



A Field-Based View on Gender in the Information Systems Discipline: Preliminary Evidence and an Agenda for Change

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Abstract

Gender disparities are an often-cited concern of the information technology (IT) workforce in general, and technology-focused fields, such as information systems, in particular. These worries have been underscored by evidence from practice, which indicates low rates of participation by women in the IT workforce, and have been exacerbated by suggestions that women lack an aptitude for technical work. Motivated by events in practice, and recent events in our own discipline, this editorial considers how gender shapes the careers of women and men in the information systems academe in relation to their employing institutions and to the Association for Information Systems (AIS). Based on a survey of 279 AIS members, we offer insights into whether women and men feel equitably treated in terms of support, job satisfaction, opportunities for career advancement, quality of mentoring, and sexual harassment in their AIS interactions and at their employing universities. We find that women and men report different experiences in the workplace, in relation to the professional association, and in regard to their opportunities for career advancement. Given these differences, we offer an agenda for change within the AIS and a call to action aiming for gender equity within the information systems community.

Keywords: Gender, Information Systems Discipline, Association for Information Systems (AIS), Career Management, Equity Theory

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1 Motivation

Information systems (IS), computing, and other technology-related professions have long been characterized as difficult for women. Anecdotal explanations abound—ranging from a lack of critical mass of women in undergraduate and graduate programs to women leaving IT jobs after encountering a less-than-friendly work environment. We have had personal experiences that confirm some

of these anecdotes: for example, one of the authors received substantial pushback for organizing the International Conference on Information Systems (ICIS) women's breakfast, and another was surprised to hear concerns expressed by both male and female faculty about how a female student becoming a parent would harm her work. While we have personal experiences, when we scanned the environment for

data to evaluate our concerns, we found a systematic lack of data necessary to understand if women and men are treated inequitably in IS academia.¹

Despite the lack of data on IS academia, the broader information systems (IT) workforce literature offers some evidence that the domain of IS can be hostile to women (Hewlett, Sherbin, Dieudonne, Fagnoli, & Fredman, 2014; Trauth, Quesenberry, & Huang, 2009). Some ascribe this hostility to the nature of IT work. For example, when IT systems fail, it is necessary for IT professionals to work until they are restored, irrespective of nonwork responsibilities. Because women are often familial caregivers, apologists for the dysfunction of our profession in practice argue that such responsibilities make women less able to meet the demands of IT work (O’Laughlin & Bischoff, 2005). In our experience, a similar logic is applied to academic work. For example, when contemplating assistant professor candidates, some senior men and women quietly question whether junior female faculty can effectively juggle the competing pressures posed by the gender roles of wife, mother, and caregiver with the professional duties of researcher, teacher, and mentor (Correll, Benard, & Paik, 2007; Cuddy, Fiske, & Glick, 2004). In fact, it is not unheard of for senior faculty to question whether such role conflict will limit a junior female faculty member’s ability to earn tenure or her ability to conduct high impact, reputation-building research. Beyond these concerns (Reilly, Rackley, and Awad, 2017), other gender stereotypes, such as aptitude or interest (Shapiro & Williams, 2012), that apologists erroneously cite to rationalize low-entry and low-retention rates of women in the IT workforce (Hewlett, Sherbin, Dieudonne, Fagnoli, & Fredman, 2014) are sometimes attributed to women interested in IS academic careers.

Such gender stereotypes may have gained credibility in our field because women and men are neither proportionately represented among technical specialists active in the IT industry (Ashcraft, McLain, & Eger, 2016; Mundy, 2017), nor among the faculty charged with training the IT workforce (Johnson, 2017).² Only one quarter of the US IT workforce are women (<https://www.ncwit.org/summit/2015-ncwit-summit-women-and-it>). Despite systematic efforts to

attract women to computer science, computer engineering, and IS, women remain the minority among students graduating in IT-focused degree programs (Dominguez, 2017). Similarly, despite the growth of support for women faculty in IS through the Association for Information Systems (AIS) Women’s Network and its mentoring program, for much of the past twenty years, women have constituted just over one quarter of the association’s membership (<https://aisnet.org/>, as of 2017), only recently growing to almost 32% of membership (Association for Information Systems, 2019). For academia, particularly in the United States, these percentages are puzzling, because they counter trends of women earning a growing majority of degrees granted by colleges and universities (Musu-Gillette, de Brey, McFarland, Hussar, Sonnenberg, & Wilkinson-Flicker, 2017). As a result, a broader conversation on gender and equity has emerged in STEM disciplines, particularly in technology-based disciplines (Miner, January, Dray, & Carter-Sowell, 2019; Xu, 2008).

While we are aware of growing societal awareness of gender bias in IS academe and the broader IT workforce, the popular press remains replete with stories of women being sexually harassed and assaulted in the IT jobs, ranging from comments attributed to a leading male venture capitalist, who suggested that hiring more women in IT meant “lowering our standards”³, to comments by a male computer engineer at Google, who claimed that women cannot code as well as men,⁴ to senior faculty being placed on leave, yet never fired, for harassing women.⁵ Gender stereotypes contribute to this spectrum of issues, ranging from the failure of some leaders to see problems (lack of support, unconscious biases), to others purposefully excluding or inequitably treating women (less pay, not hiring), to the most glaring offenses of sexual harassment or committing acts of violence against women. The different forms of mistreatment require different interventions, and society is now demanding that more attention be paid to gender disparity, its sources, and its solutions in the IT workforce (Annabi & Lebovitz, 2018).

While the popular press suggests gender disparity in academia, we possess scant understanding of gender equity and its impact in the IS academic discipline.

¹ We recognize that gender can be constructed as either biological sex or as a socially constructed concept. For example, Ely and Padavic (2007) note that gender, a “socially constructed” concept, is influenced by “an institutionalized system of social practices” (p. 1128) and differences can manifest in many ways including in the work structures and practices of an organization. In this editorial, we do not take a position on this issue—we are interested in equity across men and women—regardless of how one conceptualizes gender.

² See also the American Council on Education website at <http://www.acenet.edu/Pages/default.aspx>

³ <https://www.recode.net/2018/2/5/16972096/emily-chang-brotopia-book-bloomberg-technology-culture-silicon-valley-kara-swisher-decode-podcast>

⁴ <https://www.nytimes.com/2017/08/07/business/google-women-engineer-fired-memo.html>

⁵ <https://www.nationalgeographic.com/magazine/2018/05/sexual-harassment-science-me-too-essay/>

Two inflection points underscored the need for a richer field-based discussion of gender equity among IS academics for this author team. First, at the Winter 2013 AIS Council meetings in Milan, Italy, one co-author, who was then an AIS Council member, participated in a very short and sharp conversation about whether the ICIS should continue to host a Women's Breakfast.⁶ This conversation underscored a lack of shared understanding about the need for discussion of gender issues in the discipline, even though the AIS Council ultimately overwhelmingly supported the continuation of the Women's Breakfast event. This conversation led another co-author to found the AIS Women's Network.

Second, after the AIS Awards Ceremony in 2016 ICIS in Dublin, one of the co-authors of this paper, who was then the AIS president, was approached and challenged because the 2016 class of AIS Fellows and LEO Award⁷ winners was almost exclusively men. While the co-author saw diversity among awardees in terms of national origin, research topics, and epistemologies, the challenger pointed out that women were visibly absent from the podium (Pritchett, 2016). Among other reasons, the co-author responded that the 2016 class composition was a function of the absence of female nominations. Nevertheless, the challenge invoked several questions: Given women hold many leadership positions in AIS Special Interest Groups (SIGs) as leaders, AIS Council members, and conference organizers, why weren't more women nominated? How were nominations solicited? Who served on the selection committee? How were selection committees selected? Could structural reasons explain why women were not nominated and selected? As we sought to answer these questions, we found that even if the data necessary to answer these questions existed, the data necessary to assess gender equity issues were not readily available to the general AIS membership, making a broader, fact-based conversation about gender equity difficult.

Such inflection points underscored a need to systematically examine gender equity and potential barriers to furthering it in the academic IS discipline. Jane Fedorowicz, the AIS president, with the endorsement of the AIS Council, had already formed a task force that included three of the co-authors to gather data on the professional lives of women IS faculty and graduate students. The confluence of these events and the task force helped to crystallize our focus, which sought to provide a "ground truth"

understanding of the state of gender equity in the IS discipline. When we reviewed the literature on gender and academia, we found scant evidence that gender had been recently or extensively investigated in the academic IS discipline. Although some studies had examined the broader IT or academic workforces, we found no studies that explicitly studied our discipline. As a result, after extensive discussions, we chose to focus on:

1. Evaluating gender equity in the academic IS discipline by understanding whether men and women perceive different levels of support and satisfaction.
2. If differences existed, identifying a set of actionable remedies or steps that could be taken by academic employers and the AIS to work toward their resolution.
3. Creating a research agenda for understanding gender and its implications in the academic IS discipline.

By realizing our objectives, we hope to (1) inform the IS community on issues of gender equity in the academic IS discipline; (2) improve the understanding of gender perspectives regarding IS academic work at the university and in the AIS; and (3) foster a conversation on research and identify strategies necessary to advance gender equity in IS academia.

Toward this end, we crafted this editorial as a means to summarize the work of that task force and as a catalyst for conversations and research about gender equity in the IS discipline. It reflects not only our work as a task force, but also our experiences as leaders, faculty, and students in the IS community, our understanding of the literature on gender's impact on entry and retention in the IT workforce (Hewlett et al., 2014; Kokalitcheva, 2015; Mundy, 2017), and our examination of the broader literature on the impacts of gender on productivity and career advancement in academia (Cole & Zuckerman, 1984; Knights & Richards, 2003; Long, 1992; Morrison, Bourke, & Kelley, 2005).

We begin by explaining the importance of studying the status of gender equity in the IS discipline and identifying key questions. Next, we describe our descriptive study and provide a rich discussion of our findings. Our task force found that women IS faculty report less job satisfaction than men IS faculty. We also found evidence that both women and men experience sexual harassment at their universities and

⁶ The Women's Breakfast, now referred to as the AIS Women's Network Event at ICIS, was an annual event, organized by female faculty, intended to offer a venue to discuss issues tied to gender and participation in the IS discipline. The AIS Women's Breakfast and related conversation provided an impetus for founding the AIS

Women's Network, an AIS community specific to women's issues (Loiacono, Iyer, Armstrong, Beekhuyzen, & Craig, 2016; Loiacono et al., 2013)

⁷ All AIS awards are described in detail at <https://aisnet.org/page/AwardsPage>.

at AIS events. We then reflect on our findings and offer a path forward for fostering greater gender equity in the broader IS discipline, our association, and the academic institutions in which we work. By doing so, we hope to establish a baseline for broader gender and equity conversations among our peers.

2 Examination of Gender Equity in Information Systems

Gender equity⁸ is a concern across many disciplines and universities. According to the American Council on Education, while 50% of all college students are women, only about 25% of full professors and just 15% of university presidents at doctoral degree-granting institutions are women (Johnson, 2017). This pattern is consistent across many countries; for example, women constitute just 21% of full professors in Europe (European Commission. *She Figures 2015, 2016*) and Australia has comparably low numbers of women full professors (Australian Government, Department of Education and Training, 2016). Further, as of 2009, women faculty earned only 82% of what their male counterparts earned (Johnson, 2017), perhaps because they are not promoted at the same rates as men. Based on a survey of 221 doctoral-granting institutions in the US, Bilen-Green, Froelich, and Jacobson (2008) found that women faculty are significantly less likely than men to be tenured, irrespective of university type, land grant status, or prevalence of women in top administrative positions. In Australia, women are promoted beyond senior lecturer status at roughly one third the rate of men (Australian Government, Department of Education and Training, 2016). Across disciplines and countries, despite the best efforts of policy makers, evidence invoking concerns about gender disparities and equity persist.

Disparities in gender equity, as evidenced by rates of participation, salary differences, and rank over the past many decades, have been attributed to women and men being treated differently in academia. In a study of matched faculty cohorts of men and women in the United States, Ahren and Scott (1981) found that men are promoted to high ranks more rapidly than their female counterparts. Also, women are rewarded less than men for equivalent high-quality research productivity. For example, women biochemists are rewarded to a lesser degree than men, even though women biochemists have higher average citations per paper, suggesting higher impact than men biochemists (Long, 1992; Long, Allison, & McGinnis, 1993). Such historical evidence helps to explain why women and

men's actual time to promotion (or rank durations) are, to some extent, independent of role performance (quality and quantity of research) (Toren, 1993) and can reasonably be attributed to factors that preserve gender order, such as gender stereotypes, gendered bureaucratic procedures, and conditions in the academic labor market (Nvo-Ingber & Ben-David, 1983; Toren & Nvo-Ingber, 1989). This is supported by a more recent report by West and Curtis (2006), which found significant differences between women and men academics, including disparities in tenure and salaries.

Despite increased awareness, historic gender disparities persist across academia in the United States and globally. When compared to men, women hold fewer leadership positions, particularly at high-status, large universities (Bilen-Green et al., 2008). They also face inequities in terms of speaking invitations and author order in articles published in prestigious journals (Holman, Stuart-Fox, & Hauser, 2018). Even past gender-neutral policies established to help women in academia have led to unexpected outcomes in some disciplines. Though women bear the burden of pregnancy, childbirth, nursing, and often, a larger share of parenting responsibilities, family-friendly policies offer the same benefits to both fathers and mothers. Among academic economists, these policies were found to have resulted in a 19 percentage-point rise in the probability that a man would earn tenure at his first job compared to women, whose chances of obtaining tenure fell by 22 percentage points (Wolfers, 2016). Such challenges led the European Commission in 2018 to formally propose policies to address gender inequality and inclusion as part of 'Horizon Europe' proposal H2020, an initiative designed to encourage inclusion and gender balance in research, innovation, and decision-making in academia and beyond.⁹

Informed by this broader discourse on gender in academia, our task force group members quietly polled IS faculty on the need to investigate gender disparity and equity in the IS discipline. In our initial conversations with AIS members, we asked male and female participants from all AIS regions and all ranks about gender equity in the AIS and in their workplaces. Our conversations were designed to help us understand if there really were gender equity issues in the IS discipline and, if so, what questions to ask of the broader AIS community. Concerns were expressed by women and men at all ranks. Examples include:

- An early-career woman reported to a task force member that she had been held to different

⁸ Gender equity is defined as "the process of allocating resources, programs, and decision making fairly to both males and females without any discrimination on the basis of sex...and addressing any imbalances in the benefits available

to males and females" (<https://www.caaws.ca/gender-equity-101/what-is-gender-equity/>).

⁹ https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-horizon-europe-regulation_en.pdf

standards for promotion than men in her department. She noted, and provided evidence, that despite having a comparable record and the support of her department, her dean and the university turned her down for tenure.

- A midcareer woman reported being made uncomfortable by comments or innuendo from a senior male IS academic. She mentioned that when she spoke to other women IS faculty, they responded “that’s just so and so’s style,” suggesting that while it was abhorrent, this behavior of senior male faculty was something that many senior female IS academics had accepted.¹⁰
- A midcareer female faculty member reported, quite credibly, that while she was a graduate student, an associate editor at a top IS journal had implied that an “intimate relationship” could lead to favorable treatment in the peer-review process.
- A late-career male faculty member reported that his colleagues frequently commented on the physical appearance of female job applicants, recalling one who was referred to as the “hottest candidate” on the job market, even years after that woman had earned tenure.

Notably, our conversations did yield some credible reports of women behaving badly too—for example, women objectifying men as “cute or hot” or a woman leaving a man “out” from an editorial appointment due to his gender—however, such reports were rare in comparison to reports of men mistreating women. In any case, our conversations with AIS members of all ranks suggest a need to further investigate gender equity and its impact on women and men in the IS discipline.

Our concerns related to marginalization, derogation, or exploitation expressed in conversations about gender equity, were echoed in published reports in the AIS e-library, where we found evidence that IS women academics have expressed forceful concerns about what appear to be systemic issues with the AIS award structure and a perceived lack of support from their employing institutions (Loiacono et al., 2016; Loiacono et al., 2013). A recent AIS-sponsored SIG Social Inclusion Task Force Report (Windeler, Petter, Chudoba, Coleman, & Fox, 2018) underscored a need for broader participation by women, faculty of different ranks, faculty of different origins, etc., in AIS governance, journals, and conference committees. These published reports all contend that focusing on equitable access to participate in association

governance is important because, absent such developmental opportunities, it is difficult to envision paths for women to achieve leadership roles in our field.

Given our focus on gender equity, and as a means of refining our questions about the implications of gender in the IS discipline, we turned to equity theory, which suggests that “inequity exists for [an individual] whenever his [or her] perceived job inputs and/or outcomes stand psychologically in an obverse relation to what he [or she] perceives are the inputs and/or outcomes of [another individual]” (Adams, 1963). Equity theory suggests that when inequalities exist employees such as IS academics will report lower job satisfaction, less support and mentoring, and poorer treatment by their employing organizations and the broader AIS. See Appendix A for a literature review of equity theory and the theory of gender and power.

2.1 Research Questions to Benchmark Gender Issues in Information Systems

Equity theory, human resource research, and our conversations with the members of the IS discipline informed key questions asked in a survey of AIS members about their work experiences (see Figure 1). Because one of the gender issues of interest is the low retention rates of women in IS academia (Committee on Maximizing the Potential of Women in Academic Science and Engineering, 2007), our first question broadly asked whether women IS academics reported different levels of job satisfaction than men IS academics as a proxy for retention of faculty. Our follow-up questions directed attention to two key institutions that affect women IS academics’ job satisfaction: their employing organization and the AIS. We asked about support from the university/AIS, equity at the university/AIS, access to leadership positions within AIS, sexual harassment at the university/AIS, and mentoring at the university/AIS.

Figure 1 shows the relationship between research questions relating to job satisfaction, value and support, gender equity, leadership advancement, sexual harassment, and mentoring. We discuss these in detail below.

2.1.1 Job Satisfaction

Gender’s connection to job satisfaction has been widely studied in academia (Okpara, Squillace, & Erundu, 2005; Oshagbemi, 2000). Women and men university professors differ in job satisfaction (Okpara et al., 2005), with women generally reporting less satisfaction (Bender & Heywood, 2006). Although widely studied

¹⁰ The task force asked a senior female leader in the AIS to discuss the issue with the male faculty member. When made

aware that his behavior made women uncomfortable, he apologized and corrected his behavior.

in the IT workforce, Gallivan and Benbunan-Finch (2008) point out that few studies examine differences across women and men in the IS discipline. Consequently, we begin our investigation by establishing a baseline on gender and job satisfaction

(see Table B1 in Appendix B for the items) in the IS discipline. Thus, we explore:

RQ1: Do women in IS academia feel less satisfied with their jobs than men in IS academia?

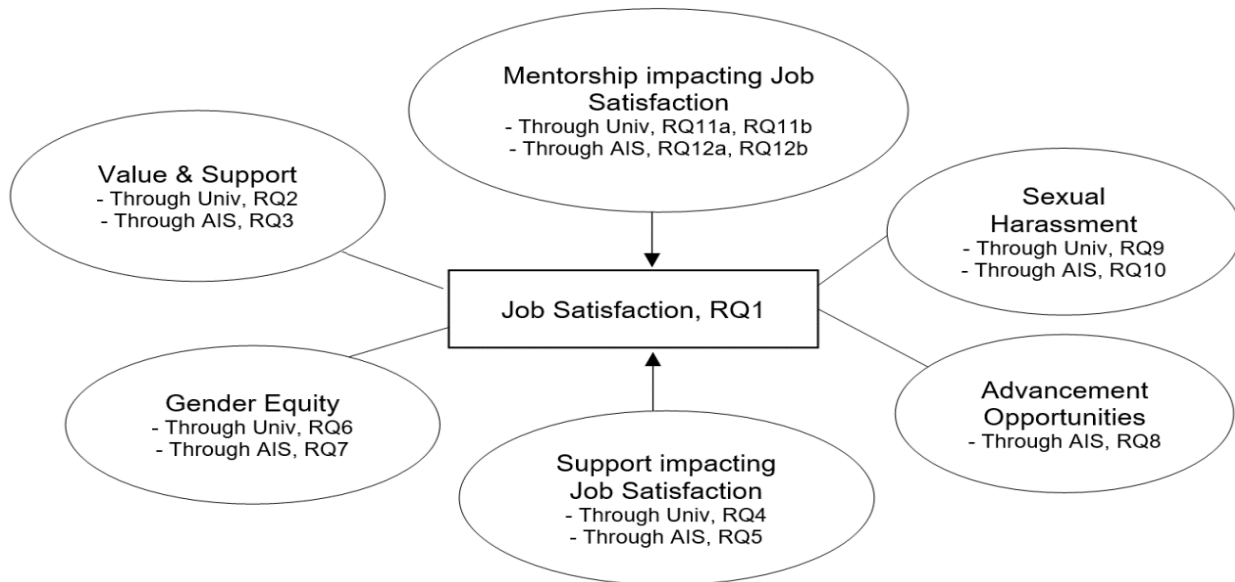


Figure 1. Relationship of Research Questions to Job Satisfaction in IS Academia

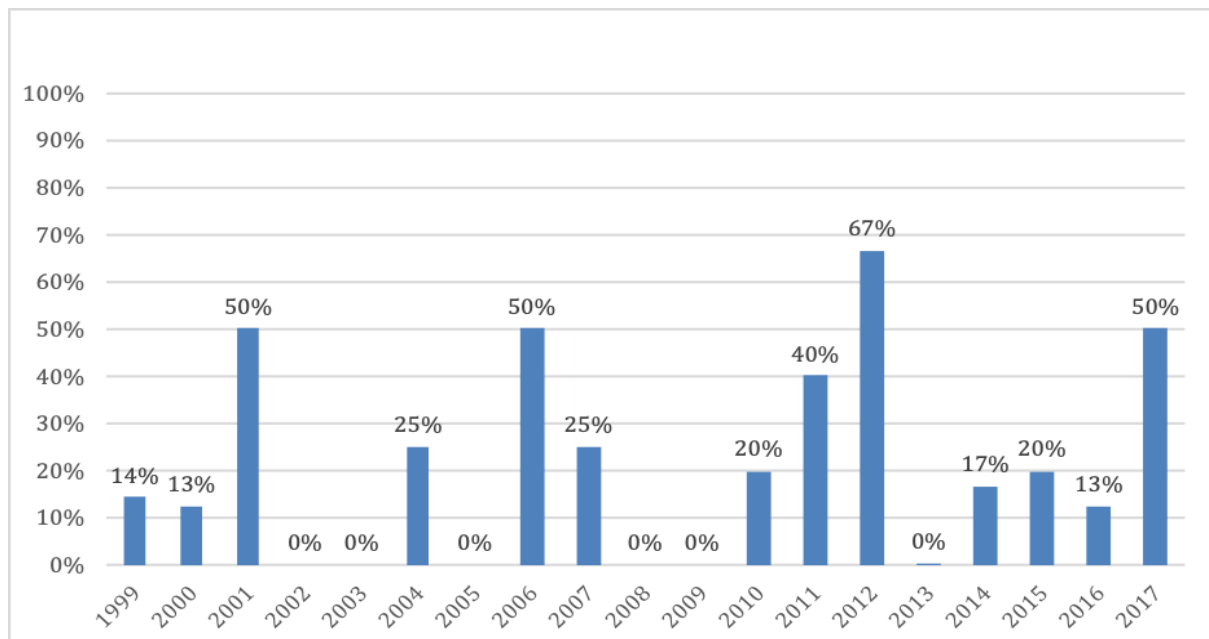


Figure 2. Percentage of AIS Fellow Awards Recipients Who Are Women, 1999-2017¹¹

¹¹ The data show that while there are few spikes in the percentage of women winning the award (notably, in 2012),

there are more periods where the percentage of women winners is either nonexistent or less than 25%.

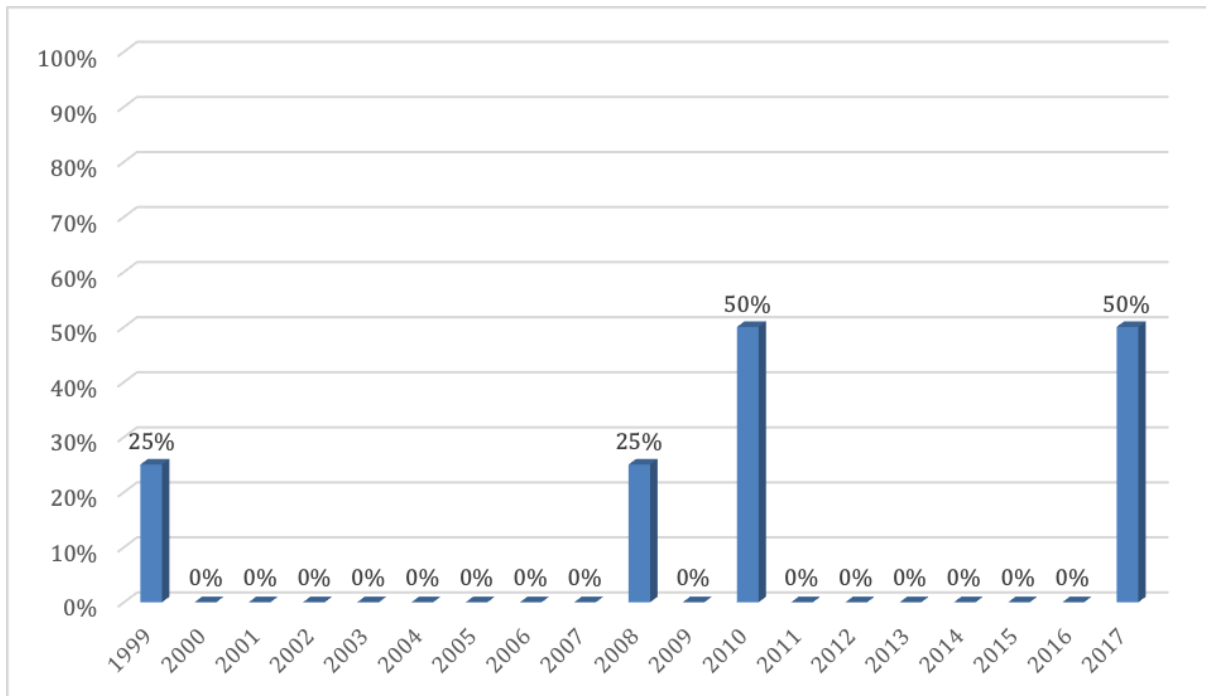


Figure 3. Percentage AIS LEO Awards Recipients Who Are Women, 1999-2017

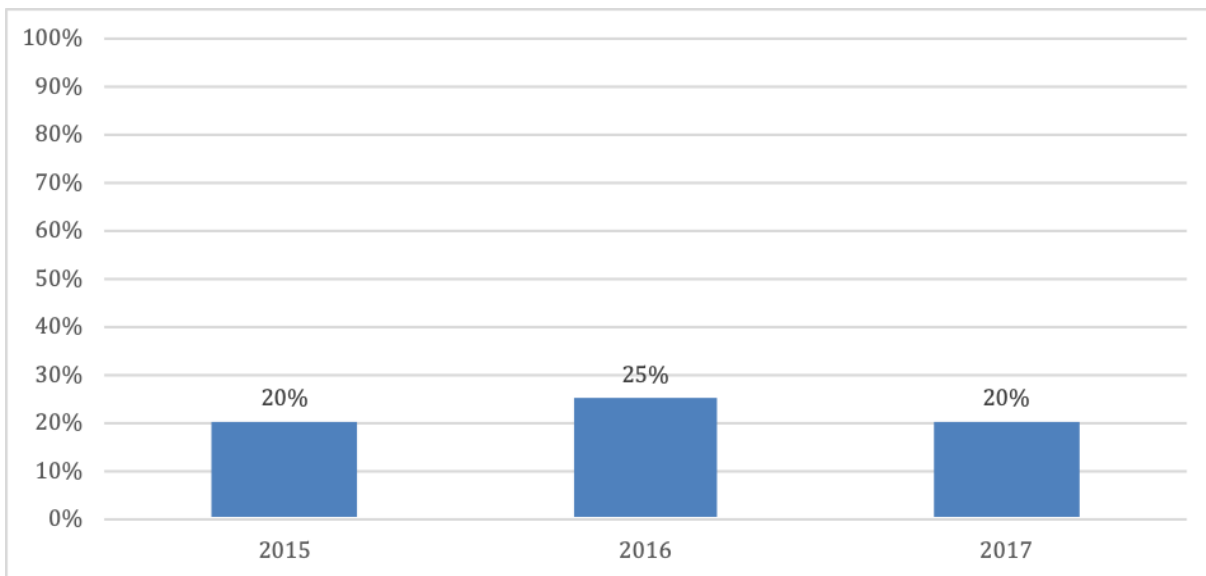


Figure 4. Percentage of Early Career Award Recipients Who Are Women

2.1.2 University Support and Association for Information Systems Support

In developing equity theory, Adams (1965) pondered the consequences of workplace outcomes and how these are perceived by employees as meeting or not meeting the distributive norms of justice. Distributive norms of justice are described as the notion that the

distribution (or allotment) of roles, status (recognition), privileges, rewards, punishments, and resources in social relationships is conducted in a fair manner based on a person’s contributions and needs within a social system (Cohen, 1987; Leventhal, 1980). If people feel treated equitably, they are more likely to feel valued and supported. Thus, gender equity is closely tied to feelings of being valued and

supported by the institution to which one belongs. For example, in the AIS, since 1999, IS women (see Figures 2, 3, and 4 below) have received far fewer AIS Fellow and LEO awards than IS men and, consequently, may feel that their contributions are less valued in the AIS (see Figure 2 and Figure 3). Further, despite growing numbers of young female faculty, relatively few women have been recognized with AIS early-career awards (see Figure 4). This evidence provides the impetus for the following explorations:

RQ2: In IS academia, do women feel less valued and supported by their employing universities compared to men?

RQ3: In IS academia, do women feel less valued and supported by the AIS compared to men?

2.1.3 University Support, Association for Information Systems Support, and Job Satisfaction

When IS academics feel greater support, we anticipate that, like in other professions, they will also report greater job satisfaction, thus increasing the likelihood of them remaining in their job (i.e., retention). This view is consistent with IT workforce and human resource management research that finds that feelings of support are intimately connected to job satisfaction (Joseph, Ng, Koh, & Ang, 2007; Thatcher, Stepina, & Boyle, 2002). By examining this relationship, we probe whether these findings translate from the broader settings of organizational life to the IS academics' professional lives. Thus, we explore:

RQ4: Do women and men in IS academia feel that their university's support has a positive impact on their job satisfaction?

RQ5: Do women and men in IS academia feel that the AIS's support has a positive impact on their job satisfaction?

2.1.4 Equitable Treatment by the University and the Association for Information Systems

Equity theory underscores the fact that people want to be treated fairly by others, be it in the workplace or in their professional lives. People assess equity by comparing their inputs and respective outputs to those of other people in the same organization or in similar positions in their profession (Douglas, Cronan, & Behel, 2007). This includes gender equity, in which men and women seek to be treated fairly, regardless of

their gender. Given the powerful concerns voiced by the IS women academics regarding the lack of support offered by their employers and the AIS (Loiacono et al., 2016; Loiacono et al., 2013), we investigate whether women differ from men in perceptions of gender equity in the IS discipline. Thus, we explore:

RQ6: In IS academia, do women feel that there is greater inequitable treatment of women at their employing university compared to men?

RQ7: In IS academia, do women feel that there is greater inequitable treatment of women within the AIS compared to men?

2.1.5 Leadership Opportunity in the Association for Information Systems

Nearly 72% of women who work in higher education perceive inequitable leadership opportunities for different genders (Bothwell, 2016). The Leadership Foundation for Higher Education in the United Kingdom is conducting a five-year longitudinal study aimed at examining the experience of women working in higher education. In its first report, Barnard, Arnold, Bosley, and Munir (2016) reported that of the 1500 women interviewed, only 35% stated that they believe men and women have equal opportunities in career advancement and garner equal respect in the workplace. In this study we focus on leadership opportunities in the AIS since the task force was sponsored by the AIS. While almost one half of the 2018-2019 elected AIS Council members are women, the entire current rotation of presidents (president-elect, president, and past-president) are men. In fact, just one woman has been elected AIS president in the past 12 years. During that time, all of the past four AIS secretaries, a three-year appointed position, have been women. Figure 5 provides data on women AIS Council members from 1996 to 2018, in five-year increments, with the last bar only including data for two years, 2016-2018.

Since the top elected AIS leadership position is often filled with senior men AIS members (Windeler et al., 2018) and women AIS members appear to be asked to serve in positions stereotyped as female and subordinate, it is possible that women in IS academia feel they lack access to higher levels of leadership within the AIS. Thus, we explore:

RQ8: In IS academia, do women feel there is less advancement opportunity (as leaders) in the AIS than do men?

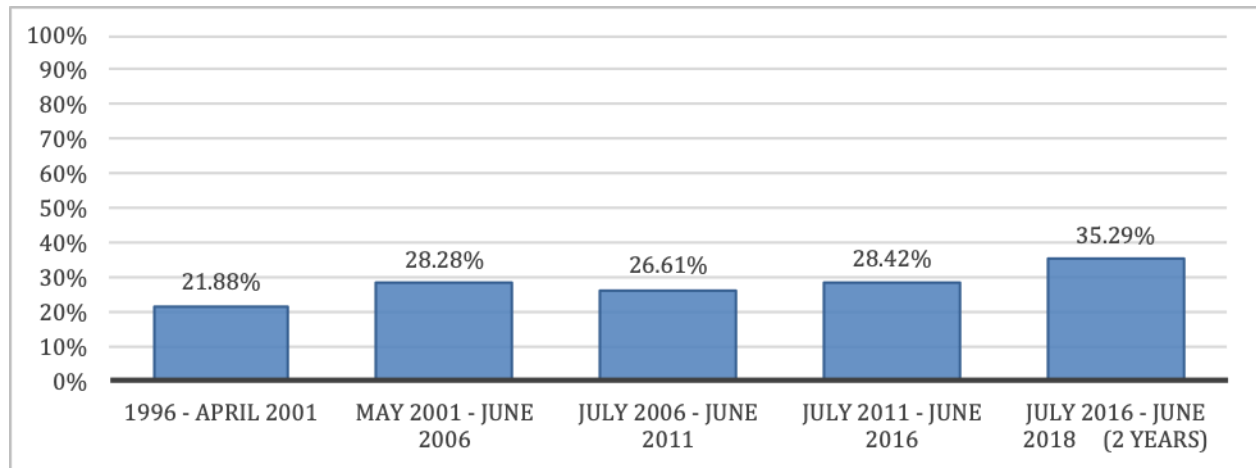


Figure 5. AIS Council Membership: Percentage of Women over Five-Year Periods

2.1.6 Sexual Harassment at the University and in the Association for Information Systems

Gender is interrelated to the concept of power both structurally (e.g., more men with higher pay, status, and institutional power) and through social practices (such as masculinity trait considered as authoritative, while femininity as acquiescent) (Ely & Padavic, 2007). Sexual harassment behaviors include “(1) gender harassment (verbal and nonverbal behaviors that convey hostility, objectification, exclusion, or second-class status about members of one gender), (2) unwanted sexual attention (verbal or physical unwelcome sexual advances, which can include assault), and (3) sexual coercion (when favorable professional or educational treatment is conditioned on sexual activity).” (National Academies of Sciences, Engineering, & Medicine, 2018). Faculty and staff in STEM fields report experiencing it at a higher rate (58%) than the sexual harassment rate reported in military, the private sector, and government (Combating Sexual Harassment, 2018). Sexual harassment and violence are often expressions of assertion of gender power, typically by men over women. While we lack published work on sexual harassment specific to business or IS academia, our qualitative data suggest that women and men report different levels of power and of harassment at the university and the AIS. Outside of the IS discipline, evidence from the United States suggests that sexual harassment and violence affect the lives of women and

men at different rates, with about 1 in 6 women and about 1 in 33 men reporting having been victims of attempted or completed rape.¹² Therefore, research questions 9 and 10 probe whether there is a disparity in the experiences of men and women in IS academia in terms of the gender-related power dynamics reflected in bullying and sexual harassment experiences. We explore:¹³

RQ9: In IS academia, do women perceive they experience more sexual harassment within their university than men?

RQ10: In IS academia, do women perceive they experience more sexual harassment at AIS events than men?

2.1.7 Mentoring at the University and in the Association for Information Systems

Mentoring, both formal and informal, has a positive impact on professionals’ careers. Women, in particular, who have mentors are more likely to negotiate, apply for promotion, and go up for full professorship (Babcock & Laschever, 2007; Harris & Leberman, 2012; Loiacono et al., 2013; Pruitt, Johnson, Catlin, & Knox, 2010; Wallace, 2001). The AIS Women’s Network has directed much attention to making mentors available to junior faculty. Similarly, anecdotal evidence suggests that some universities do provide formal and informal mentoring opportunities to their faculty. The support of mentors, if well done, should result in a more positive feeling about one’s

¹² <https://www.rainn.org/statistics/victims-sexual-violence>

¹³ Please note that women and men shared anecdotal evidence of harassment with members of the task force; however, the preponderance of incidents shared were of women harassed by men. That we hypothesize women

experience harassment at higher rates in no way diminishes the experience of any person, regardless of gender or sexual orientation, who feels they have been harassed at their university or in the IS community.

workplace and one's career trajectory, and should lead to higher job satisfaction. We explore:

RQ11a: In IS academia, do men and women who have a mentor through their employing university feel greater job satisfaction than those who do not have a mentor through their employing university?

RQ11b: In IS academia, do women who have a mentor through their employing university feel greater job satisfaction than do men who have a mentor through their employing university?

RQ12a: In IS academia, do men and women who have a mentor through the AIS feel greater job satisfaction than those who do not have a mentor through the AIS?

RQ12b: In IS academia, do women who have a mentor through the AIS feel greater job satisfaction than do men who have a mentor through the AIS?

3 Methods and Results

To examine our research questions, the task force gathered data from members of the AIS. See Appendix B for research method, constructs, and items. To compare the data collected from female and male IS academics, a series of independent *t*-tests were run. This allowed us to determine whether there is a statistically significant difference between the groups' means. Additionally, regression analysis was used to assess the relationship between the university/AIS support received and job satisfaction.

To understand whether women IS academics experienced less job satisfaction than men IS academics (RQ1), we conducted an independent *t*-test. The results showed that women in IS have significantly lower levels of satisfaction with their jobs than do their male counterparts ($t = 3.47, p < 0.001$). Women (mean = 3.62, $SD = 1.09$) were also less likely to recommend a faculty job to a good friend than were IS men (mean = 4.05, $SD = 0.86$).

In regard to RQ2, independent *t*-tests results showed ($t = 2.98, p < 0.01$) that women in IS (mean = 3.18, $SD = 0.912$) feel significantly less valued by their universities than men in IS (mean = 3.53, $SD = 0.905$). However, for RQ3, our results indicate that women (mean = 3.41, $SD = 0.601$) and men (mean = 3.34, $SD = 0.700$.) do not differ in terms of the level of support they feel from the AIS.

A regression analysis was conducted to determine if university support (RQ4) and AIS support (RQ5) impacted job satisfaction. First, an overall model (see Figure 6) that included both men and women revealed that university support (path = 0.375, $p < 0.001$) and AIS support (path = 0.179, $p < 0.01$) are both

significant. However, subsequent gender models uncovered differences between men and women. For men, only university support (path = 0.356, $p < 0.01$) was a significant predictor of job satisfaction. For women, however, university support (path = 0.365, $p < 0.001$) and AIS support (path = 0.238, $p < 0.01$) both were significant predictors of their job satisfaction.

An independent *t*-test was conducted to determine if men and women IS academics felt that there was equitable treatment of men and women at their universities (RQ6) and within the AIS (RQ7). The results reveal that women in IS (mean = 3.57, $SD = 0.944$), as compared to men in IS (mean = 4.06, $SD = 0.679$), feel that there is greater inequitable treatment of women versus men at their universities ($t = 4.415, p < 0.000$). Since 1 equaled *extremely negative* and 5 equaled *extremely positive* for these items, a lower mean signifies a more negative perception. Similarly, for gender equity in the AIS, our results indicate that women in IS (mean = 3.78, $SD = 0.775$) feel there is less gender equity than do men in IS (mean = 4.03, $SD = 0.812$) ($t = 2.381, p < 0.018$).

An independent *t*-test was run to determine if women in IS felt that there was equal access for both men and women to serve as leaders within the AIS (RQ8). The test ($t = 3.30, p < 0.01$) showed that men in IS (mean = 4.09, $SD = 0.107$) felt that there was a significantly greater level of opportunity to serve in an AIS leadership role than did women in IS (mean = 3.61, $SD = 1.18$).

Turning to men and women in the IS discipline and their experiences of sexual harassment, two additional independent *t*-tests were run. The first compared the level of sexual harassment incidents for men and women in IS at their universities (RQ9). The Likert scale was 1 (*very often*) to 5 (*never*), with lower scores indicating greater numbers of sexual harassment incidents. For RQ9, the test ($t = 3.47, p < 0.001$) revealed that IS women (mean = 4.69, $SD = 0.60$) experienced slightly more sexual harassment within their universities than did men (mean = 4.92, $SD = 0.28$). Experiences of sexual harassment at AIS events (RQ10), however, revealed no differences between men (mean = 4.93, $SD = 0.39$) and women (mean = 4.86, $SD = 0.44$). Overall, on an encouraging note, reported experiences of sexual harassment in IS academia in this study are lower for both women and men than those that have been reported in other disciplines and institutions (Combating Sexual Harassment, 2018, National Academies of Sciences, Engineering, & Medicine, 2018).

A total of 96 participants (34.29%) had mentors at their current academic institution and only 65 (23.21%) had a mentor through the AIS. The impact of mentoring on job satisfaction was also analyzed to test RQ11a and b, as well as RQ12a and b. Having a mentor at one's

university, regardless of gender, did increase job satisfaction ($F = 6.49, p = 0.011$). No evidence was found to suggest that women in IS academia who have a mentor through their employing university feel greater job satisfaction than do men in IS academia who have a mentor through their employing university. Additionally, there was no significant difference

between IS men and women in terms of job satisfaction if they had a mentor through the AIS (informal or formal). IS women, who had an AIS mentor did not have greater job satisfaction than IS men, who had an AIS mentor. Table 1 summarizes the results of the questions posed.

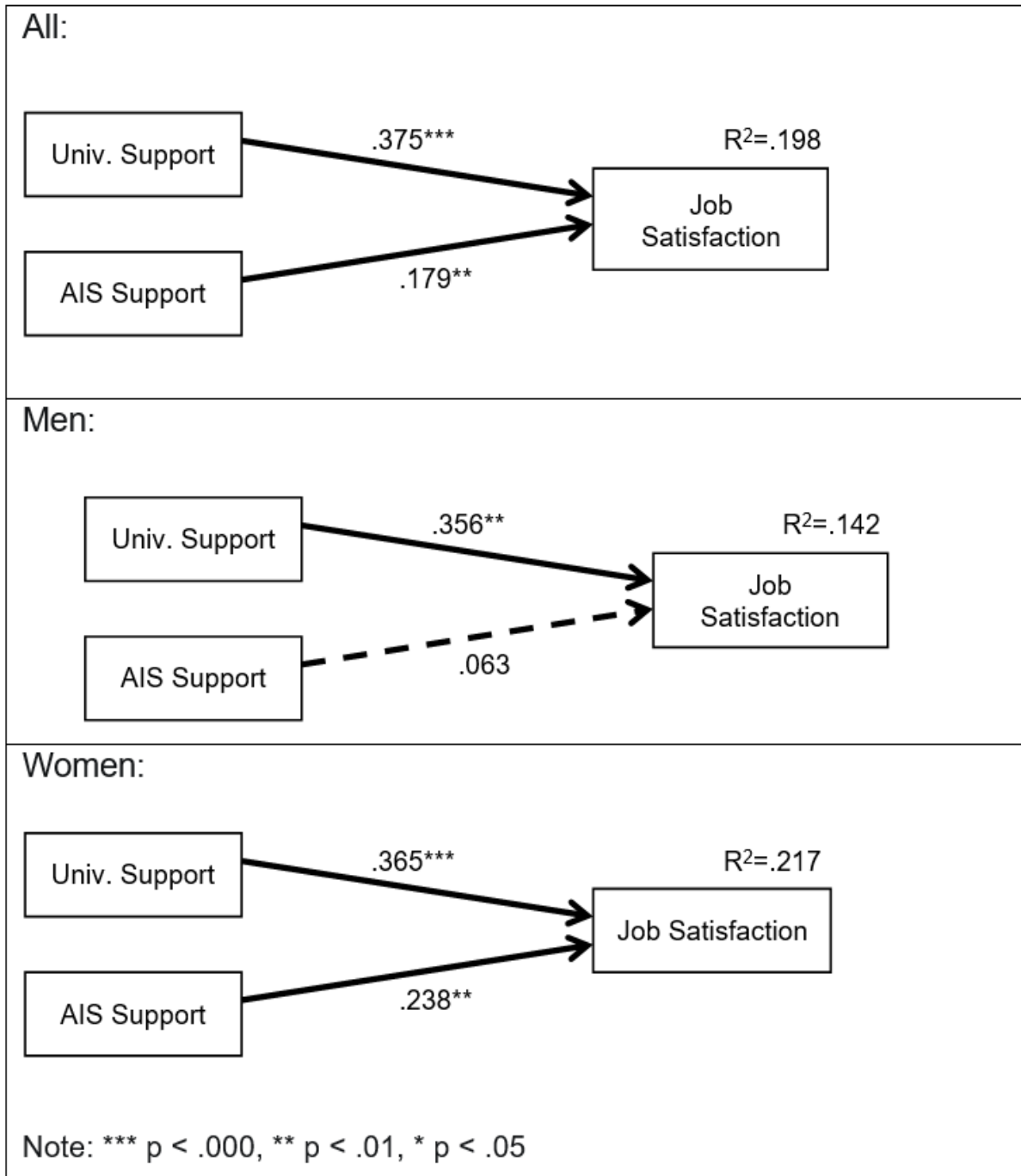


Figure 6. Regression Analysis

Table 1: Summary of Research Question Analysis

Research Question		t/F-test or beta coefficient (p-value)	Support
RQ1	Do women in IS academia feel less satisfied with their jobs than men in IS academia?	$t = 3.47$ ($p < 0.001$)	YES
RQ2	In IS academia, do women feel less valued and supported by their employing universities compared to men?	$t = 3.00$ ($p < 0.01$)	YES
RQ3	In IS academia, do women feel less valued and supported by the AIS compared to men?	No difference	NO
RQ4	Do men and women in IS academia feel that their university's support has a positive impact on their job satisfaction?	University support beta = 0.375 ($p < 0.001$)	YES
RQ5	Do men and women in IS academia feel that the AIS's support has a positive impact on their job satisfaction?	AIS support beta = 0.179 ($p < 0.01$) Men: university support beta = 0.356 ($p < 0.01$) Women: university support beta = 0.365 ($p < 0.001$) & AIS support beta = 0.238 ($p < 0.01$)	YES & NO
RQ6	In IS academia, do women feel that there is greater inequitable treatment of women at their employing university compared to men?	$t = 4.415$ ($p < 0.000001$)	YES
RQ7	In IS academia, do women feel that there is greater inequitable treatment of women within the AIS compared to men?	$t = 2.381$ ($p < 0.01805$)	YES
RQ8	In IS academia, do women feel there is less advancement opportunity (as leaders) in the AIS than do men?	$t = 3.30$ ($p < 0.01$)	YES
RQ9	In IS academia, do women perceive they experience more sexual harassment within their university than men?	$t = 3.47$ ($p < 0.001$)	YES
RQ10	In IS academia, do women perceive they experience more sexual harassment at AIS events than men?	No difference	NO
RQ11a	In IS academia, do men and women who have a mentor through their employing university feel greater job satisfaction than those who do not have a mentor through their employing university?	$F = 6.49$ ($p = 0.011$)	YES
RQ11b	In IS academia, do women who have a mentor through their employing university feel greater job satisfaction than do men who have a mentor through their employing university?	No difference	NO
RQ12a	In IS academia, do men and women who have a mentor through the AIS feel greater job satisfaction than those who do not have a mentor through the AIS?	No difference	NO
RQ12b	In IS academia, do women who have a mentor through the AIS feel greater job satisfaction than do men who have a mentor through the AIS?	No difference	NO

Table 2. An Inventory of Potential Action Items for the Information Systems Discipline

Aiming for...	Actions we can take ...	To overcome...
Eliminating sexual harassment	... as AIS leaders, members, and staff	Persistent sexual harassment
	<ul style="list-style-type: none"> • AIS members should have access to clear and simple reporting mechanisms for any sexual harassment incidents occurring during AIS events. • The AIS should clearly communicate to all members the repercussions for all perpetrators of sexual harassment. These could be: being reported to the affiliated university, being barred from any future attendance, and/or being denied leadership positions. • Individuals need to document concerns such that reasonable persons would agree that a deviant behavior occurred with conversations being centered on evidence. 	
	... as University faculty and administrators	
	<ul style="list-style-type: none"> • Universities typically require faculty to undergo sexual harassment-related seminars. For increasing their efficacy, university administrators could institute postseminar “take-away conversations” among faculty that could lead to the sharing of experiences and increasing awareness and respect for male and female perspectives on these issues. • University administrators and senior IS faculty should encourage frank discussions of gender issues and harassment that lead to constructive actions and behaviors. • Universities should implement policies that define what behaviors are acceptable, questionable, and unacceptable. Particular attention should be paid to behaviors such as amorous or personal relationships where there is an obvious power differential. 	
Increasing retention	... as AIS leaders, members, and staff	Skewed gender ratio in AIS membership and in academia and attrition of women faculty
	<ul style="list-style-type: none"> • The AIS could propagate initiatives similar to the AIS Women’s Network College and the ICIS PhD Student Corner to Region 1, Region 2 and Region 3. • AIS mentorship programs can help new women graduate students navigate job market, interview process, negotiations, and opportunities to collaborate on research publications. • AIS mentors could also help recommend new women faculty hires and graduate students get more engaged in special interest groups (SIGs) and other AIS events and get access to senior scholars. • Institute incentive awards such as a certificate and/or small monetary awards for women graduate student scholars. 	
	... as University faculty and administrators	
	<ul style="list-style-type: none"> • University administrators should structure mentoring opportunities for all new hires to increase retention and job satisfaction. • Facilitate scholarship and incentive awards to attract and retain women graduate students. • University administrators should offer leadership development opportunities, such as faculty fellow programs, based on an open-application process, rather than referrals by existing administrators or senior faculty. 	
Access to leadership opportunities in AIS	<p>... as AIS leaders, members, and staff</p> <ul style="list-style-type: none"> • The AIS should create a directory, annually updated, of faculty and graduate students that allows participants to identify gender, their region, and their areas of expertise, as well as topics they may be willing to speak about. This directory would then be available to all SIGs and AIS event planners for events such as workshops, panels, reviewers, track and minitrack chairs, popular media requests, etc. • The AIS should ask all members to pledge that they reach out to women faculty in the directory when they organize AIS events to promote gender diversity.^a • IS faculty, especially men, should resolve to not participate as leaders in AIS events that do not include any women and where a good faith effort was not made to promote gender and other forms of diversity. For example, absent evidence that a panel organizer has reached out women scholars to participate, men who are contacted to be panelists could decline.^b 	Lack of women representation in AIS leadership positions, events such as panels, SIG officers, SIG board members, and AIS nomination for various awards

Transparency in decision-making processes	... as AIS leaders, members, and staff	Gendered systems of recognition and advancement and expectations in academia
	<ul style="list-style-type: none"> • The AIS should publicize the composition of the committees formed for AIS awards selection. Prior to nominations, the committees should share the decision-making process and criterion for selection of final awardee(s) so that all members can make informed decisions about applying for or seeking nominations for awards. • The AIS should present anonymized data on gender and regional composition of nominees for elected positions and awards. • The AIS should help make university decision-making more transparent. It should collect and share data from universities on teaching expectations, research support, service expectations, and other resources so all faculty have access to information to ensure fairness in faculty negotiations and contracts. 	
Accelerating the cultural shift to recognize and deal with gender issues	... as University faculty and administrators	Lack of institutional structures that support opportunities for all AIS members
	<ul style="list-style-type: none"> • Universities should collect and share data on faculty entering into the IS academia each year so we have a better estimate of the attrition rate in our discipline. • Universities should share hiring data showing how many women were considered for campus interviews and how many were made job offers. • Both men and women faculty should examine and avoid any gender-linked attributions in making essential decisions on matters such as retention, tenure, and promotion, or author order. 	
	... as AIS leaders, members, and staff	
	<ul style="list-style-type: none"> • An AIS Mentoring program should be instituted with retreats during major AIS events to recruit and train mentors (men and women faculty), and mentees (junior women faculty and graduate students). • The AIS should create a mechanism that affords access for women and men for media engagements. • The AIS should add access to nearby affordable childcare availability as a criterion for selecting conference venues. • The AIS should periodically offer work-life balance seminars for all faculty. • The AIS should foster a conversation about shared understanding of ethical and appropriate behavior especially in the context of global cultures. • The AIS should offer negotiation training to aid women in securing academic positions, job duties, and authorship, which can influence academic success. • The AIS should conduct semi-annual inventories of diversity and diversity issues. The results should be shared with the community. 	
	... as University faculty and administrators	
	<ul style="list-style-type: none"> • Gender and diversity should be explicitly considered by University administrators such as chairs and deans and senior faculty in their design of mentoring programs. • Family-friendly policies should be made available to all faculty, such as additional travel funds for childcare to support conference attendance and participation in AIS events. • University administrators should recognize both men and women faculty that actively work to promote gender diversity. • Senior faculty and leadership should be held accountable for creating a whistleblowing culture that rewards a person intervening if they see someone being subjected to sexual harassment or any form of gender inequity along the lines of “see something, say something.” • Programs should be created that sensitize senior women faculty and administrators to be vigilant about their own conscious or unconscious bias such “I did it without any help, therefore you should too” syndrome. • Men and women must examine their own prejudices and biases to probe if they hold higher expectations of women compared to men. Women especially are likely to attribute their success to others and diminish their own role in their success, a characteristic known as the imposter syndrome (Ivie, White, & Chu, 2016). 	
<p>^aIdeas from Diversity and Inclusion Pledge, draft document from Stimson’s Peace, Security and Prosperity Program, Feb 2019</p> <p>^bIdeas from Diversity and Inclusion Pledge, draft document from Stimson’s Peace, Security and Prosperity Program, Feb 2019</p>		

4 Increasing Gender Equity in the Information Systems Discipline

Perhaps, not surprisingly, our survey of gender equity provides evidence that confirms concerns about equity and opportunities for women in the IS discipline. These concerns are: women report lower levels of job satisfaction (RQ1) and feel less valued and supported by their universities (RQ2), perceive greater inequity at their universities (RQ6) and the AIS (RQ7), realize fewer advancement opportunities at the AIS (RQ8), and experience greater sexual harassment at work (RQ9). Notably, while we did not find differences in levels, some women and men reported being sexually harassed at AIS events (RQ10). Collectively, the results suggest that women experience a less equitable work environment than men in the IS discipline. These findings provide a baseline for a much needed, constructive conversation about gender disparity and its implications for the IS discipline.

Although gender disparity has been reported across academic disciplines in terms of participation, compensation, and advancement, we present the first systematically collected ground-truth evidence of gender equity issues in the global AIS community. So, what should we do with this evidence?

We believe that increasing gender equity and diminishing gender disparities requires change in our broader IS discipline as well as the association. This requires AIS members to become change agents in their universities and academic lives. In Table 2, we provide an inventory of potential actions that individual members and leaders in the IS discipline can undertake to further gender equity in the field. We include these as touchpoints, rather than discussing each in detail, and direct the remainder of our comments to high-level ideas about how to advance gender equity at the institutional, association, university, and personal level. We have ranked these touchpoints according to urgency as well as possibility of implementation within existing system structures.

5 Information Systems Discipline

The information systems discipline needs to break down institutions of power that negatively impact the careers of young faculty. Senior faculty, especially those in positions of leadership within their universities, can take steps to help break down the gendered systems of promotion and expectations in academia. Consider the work of Knights and Richards (2003), who found that in United Kingdom (UK) universities, women experience discrimination through differences in contract status and in access to academic hierarchies. Senior members of our discipline must work to ensure that women and men are treated fairly concerning basic contractual matters,

such as teaching expectations, research support, and access to resources, and should also seek to ensure that men and women receive equal encouragement to seek the leadership opportunities necessary to earn spots in the “meritocracy” that shapes our discipline.

Addressing gender disparities requires equitable access to resources for women and men IS faculty. In the case of gender gaps in research productivity, which were once used to explain differences in rank, salary, and stature in academic disciplines (Xie & Shauman, 1998), older evidence suggests, that, on average, women researchers published less than men researchers at comparably ranked schools (Cole & Zuckerman, 1984; Long, 1992). However, research gaps have declined as more equivalent access to resources has been afforded by universities to women and men in STEM disciplines (Ceci, Ginther, Kahn, & Williams, 2015).

In addition to equitable access, the IS discipline, and the AIS as its leading professional association, needs to direct attention to our culture of dealing with gender issues. Theories of gender and power suggest that *gendered systems of recognition and advancement could explain perceived disparities between women and men in the IS discipline*. Three major social structures—the sexual division of labor, the sexual division of power, and the structure of cathexis (investment of emotional energy in a person or thing) (Connell, 1987)—shape sexual inequalities and gender/power imbalances that exist at societal and institutional levels. At the societal level, men and women are divided into specific occupations where women are often relegated to lower-paying positions (Wingood & DiClemente, 2000). At the institutional level, women are often assigned uncompensated responsibilities, such as service to the community, committee work, or advising, which are assigned less value because they generate less recognition than publications and income (Wingood & DiClemente, 2000). Together, these factors shape differences in the way women and men experience and relate to the IS field, gendered discourses about IS, and how they respond to their work environment (Trauth et al., 2009).

The AIS has the institutional prestige to collect data on scholarship and pedagogy resources offered by institutions that employ its members. Collecting such baseline data may help the AIS and other leaders in the discipline to develop guidelines for equitable distribution of resources offered to faculty at all types of institutions.

When evaluating productivity, the information systems discipline must consider more equitable metrics for performance. In terms of journal lists and author order, two frequently used surrogates for research quality, the AIS Senior Scholars’ Basket of

Journals has emerged as a de facto list defining where to publish research. This exerts a significant impact on the careers of IS faculty members, including their ability to secure promotion and tenure, research grants, and chaired professorships (Tremblay, VanderMeer, & Beck, 2018). Evidence suggests that focusing on the AIS Senior Scholars Basket tends to favor men from certain AIS regions (Gallivan & Benbunan-Finch, 2008). Studies on gender and research productivity have found that the selection of scholarly IS journals and types of research publications impacted estimates of women's productivity vis-à-vis men (Gallivan & Benbunan-Finch, 2008). This suggests a need for conversations about updating the AIS journal list, including considerations about which faculty, particularly women, from all AIS regions benefit or are harmed by recognizing specific journals.

Concerning publication author order, in many academic disciplines, women and men appear to be treated differently in this matter, with men occupying the more prestigious author positions on refereed journal papers (West, Jacquet, King, Correll, & Bergstrom, 2013). We are not aware of any work in the IS discipline that considers gender and author order. However, there is a pressing need for such work because "first-authored work," in particular, is prized by external evaluators of tenure cases. If women are not able to negotiate being first author on papers, then, as a field, we need to ask why and consider remedies that ensure equitable access to valuable author-order positions.

The IS Discipline must work to dispel the myth that IT work is gendered. A survey of 1820 faculty drawn from twelve STEM and eighteen social science/humanities disciplines revealed that "field-specific ability," which has often served as a proxy for gender stereotyping, explained lower rates of participation by women in general, and in STEM disciplines, in particular (Leslie, Cimpian, Meyer, & Freeland, 2015). To remedy gender disparities, our descriptive work highlights a need for a cultural shift that would move from talking about the need for *an artificially constructed, masculine form of brilliance* to focusing on *general intelligence, persistence, and dedication* as drivers for a successful academic career.¹⁴ To understand the implications of institutional structures and cultural norms (national, organizational, and professional), much work is needed that explores whether cultural explanations for what we perceive as success factors, and their influence on how we recruit/train our graduate students, helps to explain current rates of participation by women in our discipline.

¹⁴ Please note that this paraphrases Leslie et al.'s (2015) position.

6 Association for Information Systems

The Association for Information Systems must directly address sexual harassment. Women in IS report similar levels of sexual harassment as men in IS. Sexual harassment is unacceptable. The AIS has no published policy, no grievance mechanism, and no support mechanism for victims of sexual harassment. The AIS must become proactive in ensuring its members have outlets for reporting and seeking support if they feel sexually harassed.

The AIS must institute an AIS code of conduct and establish a procedure that provides clear guidelines that define sexual harassment. The AIS should also provide transparent guidelines to victims of sexual harassment outlining who within the AIS they should notify; what, when, and how investigative procedures will be undertaken; as well as possible consequences for predators, such as providing evidence of harassment to employing institutions. The mere threat of consequences could prove to be a deterrent for such behavior and would send a powerful message of support to both women and men in IS. In creating a code of conduct, we urge the AIS to require affiliated conferences, organizations, and journals to agree to adhere to the AIS guidelines. For example, a checkbox could be added to AIS-related conference registration pages requiring participants to review the code and its implications prior to attending the conference. This is important, because codes of conduct gain power when they become shared norms across broader disciplines. Given that the AIS is a keystone organization in information systems, we believe it should exert its moral authority to promote gender equity throughout our academic ecosystem.

The Association for Information Systems must make resources available to women and men who have encountered sexual harassment at AIS functions or through AIS-affiliated activities. The AIS should also create a resource center for members to turn to for access to *support, both psychosocial and informational*, for university-related sexual harassment. This could include information on faculty rights as well as resources and avenues for help securing legal advice, among other things. These actions by the AIS would go a long way toward cultivating a supportive culture within the association.

The Association for Information Systems must prioritize retaining women students and faculty. With only 25% women in IS academia (Loiacono et al., 2016), retention of women faculty in IS should be a key concern for the AIS. Previous literature (Chen,

Brown, Bowers, & Chang, 2015) has demonstrated that job satisfaction is highly correlated with retention. We found that both university and AIS support are critical factors contributing to job satisfaction for IS women, while for IS men it is solely university support that impacts job satisfaction. This means that the AIS has an opportunity to positively impact women's *job satisfaction* by offering additional support structures for them.

We would be remiss if we did not acknowledge some AIS initiatives relevant to gender equity that are underway. The establishment of the AIS Women's Network College in 2014 provided increased opportunities for women to network with other faculty in order to increase their professional support network and research network. Also, the PhD Student Corner at the Americas Conference on Information Systems (AMCIS) and ICIS, an initiative spearheaded by volunteer faculty and graduate students, affords opportunities for all graduate students to network with each other and senior faculty, thereby building supportive social networks. Even the task force that spawned this research was due to a concerted effort by AIS leadership to begin to understand the experiences of its women members.

However, we think that the AIS can do more. Many of the AIS initiatives are organic and sourced in the special interest groups (SIGs) and the AIS colleges that are primarily run by women. We call for the AIS leadership to engage in introspection and consider systematic, association-wide opportunities that positively influence retention of women students and faculty. For example, while the AIS Women's Network has afforded access to mentors who advise mentees on navigating issues of gender in the workplace, there is a need to consider different types of mentoring oriented on advising mentees on how to become more effective researchers and pursue leadership positions. For, as Chipidza and Tripp (2018) note, much collaboration today reflects homophily¹⁵ in gender and region. As the preeminent academic association, perhaps the AIS could undertake an initiative to break down barriers of gender and geographical region and afford junior women faculty access to senior scholars in a way that would lead to more research opportunities for them. If women and men in the AIS join in mentoring our junior members, such efforts may yield greater results in time. We believe that the AIS must capitalize on its social and political capital and sponsor initiatives and projects that afford opportunities that are accessible to the full breadth of the AIS community.

The Association for Information Systems needs to create institutional structures that support growth prospects for all AIS members. To the best of our knowledge, the AIS does not have a clear path for young members to earn leadership roles in the association. Through our conversations with AIS members, it became clear that there were both women and men who did not know how to become involved with AIS journals, SIGs, and other organizational functions. Moreover, in our review of nominees, bylaws, and conference events, it became clear that there is no systematic effort to shape a pipeline of future leaders in the AIS. Instead, ad hoc, informal processes shape nominations, evaluation of candidates, and participation in various committees, SIGs, and other leadership roles. From a gender-equity perspective, without a clear understanding of how to acquire relevant skills and experience, it is very difficult for a woman to "crack the code" necessary to navigate the institutional structures that shape access to leadership positions in the association and the field and to eventually make the field more equitable.

Growth opportunities go beyond leadership; they also entail opportunities to participate in meaningful and visible ways at conferences and service activities. We are aware of one AIS Council member taking a pledge to ensure that every panel sponsored by the AIS invites at least one woman, one man, and a person from each AIS region as a participant. We encourage the AIS and its SIG leadership to adopt a similar heuristic to ensure that women at least receive an invitation to participate in the visible and essential roles in our discipline. There is no reason that AIS-conferences such as AMCIS, PACIS, ICIS, and ECIS, and AIS-affiliated entities such as the Workshop on Information Technologies and Systems, Workshop on Information Systems and Economics, and Conference on Information Systems and Technology, should not have clearly defined processes or paths that afford equal access to women and men to earning leadership roles.

The Association for Information Systems needs transparent processes that afford equal access to recognition and leadership opportunities. Recall that one motivation for this editorial was a lack of women representation in LEO and Fellow awards at ICIS 2016. Professional associations are notably opaque in offering descriptions for the process through which it selects members for awards. We call for the AIS, Association of Management (AOM), Association for Computing Machinery (ACM), Institute of Electrical and Electronics Engineers (IEEE), and other associations in which IS faculty participate to become more transparent in their awards processes. Even

¹⁵ Homophily is described as "the tendency of individuals to associate with others based on shared characteristics" (Greenberg and Mollick, 2017, p. 341).

though one of our co-authors served as AIS president, he was hard-pressed to describe consistent selection processes for AIS Fellows or AIS Council members. In each year he served on the AIS Fellow Selection Committee, a new process was used to select nominees and evaluate candidates. For most awards committees, there are no published processes for nomination or evaluation of nominees. Nor, for that matter, is there information available on the gender or regional composition of the pool of nominees. Absent such basic information on process and nomination pools, it is difficult for members to assess whether women and men are treated equitably by the association and, if they are not, to devise remedies.

Given that association-level awards, such as AIS Fellow and LEOs, often recognize high-level service, it is important that our professional associations create transparent, inclusive paths to leadership positions. There is a notable dearth of published information on how nominees for leadership positions ranging from AIS Council members, to editors in chief of major journals, to conference chairs are evaluated and selected. The AIS has not published a set of bylaws for its nominating committee nor for its editor-in-chief selection process. Nor for that matter, does it have published guidelines regarding conflicts of interest for committee members. Crafting such bylaws and guidelines is important, as it would help members understand how to secure positions and would ensure that merit and transparency drive selection processes.

Absent transparency regarding how to earn awards and leadership positions, it is difficult to envision a future where women and men are afforded equal access to awards and leadership positions (Ceci et al., 2015). We believe that institutions such as the AIS and groups such as the AIS Senior Scholars can do much more to afford equitable access to leadership and awards.

The Association for Information Systems must enact global, journal, and conference best practices that lead to gender equity. We found that women perceive less opportunity for advancement in the AIS than men. Members should demand that the AIS:

- Commission studies on gender and institutional structures in Region 1 (Americas), Region 2 (Africa and Europe), and Region 3 (Asia and Australia) that provide an association-wide overview of gender and disparity in the discipline. There remains a need to develop a culture and region-specific understanding of how gender affects our peers' lives and, if disparities exist, how to remedy them in context-appropriate ways.
- Require diversity on journal editorial boards and on committees that serve as gateways to journal editorships and administrative leadership. Currently, women editors in the

Basket of Eight are few and far between. We believe it is necessary for journal leaders to reach out and develop intellectually and demographically diverse pools of qualified reviewers. We are encouraged by *Information Technology and People's* and *MIS Quarterly's* sponsorship of reviewer development workshops. We believe the next step is to start developing the next generation of editors and associate editors through mentoring workshops and other institutional structures.

- Require the AIS Student Chapter Conference to host and participate in gender equity conversations so that as student members grow into AIS leadership positions or move into the IT workforce, they understand the importance of equitable norms and behaviors and are prepared to be advocates for equity.

While our call to action is focused on the AIS, it is equally relevant to all groups supporting the IS community. We call on leaders in organizations, such as the Information Society, Decision Sciences Institute, Association for Computing Machinery's SIGMIS, and Organizational Communication & Information Systems, to foster a discipline-wide conversation about gender and disparity that focuses on solutions. Just as the Grace Hopper conference brings together women in computing, the field would be helped by bringing together the AIS, the Institute for Operations Research and the Management Sciences, the AOM, the International Federation for Information Processing, the ACM, and other organizations to have a conversation on how to mentor and afford opportunities to the growing number of women in the field.

7 University Administrators

As the information systems discipline has matured, growing numbers of our members have assumed roles as presidents, provosts, deans, chairs, and administrators. Our findings speak directly to these members of the information systems discipline who are charged with stewardship of not only IS faculty but also the broader academic community. *Irrespective of gender, IS faculty point these administrators to consider how equity at the university drives job satisfaction.*

Administrators must pay attention to factors that level the landscape of work for women faculty: career support and faculty development. There is a need for administrators to redirect resource allocations to breakdown the power structure that currently favors men. Administrators must direct attention to ensuring access to support and skill development. Programs that develop strong social and research community by facilitating higher conference attendance may provide

some relief to time-constrained, stressed younger faculty (especially women faculty) who are also juggling competing demands of work and family (Ward, 2008). It is important for university administrators to afford opportunities for IS faculty to keep up to date on the latest technologies and research methods, necessary to succeed in the classroom and in publishing.

Administrators must direct attention to gender bias in how they evaluate faculty life: teaching and research. Substantial evidence suggests that students rate women faculty lower than men faculty on semester teaching evaluations (Boring, 2017). When controlling for course content, evidence suggests that women are evaluated based less on what they teach and more on how they appear (Mitchell & Martin, 2018). Administrators, therefore, should be careful in relying on student evaluation of faculty data alone for hiring, retention, and tenure decisions. Similarly, we encourage administrators to carefully consider how they evaluate research productivity. Tenure decisions and merit pay often hinge on “leadership,” which is operationalized as first-authored publications in high impact outlets. Yet, research demonstrates that (1) across academia, women are underrepresented as first authors in premiere academic outlets (Holman et al., 2018), and (2) within information systems, how we define “premier journals” affects whether women are considered high-impact scholars (Gallivan & Benbunan-Finch, 2008). Administrators need to be mindful of how these metrics used to assess faculty performance and distribute resources may reinforce structural inequity and lower job satisfaction.

8 Individuals

While we have pointed to institutional mechanisms, ultimately, addressing disparities in gender equity depends on individual faculty taking action and demanding change. We direct women and men faculty to three potential behaviors that could lead to more gender equity in the IS discipline.

Information Systems faculty must respect work-life balance. A tired trope of academic life is that young faculty must defer life and family responsibilities, first as a student, and then as a faculty member. Because women are viewed as more likely to bear the burden of family responsibilities, this platitude is one reason that women faculty are seen as less able to successfully navigate faculty life. Putting an end to this pervasive belief is a responsibility of all faculty interested in gender equity. For example, one of our team members recently participated in a conversation in which a faculty advisor complained that a PhD student had stopped working since becoming a mother. That team member discussed the comment directly with the advisor and the department chair and suggested that redirecting the conversation to focus on helping the

PhD student juggle newfound responsibilities would help everyone concerned. For change to occur, all faculty must speak out and have honest conversations about work-life balance, gender, and its impact on our lives.

If the IS discipline is to successfully attract and retain young faculty—be they women or men—we need to create an environment that puts family and life on par with work responsibilities. In our experience, we see evidence of this shift occurring, with senior faculty increasingly advising younger colleagues to place “family first” in doctoral student consortiums and junior faculty consortium. This is important, because as society increasingly supports blurred gender roles and encourages men and women to partner in family life, caregiving, earning income, and more, our discipline will otherwise struggle to attract and retain new faculty in increasingly competitive IT job markets.

Information Systems faculty must recognize the contributions of women in IS academia as a means to create a more equitable future for all IS faculty.

Like computer science and engineering disciplines, which took time to recognize the contributions of Grace Hopper and Katherine Johnson, it is important that IS acknowledges the pivotal role that women have played in the foundation of our field. Our field is unique in that many of our founders populate our conferences, including many women who have played a central role in the field—from Jan DeGross who has been a force in the management of *MIS Quarterly*, to Cynthia Beath who has been a thought leader in sustaining the AIS Women’s Network and the AIS, to Shirley Gregor who was the first non-US-based woman editor in chief of a top AIS journal. In our author team’s experience, women such as these have paved the way for the next generation of scholars by helping new authors navigate the peer-review process, promoting inclusion of women in our field, and serving as scholarly role models.

As members of the IS discipline, we think it is important to pause and reflect on women’s contributions to who we are and what we are becoming as a discipline. We encourage all members to consider, recognize, and celebrate women’s contributions to their employing universities, to their training, and to their development as scholars. As noted in the early pages of this manuscript, we see profound inequities in the distribution of AIS Fellow and LEO awards. A casual inspection of other discipline-based awards, such as the Information Systems Society Distinguished Fellow Award, reveals similar gender disparities in awardees. As members of the IS discipline, if we want change, we must demand that the AIS, as well as the broader discipline, recognize the contribution of women to our field and leverage that momentum to

create processes that offer equitable access to all faculty in the future.

Do not mistake this call as simply a call for more awards for women; we are asking for much more than that. We are asking members of the IS discipline to recognize and internalize the values of helping each other, of inclusion, and of scholarship, embodied by the careers of founding women and men in the IS discipline, and to draw on these values as we seek to build an equitable, inclusive, global discipline.

9 Qualifiers

Our editorial has some limitations. There is a need for a more nuanced understanding of satisfaction, career stage, geography, and leadership opportunities among IS faculty. Where we used a single item to measure job satisfaction, it is likely that IS faculty consider pay, career, student success, and more when assessing satisfaction. There is a need for rigorous academic work that more deeply probes the satisfaction (and related correlates) of women and men IS faculty. It may very well be that faculty development (e.g., training or travel) are important components of job satisfaction among IS faculty. We believe that developing a more granular view of satisfaction in the IS Discipline could shed further light on gender equity among IS faculty.

We believe there is a pressing need to consider additional contingencies that affect perceptions of equity in the IS discipline. Factors such as faculty rank, race, the focus of university, and geographic location may very well covary with gender, particularly given that there is reasonable doubt as to whether women faculty have had access to positions at premier institutions to the same degree as men faculty over time due to the “cumulative advantage” effect.¹⁶ A richer understanding of how the intersection of identity attributes shapes perceptions could help the AIS and its members formulate strategies to afford equitable access to participation in the discipline. Additionally, a longitudinal study may yield interesting insights into whether a convergence occurs in job satisfaction and career attitudes for women and men faculty as they advance in their careers.

10 Opportunities for Research

We were motivated to write this editorial for personal reasons. Some of the authors experienced pushback against the Women’s Breakfast. Other authors experienced pushback when raising concerns about the relative scarcity of women being recognized with AIS

awards. Whether or not these pushbacks manifested as a need to more intensively consider gender equity, these moments underscored the need for an IS discipline-based conversation on gender disparity and gender equity. Overall, our sentiment is that everyone needs to know “the rules” in order to navigate through the maze of politics surrounding retention, promotion, and tenure at universities and earn leadership opportunities and award nominations in the Association for Information Systems.

While we have offered some initial prescriptive starting points, we believe there is a need for rigorous research that can fully unmask the “rules” shaping gender equity in the IS discipline. In the US, it costs an estimated \$500,000 for an individual to earn a doctorate in a STEM field (Combating Sexual Harassment, 2018). Although similar estimates of the cost of IS faculty attrition do not yet exist, research that aids understanding the implications of gender inequity may be one key to understanding how to attract and retain women faculty as well as the women students necessary to sustain our discipline.

First, albeit informed by conversations with members, observations in the field, and a review of the gender equity in academia literature, we did not conduct a rigorous qualitative or quantitative research study. Our data gathering was designed to evaluate whether concerns about gender disparity were legitimate. We call for IS academics to engage in introspective work in the field that sheds a more rigorous light on gender and other demographic differences, such as rank, ethnicity, or age, that shape the work life of women and men IS academics. Given that our descriptive study employed perceptual measures, we believe that the door is open for rigorous qualitative and archival research devoted to exploring industry-specific or organization-specific measures that encourage or discourage equity. For example, a narrative and quantitative evaluation clarifying whether the strength of IT academic labor markets influences adherence to labor laws or social norms regarding gender equity would clearly be helpful. In any case, there is much work to be done in order to glean a contextualized understanding of drivers of gender disparity and movement toward gender equity in the IS discipline.

Second, while we have presented evidence to support concerns about gender equity, we have not presented rigorously tested policy or personal interventions for addressing these concerns. As evidenced by the example noted in a footnote above about the male faculty member who changed his behavior once a senior female leader intervened on behalf of a junior

¹⁶ The theory of cumulative advantage suggests that individuals put into an advantageous position early in life due to gender, social class, economics, race, and/or other

factors, experience a net accumulated set of benefits over time compared to those conferred with no such advantages early in life (Gallivan & Benbunan-Fich, 2008).

female faculty member, the association and universities may benefit from providing training in gender inequities followed by structured opportunities for dialog among male and female faculty. The effective development of such remedies, particularly one that is sensitive to the many cultures in our global community, likely requires a robust series of studies on interventions at the individual, organizational, and institutional level in different global contexts.

Third, we believe there is a need for work that examines the social structuring of the IS discipline. We feel such work would help address lingering questions, such as why IS women faculty feel less satisfied in their jobs than IS men. Why are some leadership opportunities open to women and others seemingly less accessible? Our feeling is that understanding differences in advancement opportunities for women and men in the AIS will require employing multiple theoretical lenses and methods to tease apart the thicket of issues that cause gender disparity and afford opportunities for increasing gender equity.

Fourth, as the founders of our field grow in age, we believe there is a pressing need for qualitative work that gathers wisdom from the women (and their allies) who broke ground in an ostensibly male-dominated STEM discipline. We believe that gathering such narratives would prove useful to understanding the social structure of the IS discipline from the perspective of an “other” (i.e., from a nondominant point of view), could offer insight to young faculty on how to navigate our evolving social landscape, and would create an archive of resources available for future work in our field.

Fifth, we believe there is a need for comparative work that compares the information systems discipline with other STEM disciplines as well as other business disciplines. For example, it would be useful to extend the works of Adam, Howcroft, and Richardson (2004)

and Gallivan and Benbunan-Finch (2008) to examine whether including business journals that focus on a diverse range of behavioral, economic, and technical topics changes our understanding of gender and high-impact research in IS. Similarly, it would be helpful to conduct mixed-methods work that provides baseline comparisons of norms, mechanisms for inclusion, and their implications in IS and its referent disciplines. Through cross-field comparisons, we could learn much about how the structure of our field shapes gender equity and creates other field-based outcomes.

Finally, while we are optimistic that the IS discipline can move toward gender equity, this movement will require changes in how our field approaches gender and inclusion in our research. In our early conversations with colleagues, a recurring theme among women and men IS faculty is that we do not have answers to gender equity questions or other equity questions because such research is hard to publish. Other than as a control variable, in the past twenty years, only a handful of papers have focused on gender or other demographic variables in the IT workforce in *Journal of the Association for Information Systems*, *MIS Quarterly*, *Information Systems Research*, or *Journal of Management Information Systems*. If our discipline is to speak definitively to gender, then perhaps it will require IS academia to publish introspective work on how gender and gender equity affect IT work in our universities, in the broader workforce, and in society.

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Appendix A

Literature Review

To identify key variables relevant to understanding gender disparities in the IS discipline, we turned to theories of equity (Adams, 1963) and gender and power (Connell, 1987). These theories helped explain how women and men in the IS discipline could potentially have different experiences at their home universities and in their broader careers. Table A1 below summarizes the IS literature relevant to the equity theory and the theory of gender and power.

Table A1. Relevant Literature Review of the Equity Theory and the Theory of Gender and Power

Author, year	Study Type (review, survey, empirical)	Research model (theory used), Research focus	Focus on academia or industry, and country	Main Findings
Equity theory related literature review				
Huseman, Hatfield, & Miles (1987)	Conceptual, using equity theory	Used equity theory to propose an equity sensitivity construct that proposed that individuals do not react consistently to the equity norm; construct is proposed as a framework to explain individual's perceptions of the ambiguous job elements such as turnover, job satisfaction	General	Equity sensitivity construct was proposed.
Joshi (1989)	Empirical survey of 226 nonclerical users from seven organizations	Equity and social justice theory to develop and test an instrument to measure fairness or equity in the MIS context	US companies	Validated instrument to measure equity concerns of nonclerical users.
Glass & Wood (1996)	Empirical survey of 271 undergrads	Equity theory to study propositions concerning the effect of situational factors on the intentions of individuals to participate in software piracy	US university setting	Results were consistent with equity theory predictions that individual consider both the inputs and outputs of the act of software piracy.
Glass & Wood (1996)	Empirical survey of 191 IT workers	Studying organization commitment (OC) and perceived job alternatives and their distinct effects on turnover intention and how OC mediated the influence of job satisfaction, perceived job characteristics, and perceived competitiveness of pay on IT worker's turnover intention	US companies	Managers facilitating positive attitudes toward job may reduce IT-workers' turnover intention.
Douglas et al. (2007)	Empirical survey of 232 undergraduate students	Research model studied the constructs of reciprocal fairness, procedural fairness, and distributive fairness as components of the equity construct as a determinant of software piracy	US university setting	The two components of the equity construct, reciprocal fairness and procedural fairness, were significant determinants of understanding ethical/unethical behaviors.
Gallivan & Benbunan-Finch (2008)	Literature review of all studies about gender and academic career outcomes in the social sciences.	Structured literature review of the studies on the role of gender in academic IS careers	All	There are very few studies on the relationship of gender to the academic career outcomes for the IS scholars.

Table A1. Relevant Literature Review of the Equity Theory and the Theory of Gender and Power

Timms, Lankshear, Anderson, & Courtney (2008)	Empirical survey of 178 professional women in ICT industry	Identify aspects of work environment, culture, or expectations that contributed to women's comfort or discomfort within the information and communication technology (ICT) industry	Australian ICT industry	Women found careers in ICT rewarding, however, organization-specific issues of management approachability and equality appear to influence confidence and women's intention to encourage other young women to enter ICT.
Theory of gender and power related literature review				
Ahuja (2002)	Literature review of studies on women's status in the IT field	Proposed framework to reduce women turnover in IT industry that include social factors (social expectations, work-family conflict and informal networks) and the structural factors (occupational culture, lack of role models and mentors, demographic composition and institutional structures)	N/A	Proposed a model for examining choice, persistence, and advancement of women in IT careers.
Sumner & Niederman (2004)	Empirical survey of 169 students and alumni	Research to study the impact of gender differences upon the career experiences including job satisfaction of IS professionals	US universities	While the study results did not suggest any statistical differences among male and female career experiences, it did suggest that there may be differences at the point of entry and at later stages of career development.
Trauth & Howcroft (2006)	123 interviews of women academics working in IT departments at US universities	Study focuses on the underrepresentation of women in technological disciplines in the academy and the workforce using theoretical scaffolding related to power; individual differences theory of gender and IT	USA	Results highlight the role of power dynamics in understanding women's experiences in the IT workforce.
Kvasny, Trauth, & Morgan (2009)	Ethnographic study consisting of informal interviews and participant observations of 123 female IT professionals	Focuses on studying the intersection of gender, race, and class identities and power relations and how these influence the experiences of Black female IT workers and learners in the US.	USA	Heterogeneity is a key consideration in IT research, as gender, race and class influence women's exposure to, experience of, and response to oppression.
Trauth (2013)	Literature analysis of gender and IS research published over 20 years	Literature review of the use of gender-related theories explicitly in the IS research	N/A	Need for IS researchers to incorporate gender and IS theories explicitly.

Appendix B

Research Methods

To assess whether gender disparities exist in the IS discipline, we conducted a survey of AIS members. The survey solicited AIS members and the responses were completely voluntary. The survey was administered using Qualtrics, an online survey creation and administration software package.

Measures

A survey instrument was developed based on an extensive literature review (Moore & Benbasat, 1991). The survey items were adopted from existing measures found in pertinent management and psychology literature or developed to describe the IS discipline. Slight modifications were made to items in order to fit the current setting. Job satisfaction was measured using Quinn & Shepard (1974). University support items were based on Eisenberger, Huntington, Hutchison, & Sowa (1986). Perceptions of AIS support were taken from Brown & Leigh (1996). Additional measures were developed using supporting literature to determine the feelings related to equity one has toward his or her university and the AIS (Guerrero, Andersen, & Afifi, 2017). Items were measured using a five-point Likert scale, 1 being either *strongly disagree*, *extremely negative* or *never* and 5 being *strongly agree*, *extremely positive*, or *very often*. Table B1 provides the details on survey constructs and items.

Table B1. List of Research Constructs and Items

Item name	Item	Reliability (CA) Source	Gender			
			Male		Female	
			Mean	SD	Mean	SD
Academic institutional support		0.890				
ACAD_INST_1	My academic institution takes pride in my accomplishments at work.	Eisenberger et al. (1986)	3.72	0.992	3.44	1.100
ACAD_INST_2	My academic institution really cares about my well-being.		3.41	1.082	2.95	1.131
ACAD_INST_3R	My academic institution shows very little concern for my personal welfare.		2.54	1.200	2.96	1.170
ACAD_INST_4	My academic institution values my contributions to its well-being.		3.61	0.966	3.30	1.090
ACAD_INST_5	My academic institution is willing to help me when I need a special favor/help (professional or personal).		3.46	1.015	3.18	1.084
AIS support		0.851				
AIS_1R	I rarely feel my work for the AIS is taken for granted. —REMOVED due to lack of fit—	Brown & Leigh (1996)	3.22	0.873	3.44	0.710
AIS_2	AIS leaders generally appreciate the way I do my work.		3.34	0.831	3.44	0.710
AIS_3	The AIS recognizes the significance of the contributions I make.		3.24	0.903	3.38	0.701
AIS_4	The AIS recognizes the contributions of people like me (e.g., same gender).		3.56	0.856	3.56	0.751
Gender equity within university*		0.897				
EQUITY_1	My feelings about equity in gender treatment by peers toward me in my immediate work unit (e.g., department, etc.) are:	Guerrero, Andersen, and Afifi (2017)	4.17	0.66	3.72	1.070

Table B1. List of Research Constructs and Items

EQUITY_2	My feelings about equity in gender treatment by peers toward me in my college (e.g., college of business, etc.) are:		4.03	0.774	3.50	1.069
EQUITY_3	My feelings about equity in gender treatment by peers toward me in my employing academic institution are:		3.98	0.808	3.51	1.028
Gender equity within the AIS*		0.860				
EQUITY_4	My feelings about equity in gender treatment by peers in the Association for Information Systems are:	Guerrero et al. (2017)	3.98	0.846	3.72	0.888
EQUITY_5	My feelings about equity in gender treatment by members in AIS Special Interest Groups or pre-conference workshops (e.g., WISE or WITS) are:		4.07	0.861	3.85	0.801
Job satisfaction		NA				
FRIEND_1	If a good friend of mine told me that he/she was interested in working in a faculty job like mine, I would strongly recommend it to him/her.	Quinn and Shepard (1974)	4.04	0.863	3.62	1.085
Sexual harassment**		NA				
U_SXCHARAS	At your academic institution, you have experienced an incident of sexual harassment.		4.92	0.278	4.69	0.601
AIS_SXCHARAS	At an AIS event, you have experienced an incident that you perceived as sexual harassment.		4.93	0.391	4.86	0.440
Mentoring		NA				
U_MTR	I have a mentor at my current academic institution, who supports my professional development.		1.68	0.470	1.65	0.479
AIS_MTR	I have a mentor (formal or informal) in the AIS (including within SIGs, colleges, or chapters) who supports my professional development.		1.79	0.408	1.77	0.422
<p>Notes: CA = Cronbach's alpha. N = 261, women = 165 (63.22%). *1 equals <i>extremely negative</i> and 5 equals <i>extremely positive</i>. ** 1 = <i>very often</i> and 5 = <i>never</i>.</p>						

Pretesting

A web-based pilot test using Qualtrics was conducted. Participants were women and men IS academics, who had participated in leadership positions in the Association for Information Systems, served as journal editors, or were currently enrolled as PhD students. Participants provided extensive written feedback on the survey. Subsequently the survey was refined. A second pretest of the survey was administered to a different sample of participants. Participants offered additional suggestions for revising the survey instructions, items' clarity, the layout, and flow of the survey instrument.

Survey Administration and Sample

Participation was solicited via an email to the AISWorld email list as well as by a direct email sent by the Association for Information Systems' vice president of Membership to all current AIS members. We received 279 valid responses, with 19% choosing not to disclose their gender. Of the 261 who indicated their gender, 63.22% were female and 36.78% were male. Participants spanned all ranks in academia, including professors (27%), associate professors (26%), assistant professors (19%), lecturer or instructors (11%), PhD students (9%), and clinical professors/other. The largest number of participants were in the 48 to 66 age range (38.9%) with the next largest group being the 35 to 47 age range (25.8%). The geographic locations of participants were as follows: 58.96% of the participants were from Region 1, 26.69% from Region 2, and 14.34% from Region 3.

Results

Several tests were run to evaluate the quality of the data collected. Data analyses were performed using IBM’s SPSS software, version 24. An exploratory factor analysis revealed that all items, but one (AIS_EQUI_1) loaded on its respective construct (see Table B2). AIS_1 was removed from further analysis and reliability for gender equity within AIS was recalculated (see Table B2).

Table B2. Exploratory Factor Analysis

Construct/ Item	Academic institute support	AIS support	Gender equity university	Gender equity AIS	Job satisfaction
ACAD_INST_1	0.757	0.136	0.049	0.283	0.128
ACAD_INST_2	0.832	0.177	0.146	0.239	0.126
ACAD_INST_3	0.819	0.189	0.039	0.017	0.078
ACAD_INST_4	0.810	0.088	0.108	0.235	0.052
ACAD_INST_5	0.744	0.074	0.129	0.195	0.143
AIS_EQUI_2	0.085	0.150	0.876	0.048	-0.022
AIS_EQUI_3	0.119	0.159	0.882	0.02	-0.019
AIS_EQUI_4	0.104	0.188	0.801	0.089	0.171
AIS_SUPP_1	0.285	0.233	0.027	0.814	0.164
AIS_SUPP_2	0.314	0.353	0.095	0.794	0.116
AIS_SUPP_3	0.362	0.467	0.099	0.667	0.017
UNI_EQUI_1	0.150	0.818	0.239	0.265	-0.003
UNI_EQUI_2	0.206	0.819	0.232	0.191	0.041
UNI_EQUI_3	0.126	0.781	0.144	0.258	0.200
FRIEND_1	0.377	0.165	0.096	0.213	0.866

The means and standard deviations for each item are presented for both men and women in Table B1. Next, Cronbach’s alpha was calculated to determine the reliability for each construct. All alphas, presented in Table B1, were above the recommended cutoff of 0.70 (Hair, Black, Babin, & Anderson, 2014) and ranged from 0.851 to 0.97. Table B1 presents the construct means and standard deviations by gender as well as construct reliabilities. Table B3 provides construct correlation. Table B3 presents the research construct correlations.

Table B3. Construct Correlations

Research construct	Academic institute support	AIS support	Gender equity university	Gender equity AIS	Job satisfaction
Academic Institute Support	1				
AIS Support	.264	1			
Gender Equity University	.598	.250	1		
Gender Equity AIS	.404	.434	.645	1	
Job Satisfaction	.514	.222	.482	.374	1

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