explicit about the details of these criteria. For example, the document asserts that, "Length of service in rank is one of the criteria for promotion, but by itself it should not insure promotion or cause denial of promotion" (p. 1 of the university level memorandum). However, it does not define clearly the extent of the 'length of service in rank.' At the same time it is not very clear from the document that whether or not this criterion is true for all the faculty ranks. In page 3 of the memorandum, the readers get the information about one of the key contents of the P&T processes: 'President's Office Form 36' that the heads of the departments prepare for all the candidates in their respective departments who are nominated for promotion and tenure.

The committees that are responsible for granting promotion and tenure to the faculty members are described in this document quite elaborately. The 4 specific committees are 'primary

committee,' 'area committee,' 'university promotion committee' and, the 'Board of Trustees.' The chair and the members of the first 2 committees, their responsibilities as well as the processes of their decision-making are well-defined. The text also describes the structure and the function of the university promotion committee quite clearly. At the same time it explicates the people who are responsible for updating the candidates about their progresses in the promotion and tenure processes.

The document does not have a separate section on timeline. The 8th paragraph in section 3, "general procedure" (p. 4 of the university level memorandum) states that, "…it is expected that each chair of the primary committee should, during the first month of fall semester, publish a timetable setting forth the dates of the primary committee meetings and suitable deadlines for faculty members to update their files and to receive and react to the appropriate parts of a nomination for promotion." Thus, the university level has kept the timeline open and flexible for different colleges/schools.

College of Engineering
The promotion and tenure template of the College of Engineering offers elaborate information about what specific documents the candidates are required to submit. For example, personal information in terms of educational achievements and work experience, professional objectives, services and scholarly publications and presentations among others.

The given document also has detailed descriptions of the members of the 'Engineering Area Promotions Committee' (EAPC). However, the distinction between the primary and the area committees are less explicit in the documents. The College also has MS power-point document that presents a brief idea of the policy to the faculty members that consists of a URL for the EAPC that provides a separate link to the timelines where the important EAPC meetings and file submission deadlines are highlighted in bright colors.

College of Science
The P&T policy document of the College of Science presents the criteria for promotion and tenure in an easy and detailed manner. The criteria includes "general information" of the candidates in terms of education, work experience and, awards and honors received among others. It also elaborates the teaching requirements from the candidates in terms of their teaching (with special mention about their 'contributions to undergraduate education') and other scholarly activities such as 'publications,' 'invited lectures,' 'presented papers' etc. According to this document, the candidates are also required to provide service to the institution and the community with regards to their 'departments,' 'college,' 'university,' 'professional' organizations and 'public outreach.' The text also explains the details of the 'external referees.

The P&T policy document of the College of Science does not provide detailed descriptions of the committees that are responsible for the promotion and tenure of the faculty members or the timelines for the submission of the documents and decisions to be taken.

College of Technology
The preface of the P&T document of the College of Technology starts with the note, "This handbook has been prepared for the purpose of informing members of the faculty of the College

of Technology … of the criteria for promotion and tenure of technology faculty. In addition, this handbook is one source of guidance to help individual faculty in preparation of promotion documents." This handbook indeed provides detailed information to the faculty members who intend to submit their promotion and tenure packages. The document is primarily put together by the already tenured and promoted professors of the college and thus, includes much significant information about the college's expectations from the candidates of promotion and tenure. The handbook illustrates the requirements of promotion to the ranks of associate professor and professor. It also vividly describes the concepts of 'teaching,' 'discovery' and, 'engagement' activities on the part of the faculty members who aspire to achieve promotion and tenure. Furthermore, the document also presents step-by-step processes that the candidates should follow to prepare their documents.

Pages 45 to 50 of the handbook comprise of "promotion flow charts" that provides details of the promotional processes in tabular forms. However, the document is not very explicit about the members of the different promotion and tenure committees and exact timeline for the promotion and tenure document submissions and decision-making deadlines.

Table 2: Inconsistency in the contents of Promotion and Tenure Documents

Contents of P&T Policy Documents	Institutional Levels			
	University Level	**College of Engineering**	**College of Science**	**College of Technology**
Information about academic criteria	Somewhat detailed	Detailed	Detailed	Detailed
Information about different committees	Detailed	Detailed	Not detailed	Not detailed
Information about the timelines	Not detailed	Somewhat detailed	Not detailed	Not detailed

Note: The categories, "Detailed", "Somewhat detailed" and, "Not detailed" are used based on analysis by the authors.

Discussion and Conclusions
The purpose of this paper was to examine the impacts of institutional policies of promotion and tenure on the work-life experiences of the STEM faculty members especially women and minority faculty members. In so doing, we asked: how do institutionally generated texts (at university and college levels) faculty members' (especially underrepresented minority women in the STEM disciplines) experiences in terms of their career-based survival and success context of the university? At the same time we highlighted the importance of using institutional ethnography as an efficient research method that facilitates the understanding of the work-life experiences of the women and minority faculty members in the STEM disciplines by situating their perspectives at the center of the study. Findings from the discourse analyses (that focus on the promotion and tenure policies) suggest that there exist significant amount of inconsistencies in the structures and contents of the P&T documents. The inconsistencies in the P&T policy documents underscore two primary issues: accessibility to the documents, and understanding of the documents.

The accessibility to these documents may vary not only across departments but also across the faculty members. This is because many of the STEM colleges/schools do not provide easy online or off-line access to the P&T policy documents. Faculty members who are in the tenure track or on the verge of promotion may have to make extra efforts to obtain this information. They may have to start formal and informal networking since the beginning of their workdays to obtain the information about promotion and tenure guidelines and timelines. And, in order to enhance the processes of networking, the faculty members may need to negotiate with their teaching, personal and family responsibilities. These negotiations may become more challenging for the women and minority faculty members as compared to the "ideal workers" of white male faculty members.

Understanding the documents in terms of the P&T requirements, timelines for submission of the documents and committee-level decision-makings in university level, college/school level and, department/school level is a serious issue of concern when the faculty members apply for their promotion and tenure. Inconsistencies in the structure and contents of the P&T policy documents as well as the lack of standardization of the documents across college/school and department/school levels may create difficulties for the faculty members to prepare strong application documents. Disconnects between the institutional requirements and the understanding of these requirements may cost the faculty members their much coveted promotion and tenure. Thus, to bridge the gap between organizational policies and misunderstanding of those policies the faculty members may have to devote additional time and efforts in terms of receiving detailed information about the policies through elaborate searching and networking. These experiences may become more stressful for the women and minority faculty members. This is because women and minority faculty members experience greater work-life conflicts as compared to the "ideal workers."

Structural level changes are required to address gender, race and ethnicity-related social changes in the STEM disciplines. Moreover, institutional texts like promotion and tenure policies represent the structure of academia to a large extent. In this paper, by using the method of institutional ethnography we present a deeper analysis of the apparently 'value free' promotion and tenure policies. Disconnect in the structure and the contents of the texts may lead to unequal gender, race and ethnic relations among the faculty members in STEM disciplines. Thus, policy-makers should pay greater attention to prepare these texts in terms of their uniformity and standardization.

Discursive analyses of institutional texts are subjected to limitations.[12] This study is no exception. A limitation of the research reported here stems from the unavailability of the data from the College of Agriculture. Nevertheless, it presents detail information about how institutional texts can impact gender, race and ethnicity based inequalities among the faculty members of STEM disciplines. Conducting in-depth interviews with the faculty members and policy-makers as well as organizing focus group sessions among the faculty members will provide new perspectives and insights to our research questions. These methods of data collection definitely broaden the scope of future research. At the same time, focusing on other institutional policies like parental leave, childcare and tenure clock extensions also offers directions for future research endeavors.

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