

## **Women Faculty in Higher Education: A Case Study on Gender Bias**

Teri Bingham and Susan J. Nix

Teri Bingham, Associate Professor, West Texas A&M University

Susan J. Nix, Associate Professor, West Texas A&M University

### **Abstract**

This study examines the perceptions of female faculty members in higher education to ascertain their views regarding gender bias in the workplace. A questionnaire was used to collect data from the participants regarding their beliefs of the value and productivity of their work, possible disparity in treatment based on gender, constraints put on women because of care-giving responsibilities, and potential limitations on their career. From the data emerged four categories that impact the lives of women. These issues are discussed and recommendations for policy changes are suggested.

### **Introduction**

University faculty are involved in a wide array of demanding work including teaching, scholarly activity, and professional service. Houston, Meyer and Paewai (2006) address the complexity of that work in the environment of academia. The functions of knowledge creation and knowledge transmission through research and teaching is stressed by Romainville (1996). Although administrators may have the same written standards for all faculty, women seem to share the perception of a difference between the way male and female faculty members are treated in the work environment and this perception impacts them professionally. Women perceive that the quality of their work is more scrutinized and valued less than men's and believe there are more constraints placed on women because of home responsibilities. Added to that is the perception that familial responsibilities limit career advancement and fragment career growth. Williams (2004) cites the fact that women's lack of progress in academia is well documented. Although there has been an increase of women who are tenured or on tenure-track in higher education, they are still underrepresented in many departments, colleges, and universities according to the Annual Report on the Economic Status of the Profession published by the American Association of University Professors (2010). Women continue to be treated differently than their male counterparts.

### **Purpose of the Study**

The purpose of this pilot study was to determine women university faculty perceptions in a particular higher education climate. Through the use of a survey instrument, female faculty perceptions were ascertained regarding their beliefs of the value of their work and productivity, possible differences in treatment based on gender, constraints put on women because of responsibilities in the home, and potential limitations on their career.

## **Literature Review**

A condensed literature review is included for this study because of the wealth of information provided and the studies completed in academia on the perceptions of female faculty. Riger, Stokes, Raja, and Sullivan (1997) examined the relationship of how the proportion of women in a department relates to perceived supportiveness through open-ended interview questions with 20 female faculty members. The questions were based on the five dimensions previously identified by Stokes, Riger, and Sullivan in 1995. As a result, in combination with a review of the literature, a list of 200 items, were created. Using a Likert scale to measure after a pilot sample of faculty responded, items were revised. Almost 1,300 surveys were administered at 69 colleges and universities, 67 in the United States and two in Canada. Both men and women responded between the ages of 27 and 91 with a dominant Anglo ethnicity. Demographics showed that 98% were employed full time and 63% were tenured or in a tenure-track position. Findings indicated that the proportion of women in a department is related to women's perceptions of the environment and departments with fewer women were seen as hostile. Toren and Klaus (1987) examined the degree to which the numbers of women in a workplace related to the size of the workplace and found a direct relationship between equitability of treatment and smallness of workplace size. Women perceive the existence of inequality between men and women.

Several studies found that women spent more time teaching than on research in comparison to male faculty (Bellas and Toutkoushian 1999; Park 1996; Russell, Fairweather, Hendrickson, and Zimble, 1991; Menges and Exum 1983). The literature (Joeckel and Chesnes 2009; Williams 2004; Watkins, Gillaspie and Bullare 1996) further provided survey ideas that, when adapted, could be used in this study. Although there are many articles focusing on gender bias, there are a dearth about the constraints many women faculty in higher education experience (Williams 2004). Several articles seemed to follow the same concepts, but since they dealt with the medical field, different populations, had religious undertones, or had political party components these were not considered appropriate. This study would focus on higher education and female faculty perceptions.

Further examination of the research made it seem that the university culture appears to value work over people. Wilson (1999) described a female faculty member's experience with sex discrimination as that of being marginalized as a result of reporting the incident. Women with familial responsibilities seemed to be judged unfairly in multiple ways: by the quality and value of their work, women's commitment to work, the degree of respect received by peers, the scrutiny of the work, differing performance standards between men and women, and unequal pay raises and promotions. Even with an abbreviated literature review, the message remains the same, gender bias continues to impact female faculty members.

## **Purpose of the Study**

The policies and practices in higher education directly impact faculty members' career opportunities and advancement. Research provides evidence of personal and institutional

constraints that affect university female faculty's aspirations and success. The purpose of this study was to ascertain university female faculty's perception of the work environment in higher education as it relates to their professional success and support. After consulting colleagues about the adapted survey questions, it was decided to conduct this pilot survey online for convenience and to make the data collection and analysis more efficient.

### **Data and Methodology**

As a direct result of the literature review, questions about a woman's perception of home responsibilities and the possible impact on work were included in the survey for this study. In particular, the survey included questions about the difficulty of balancing home and work, potential career barriers created by the number of children in the home, the possibility of the consideration for limiting family size because of work, ability to maintain the same productivity of research as men, the perception of women about the balance between home and work for men, and the perception of the impact of children on career advancement for women.

Using content analysis, data from the survey questions were analyzed for themes within the four categories of questions. As part of the collection of demographic data there was an interest in the possible impact of a faculty member's rank: Assistant, Associate, or Full professor; the length of the work experience in higher education, and if the primary responsibilities were that of a faculty member or of an administrator. Because there were so few African-Americans, Hispanics, and participants that recorded 'other' the data was not sorted according to ethnicity. The survey included comment sections for participants to write in any comments. A critical analysis was conducted of those comments, watching for repetitious concerns as stated by survey participants.

### **Discussion and Recommendations**

The participants in this study were female faculty and administrators in higher education at a small, southwestern regional university in the United States. The participants received an email briefly explaining the purpose of this study: to ascertain women's perceptions of the working environment for females in higher education. The email included the link to the website-based survey for the participants to complete anonymously. Thirty-five surveys were completed and comments submitted out of the 59 emails sent for a return rate of 59 percent. The survey questions were based on four dimensions of work environment issues: perceptions and valuations of work by both genders, perceptions of fair or unequal treatment of men and women in the workplace, possible limitations caused by family responsibilities, and perceived limitations on women's careers.

The sample included 88.2 percent of women who are faculty and 11.8 percent who hold administrative position as well as teach. Demographics showed that 71 percent of the participants have worked at this institution for one to ten years; about 11 percent have worked here for 11-15 years; and 17 percent have worked here for 16 years or more. Ninety-two percent of the participants' terminal degree was a doctorate with eight percent having earned a Masters

as their highest post-baccalaureate degree. All but one participant are either tenured or on tenure-track. The percentage of participants in each academic rank included 16.7 percent Full professors, 36.1 percent Associate professors, and 47.2 percent Assistant professors with 94.4 percent being employed full time and five point six percent being part-time. The sample included three percent African-Americans, 92 percent Caucasians, three percent Hispanics, and three percent other. When grouped according to how long each participant has worked at this institution increments of 5 years were used: 1-5 years, 6-10 years, 11-15 years, 16-20 years, and 20 years or more. Each of these ranges had about the same amount of participants, creating a balanced representation of women.

The survey contained 24 questions, worded both negatively and positively much the same as Riger et al. (1997) and used a Likert scale of strongly agree, agree, neutral, disagree, and strongly disagree. The four categories of questions included: 1) perception of value of women's work; 2) comparative treatment of men and women; 3) the impact of familial responsibilities on women's work; and 4) limitations on women's careers. Within these four strands the following concepts or perceptions emerged: a perception of a real difference between the treatment of women and men; an awareness of the difficulty of the balance between work and home responsibilities, including the impact of children; and the perception that men can commit more time to work than women.

### ***Real differences in treatment between women and men***

Treatment was not defined in the survey, but was left to the individual interpretation of each respondent. However, in the literature, treatment implies hiring practices, promotions, salary, work load and institutional support (AAUP 2010; Monk-Turner and Fogerty 2010; Wilson, Gadbois and Nichol 2008; Mayer 2008; West and Curtis 2006). Initially, when asked if women are treated equally to male faculty, the response overwhelmingly says there is not fair treatment. When the data is analyzed by faculty rank (assistant professor, associate professor and full professor) it shows that 77 percent of associate professors and 76 percent of the assistant professors did not agree with the statement. Interestingly, the longer a female faculty member has worked at this university, data show those participants agree with the statement.

Of the women faculty who have taught here 15 years or less 69 percent believe they are not treated equally to men faculty, while women faculty who have taught her more than 15 years, 83 percent believe they are not treated equally to men. A larger percentage of faculty (63 percent) disagreed than administrative faculty (50 percent). This would indicate that if a faculty member goes into administration, the concern for equality seems to become less important. Without further interviews of faculty, the ability to understand the reasons for these results is difficult to ascertain.

### ***Awareness of the difficulty of the balance between work and home responsibilities***

West and Curtis (2006) explain the challenge women faculty experience when trying to balance family responsibilities and career aspirations. Of all the respondents 83 percent agreed the more

children one has the more arduous it is to balance a family and profession. This strong of a belief of participants is maintained regardless of academic rank, job position, and length of time a participant has worked here. When the data is grouped according to length of time the participants have worked at this university, 83 percent of the participants who have worked here 15 or fewer years agreed and 100 percent of the participants who have worked here over 15 years agreed.

One reason to explain this is the likelihood that women who have been teaching in higher education for a relatively shorter period of time, as compared with veterans, may have children at home requiring parental involvement. When time becomes the rope in the tug-of-war between home and career responsibilities whether or not an individual has children may prove to be the pivotal factor. Research data supports the stress women in academia experience by juggling their career and having a family (Monk-Turner and Fogerty 2010; Drago, Colbeck, Stauffer, Pirretti, Burkum, Fazioli, Lazzaro, and Habasevich 2005; Jacobs 2004; Mason 2002; Watkins, Gillaspie, and Bullare 1996). Williams (2004) makes clear that women who become mothers soon after completing their doctorate degrees are less likely to gain tenure than their male counterparts who become fathers at the same point in their educational pursuits.

### ***Men can commit more time to work than women***

Disparity among participants is evidenced by 61 percent agreeing and 31 percent disagreeing with the idea that men can commit more time to their profession than women. The researchers believe that women are equally committed to their profession as men, but may have limits on their time due to a myriad of factors: obstacles inherent in higher education jobs, and disinterest in a tenure track position because of the difficulty balancing home life and academia expectations (West and Curtis 2006); women have greater teaching loads than men and less access to resources necessary for research (Kauffman and Perry 1989); and women's commitment to teaching and service minimizes their time for research (Olsen, Maple and Stage 1995; Davis and Astin 1990). Sutor, Mecom, and Feld (2001) report that tenure track faculty who also serve as primary caregivers of children are less productive than their counterparts without children in the home. Overall, the women faculty in this study report they have less opportunity to spend time in their career than men. Of the women who have been working at this institution 10 years or less 68 percent agreed while participants who have worked here more than 10 years had only a 40 percent agreement rate. This disparity may be again a reflection of women who have children in the home and those that do not. Length of time working here may influence the degree to which a participant agrees or disagrees with the statement because of the likelihood of care-giving responsibilities. Drago et al. (2005) explains that, women with children in the home have more demands placed on them than men.

In response to the survey statements one major theme seemed to be paramount. A majority of participants perceive a lack of gender parity for men and women faculty in higher education. The university work climate seems to be less accommodating for women and more permissible for men.

Four major categories of gender equity emerged from the content analysis including: the extent to which women's work is valued and women are as committed to their profession as men; comparative treatment of men and women; the impact of familial responsibilities on women's work; and limitations on women's careers. These issues in the workplace play a role in shaping female faculty productivity and morale. This is a report of women faculty in one institution of higher education perspectives of gender balance in their work environment. These points of view are from real women working in a climate where these opinions are not easily observed, and not openly shared. In discussing these four work environment issues it is apparent that the experiences of the participants reflect the gender parity concerns in corresponding literature. Further examination of comments provided by survey respondents seems prudent to enhance this study within the framework of the identified issues.

*The work environment issue:* to what extent women's work is valued and women are perceived as being as committed to their career as their male counterparts

Participant perspective: "Women tend to not be taken as seriously as men." Another participant explained that if she is not in her office after 3 p.m., it is assumed that she is picking up her children from daycare, when she may be doing research at the library or at a committee meeting. However, when her husband is not in his office after 3 p.m. it is assumed he is busy doing scholarly work.

*Impact:* Twenty one out of 36 women faculty convey that they believe men are perceived as more committed to their work than women. Over 66 percent of the respondents shared their disagree with the perception that women's work is perceived as valuable as men's work. A qualitative study completed by Acker and Feuerverger (1996) mention the commitment of women in academics in their positions. However, stereotypes still exist; Williams (2004) explains how some individuals will judge a woman as less competent due to maternity and motherhood. Halpert, Wilson, and Hickman (1993) have acknowledged negative assumptions about women's competency attributed to pregnancy. Working mothers are perceived more as housewives than business women (Ridgeway and Correll 2004) and housewives as being low on the competence continuum (Glick, Lameiras, Fiske, Eckes, Masser, Volpato, Manganelli, Pek, Huang, Sakalli-Ugurlu, Castro, D'Avila, Maria, Willemsen, Brunner, Six-Materna, and Wells 2004).

*The work environment issue:* comparative treatment of men and women

Participant perspective: "I do think that more opportunities for women exist today but still not at the same level or pay grade as for men."

*Impact:* The questionnaire results reveal that a staggering majority of the participants believe that unequal treatment of men and women exists. Over 72 percent of all the female participants report they do not believe they are treated equally to male faculty and that men are more likely to get a pay raise than women. AAUP (2010) reports that the average salary for female faculty falls into the 80.5 percent range of male faculty. It is not uncommon for women to be hired at a

lower salary than a man of equal rank (West and Curtis 2006; Wilson, Gadbois and Nichol 2008; Glazer-Raymo 1999). A report issued by the AAUP (2010) documents that for over 30 years there has been little advancement in the salary gap for equally competent men and women. Bereman and Scott (1991) report the disparity in academic salaries and gender inequities.

When comparing men and women in higher education a discrepancy in productivity exists (Bain and Cummings 2000). Bonawitz and Andel (2009) and West and Curtis (2006) address the obstacles faced by female faculty in academia as compared to females in other fields and administrative positions in corporate America. Women spend more time on teaching and service, and carry heavy teaching loads, creating a disadvantage for research time, while men have more access to research facilities and resources (Wilson, Gadbois and Nichol 2008; Houston, Meyer and Paewai 2006; Acker and Feuerverger 1996; Park 1996; Olsen, Maple and Stage 1995; Davis and Astin 1990; Kauffman and Perry 1989). Johnson (2009) argues that research activity receives markedly higher status in measuring productivity than teaching or service (Acker and Feuerverger 1996). Researchers identify the problematic concern that professors have to choose between excelling at teaching or research knowing that when rewarding success, research trumps teaching (Bellas and Toutkoushian 1999).

Other research studies discuss how the work climate may affect women's behavior. Monk-Turner and Fogerty (2010) examined the relationship between how welcome one feels at work and work productivity. Their study shows how working in an unsupportive environment has detrimental consequences on productivity. Cress and Hart (2009) suggest making changes so all faculty feel at ease and wanted. The climate in some workplaces lends itself to working mothers feeling the need to minimize or hide parental responsibilities in order to avoid negative career repercussions (Drago, Colbeck, Stauffer, Pirretti, Burkum, Fazioli, Lazzaro and Habasevich 2006).

*The work environment issue: the impact of familial responsibilities on women's work*

Participant perspective: "Because of my obligations as a parent and professional responsibilities I feel pulled in two directions between my family and my work."

*Impact:* Over 61 percent of the respondents inform us they believe men can commit more time to their profession than women and 83 percent of those surveyed agree that the more children you have the more difficult it is to balance family and career. Watkins, Gillaspie and Bullare (1996) explain that women who have children in the home and work outside the home have difficulty balancing family and career (Drago et al. 2005; Jacobs 2004; Mason 2002). A study by Suito, Mechom and Feld (2001) report that tenure-track faculty with children in the home have less work productivity (Park 1996). Studies explain that some women may even avoid having children to avoid the bias engendered by motherhood and the difficulty maintaining a balance between work and home (Drago et al. 2005; Goldin 1995). Because of this challenging balance of home obligations and work responsibilities some universities are revising policies and practices to support their faculty members (West and Curtis 2006). Women should not have to choose between raising a family and a career as a tenure-track faculty member. To place

university equity issues on the radar Wilson, Gadbois, and Nichol (2008) recommend designing committees to dialogue about certain topics including, family leave, salary equity, and pregnancy. Collective agreement within these committees could be instrumental in making policy changes for gender parity (Eaton 2001).

*The work environment issue: limitations on women's careers*

Participant perspective: "I believe that women (and to a lesser degree, men who are fathers) at my institution are damaged in their careers because we lack short term disability or parental leave, forcing women to try to use as little sick time as possible for childbirth/early parenting, or sacrifice career advancement and family finances by taking leave without pay."

*Impact:* Of the participants surveyed over 55 percent did not disagree with the idea that they had been overlooked for a promotion or did not receive an expected/earned pay raise because of gender bias. This study indicates two perceived barriers women encounter during their careers: the glass ceiling and the tug-of-war between career aspirations and family responsibilities (Cheung and Halpern 2010; Elacqua, Beehr, Hansen and Webster 2009; Bonawitz and Andel 2009; Schedler, Glastra and Hake 2003; Bain and Cummings 2000; Glazer-Raymo 1999; Acker and Feuerver 1996). Watkins et al. (1996) and Park (1996) acknowledge that some women, due to caregiving commitments, encounter splintered phases during their career path. More studies would have to be completed to determine the degree to which these obstacles affect women's work and women leaving higher education.

Bird, Litt and Wang (2004) explain the significance of investigating attrition rates. Wilson, Gadbois and Nichol (2008) suggest one way to discover an individual's reason for leaving an institution is to use exit surveys. This type of information may reveal gender issues as part of the reason a woman leaves her employment.

Women can contribute in the workplace (Cress and Hart 2009; Schedler, Galstra and Hake 2003), however, many women with children in the home suffer from current policies. The need for more universities to have family-friendly policies is well documented (Monk-Turner and Fogerty 2010; Joeckel and Chesnes 2009; Johnson 2009; Mayer and Tikka 2008; Wilson, Gadbois and Nichol 2008; West and Curtis 2006; Drago et al. 2005; Williams 2004; Wilson 1999; Watkins, Gillaspie and Bullard 1996; Halpert, Wilson and Hickman 1993). Drago et al. (2005) and Glazer-Raymo (1999) encourage workplaces to nourish an environment which supports faculty obligations to their household. A study by Mayer and Tikka (2008) encourage institutions to review and revise their family policies in order to retain more women in university positions. Some women may opt out of a career in academia or take a job with minimal scholarly activity demands (Mason and Goulden 2002).

## **Recommendations**

A majority of participants perceive that the university work environment seem to be less accommodating for women than men. University women faculty believe they are restricted professionally by the university structure, perceptions, policy, because of familial

responsibilities. It is interesting that more female administrators than female faculty disagree with the idea that women's work is perceived as valuable as men's work. It is curious that female administrators perceive that their work is not valued as much as a man's, but female faculty has a somewhat different perspective. A future area of study might be the determination of differences between administration and female faculty perceptions in academia.

In order to increase women's beliefs that their work is valued and respected, and to increase job satisfaction and achievement the researchers suggest a policy revision aimed at the support of female faculty. Administrators need to cultivate an awareness of the perceptions of all faculty, in particular women, in order that all employees can reach their potential. Awareness, can lead to correcting perceptions that seem erroneous.

### **Limitations**

One of the limitations of this pilot study for this university was the small sample size and that only women were surveyed. For additional validity a study could include men and a much larger number of participants. Additionally, the survey should include collecting details about children in the home. Moreover, data should also include marital status.

There appears to be a difference in responses for women who have worked in higher education for 16 or more years than women who have worked in higher education fewer than 16 years. This disparity may be due to whether or not the woman currently has children in the home and the degree of involvement necessary for the parent. For example, a mother with two or more very young children may have more familial responsibilities than a parent with one older child in the home. Although teenagers bring inherent challenges, generally they are more responsible, mobile, and independent than young children. The researcher attributes the obvious disparity between agree and disagree results to the likelihood that women who have been in higher education 16 or more years are less likely to have children in the home and women who have been in higher education less than 16 years are more likely to have children in the home. This variable of children in the home may strongly influence the participants' response. One example of such an obvious split of opinions is in respect to the prompt that men can commit more time to their profession than women. Most participants that have taught in higher education 20 years or more disagree, whereas the majority of women who have been in higher education one to ten years agree with this statement. Female faculty who are also caregivers have different strains put on them than women without children in the home. This rationale is supported by one participant's comment, "Much of this [survey] does not apply to me. I am single with no children and thus more like a man than most women in academia." This separation reflects the degree to which a woman's home responsibilities consume the limited resource of time.

To improve the data collection results two other variables that may be useful are the participants' department and college. Some of the responses that were almost equally split between agree and disagree may be a result of the department or college in which a participant works. For example, responses to a question regarding the participants' home responsibilities being taken into consideration regarding teaching schedules were about evenly split between

agree and disagree. This may be a reflection of department heads' management style or college level administration's decision-making beliefs.

## Conclusion

The scope of this pilot study covers a small population and needs to expand for increased validation and reliability. Therefore, even though trends are noted that coincide with current literature the size limits the generalized transferability.

However, a possible outcome of this pilot study would be a revision to university policies and practices. Numerous researchers agree there is a need for policy change in academic institutions and have a plethora of suggestions (Johnson 2009; Mayer and Tikka 2008; Wilson, Gadbois, and Nichol 2008; West and Curtis 2006; Draco et al. 2005; Williams 2004). These changes could be framed and guided by the results of this study and include the four dimensions of work environment issues flushed out of the data results: perceptions and valuations of work by both genders, perceptions of fair or unequal treatment of men and women in the workplace, possible limitations caused by family responsibilities, and perceived limitations on women's careers. Williams (2004) posits that, as any workplace, academia is not immune to gender bias. Recognizing common stereotypes of women in the workplace and taking measures to eliminate them would improve the climate for all women; especially those who have children in the home and are still highly productive and successful (Drago et al. 2006; Glazer-Raymo 1999). University hiring practices could be reviewed to help reduce the negative influence of stereotypes and increase gender parity (Bonawitz and Andel 2009; Johnson 2009; Wilson, Gadbois and Nichol 2008; Williams 2004). As such, this study has the advantage of identifying faculty perceptions of equitability and can be used for further research as possible changes occur across the university work environment.

## References

- AAUP. Annual Report on the Economic Status of the Profession, 2009-2010. <http://www.aaup.org/AAUP/comm> Report on the Economic Status of the Profession. *Academe*, March-April, 2010.
- Acker, S. and Feuerwerker, G. 1996. Doing good and feeling bad: The work of women university teachers. *Cambridge Journal of Education*, 26(3): 401-422.
- Bain, O. and Cummings, W. 2000. Academe's glass ceiling: Societal, professional-organizational, and institutional barriers to the career advancement of academic women. *Comparative Education Review* 44 (4): 493-514.
- Bellas, M. and Toutkoushian, R.K. 1999. Faculty time allocations and research productivity: Gender, race and family effects. *The Review of Higher Education* 22 (4): 367-390.
- Bereman, N.A. and Joyce, S.A. 1991. Using the compa-ratio to detect gender bias in faculty salaries. *The Journal of Higher Education* 62 (5): 556-559.
- Bird, S., Litt, J., and Wang, Y. 2004. Creating status of women reports: Institutional housekeeping as "women's work." *National Women's Studies Association Journal* 16 (1): 194-206.
- Bonawitz, M., and Andel, N. 2009. The glass ceiling is made of concrete: The barriers to promotion and tenure of women in American academia. *Forum on Public Policy Online*, Summer. [http://forumonpublicpolicy.com/summer09/womenand\\_leadership.html](http://forumonpublicpolicy.com/summer09/womenand_leadership.html)
- Cheung, F.M., and Halpern, D.F. 2010. Women at the top: Powerful Leaders define success as work + family in a culture of gender. *American Psychologist* 65 (3): 182-193. <http://dx.doi.org/10.1037/a0017309>

- Cress, C.M. and Hart, J. 2009. Playing soccer on the football field: The persistence of gender inequities for women faculty. *Equity and Excellence in Education* 42 (4): 473-488.
- Davis, D., and Astin, H. 1990. Life cycle, career patterns and gender patterns and gender stratification in academe: Breaking myths and exposing truths. In S. Lie and V. O'Leary (Eds.), *Storming the tower: Women in the academic world*. East-Brunswick: GP.
- Drago, R., Colbeck, C., Stauffer, K.D., Pirretti, A., Burkum, K., Fazioli, J., Lazarro, G., and Habasevich, T. 2005. Bias against caregiving. *Academe* 91 (5): 22-25.
- Drago, R., Colbeck, C., Stauffer, K.D., Pirretti, A., Burkum, K., Fazioli, J., Lazarro, G., and Habasevich, T. 2006. The Avoidance of Bias Against Caregiving. *American Behavioral Scientist* 49 (9): 1222-1247.
- Eaton, S.C. 2001. Work-family integration in biotechnology: Implications for firms and employees (Doctoral dissertation, Massachusetts Institute of Technology, 2000). *Dissertation Abstracts International* 61,3647.
- Elacqua, T.C., Beehr, T.A., Hansen, C.P. and Webster, J. 2009. Managers' beliefs about the glass ceiling: Interpersonal and Organizational Factors. *Psychology of Women Quarterly* 33 (3): 285-294. <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1471-6402.2009.01501x>
- Glazer-Raymo, J. 1999. *Shattering the Myths: Women in Academe*. Maryland, Johns Hopkins University Press.
- Glick, P., Lameiras, M., Fiske, S., Eckes, T., Masser, B., Volpato, C., Manganelli, A.M., Pek, J. C. X., Huang, L., Sakalli-Ugurlu, N., Castro, Y., D'Avila P., Maria L., Willemsen, T. M., Brunner, A., Six-Materna, I, and Wells, R. 2004. Bad but bold: Ambivalent attitudes toward men predict gender inequality in 16 nations. *Journal of Personality and Social Psychology* 86 (5): 713-728.
- Goldin, C. 1995. Career and family: College women look to the past. (Working Paper 5188) Cambridge, MA: National Bureau of Economic Research.
- Halpert, J.A., Wilson, M.L. and Hickman, J.L. 1993. Pregnancy as a source of bias in performance appraisals. *Journal of Organizational Behavior* 14 (7): 649-663.
- Houston, D., Meyer, L.H., and Paewai, S. 2006. Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education and Policy and Management* 28 (1): 17-30.
- Jacobs, J. 2004. The faculty time divide. *Sociological Forum* 4: 18-36.
- Joeckel, S. and Chesnes, T. 2009. The challenge of gender equity within the council for christian colleges and universities. *Christian Higher Education* 8 (2): 115-131.
- Johnson, R.E. 2009. But can you hit? *Academe* 95 (4): 19-21.
- Kauffman, D. and Perry, F. 1989. Institutionalized sexism in universities: The case of geographically bound academic women. *NWSA Journal* 1: 644-659.
- Mason, M.A. 2002. Do babies matter? *Academe* 19: 72-89.
- Mason, M.A. and Goulden, M. 2002. Do babies matter? The effect of family formation on the life long careers of women. *Academe* 88 (6).
- Mayer, A.L. and Tikka, P.M. 2008. Family-friendly policies and gender bias in academia. *Journal of Higher Education Policy and Management* 30 (4): 363-374.
- Menges, R., and Exum, W. 1983. Barriers to the progress of women and minority faculty. *Journal of Higher Education* 54 (2): 123-144.
- Monk-Turner, E. and Fogerty, R. 2010. Chilly environments, stratification, and productivity differences. Online publication: Springer Science+Business Media.LLC.
- Olsen, D., Maple, S., and Stage, F. 1995. Women and minority faculty job satisfaction: Professional role interests professional satisfactions and institutional fit. *Journal of Higher Education* (66): 267-284.
- Park, S. 1996. Research, teaching, and service: Why shouldn't women's work count? *Journal of Higher Education* 67 (1): 46-84.
- Ridgeway, C.L., and Correll, S.J. 2004. Motherhood as a status characteristic. *Journal of Social Issues* 60 (4): 683-700.
- Riger, S., Stokes, J. Raja, S., and Sullivan, M. 1997. Measuring perceptions of the work environment for female faculty. *The Review of Higher Education* 21 (1): 63-78.
- Romainville, M. 1996. Teaching and research at university: A difficult pairing. *Higher Education Management* 8: 135-144.
- Russell, S., Fairweather, J., Hendrickson, R., and Zimble, L. 1991. Profiles of faculty in higher education institutions, 1988 Washington, DC: U.S. Department of Education Office of Educational Research and Improvement. (NCES 91-389).
- Schedler, P., Glastra, F., and Hake, B. 2003. Glass Ceiling for Women in Higher Education. *Lifelong Learning in Europe* 8(3): 26-33.

Forum on Public Policy

- Stokes, J., Riger, S., and Sullivan, M. 1995. Measuring perceptions of the working environment for women in corporate settings. *Psychology of Women Quarterly* 19: 533-549.
- Sutor, J.J., Mecom, D. and Feld, I. 2001. Gender, household labor, and scholarly productivity among university professors. *Gender Issues* 19: 50-67.
- Toren, N., and Klaus, V. (1987). The effects of minority size on women's position in academia. *Social Forces* 65: 1090-1100.
- Watkins, R. M., Gillaspie, L. C. and Bullare, J. H. 1996. The university community where equity can happen: Getting past the rhetoric. Paper presented at the annual meeting of the American Association of Colleges for Teacher Education. Chicago, Illinois.
- West, M.S. and Curtis, J.W. 2006. AAUP faculty gender equity indicators 2006: A report for the American Association of University Professors.
- Williams, J. 2004. Hitting the Maternal Wall. *Academe* 90 (6): 16-20.
- Wilson, M., Gadbois, S. and Nichol, K. 2008. Is gender parity imminent in the professoriate? Lessons from one Canadian university. *Canadian Journal of Education* 31 (1): 211-228.
- Wilson, Robin. "An MIT Professor's Suspicion of Bias Leads to a New Movement for Academic Women." *Chronicle of Higher Education*, December 3, 1999, V46 n15 pA16-A18. ERIC, EJ599488.

Published by the Forum on Public Policy

Copyright © The Forum on Public Policy. All Rights Reserved. 2010.