An Assessment of the Working Climate for Science Faculty at the University of British Columbia (UBC) – May 2007

– MAIN FINDINGS –

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MAIN FINDINGS

Assessment Advisory Committee (Faculty of Science)[1]: Rachel Kuske, Dept. of Mathematics (Chair); Elizabeth Croft, Dept. of Mechanical Engineering; Anne Condon, Dept. of Computer Science; Nancy Heckmann, Dept. of Statistics; Carola Hibsch-Jetter, Faculty of Science; Grant Ingram, when Assoc. Dean, Faculty of Science; Janis McKenna, Dept. of Physics & Astronomy; Wayne Maddison, Depts. of Botany and Zoology; Michiel van de Panne, Dept. of Computer Science

Procedures for the Assessment of the Working Climate for Science Faculty

In early 2005, the Dean of the Faculty of Science, John Hepburn, with the support of the Provost and Vice President Research, established an advisory committee to assess the working climate of FoS.. This Advisory Committee developed a variety of strategies to assess the working climate of the faculty. These included an on-line faculty survey, a department heads questionnaire, and collection of quantitative data from various administrative units across the campus.[2] Together with a Working Group[3] composed of representatives from the nine departments in FoS, a survey advisor and a survey consultant, the Advisory Committee designed the surveys.[4]

The results were compiled by the survey consultant and report consultants[5] and overseen by the Advisory Committee. Focus groups were added to provide context for the data collected and to allow for more detailed responses to faculty concerns and issues. The Advisory Committee designed the focus group questions and procedures, together with consultants[6] from the UBC Equity Office, who then facilitated and led the focus groups.

Participants in the Assessment of the Working Climate

An invitation and access to the on-line Faculty Survey was sent to all 360 tenured/tenure-track full-time FoS faculty appointed before July 2005, including instructors, senior instructors, assistant professors, associate professors, and full professors, as well as 119

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[1] The Advisory Committee was initially chaired by then Associate Dean Grant Ingram (now CFIS) and later by Anne Condon and then Rachel Kuske. External members of the Advisory Committee were professors Joan Girgus, Princeton, Jo Handlesman, UW-Madison, and Geri Richmond, U Oregon.
[2] The on-line faculty survey and heads questionnaire can be accessed at www.science.ubc.ca/content/view/42/.
[3] The Working Group included: Kathie Nomme (Depts. of Botany and Zoology), Suzana Straus (Dept. of Chemistry), Tamara Munzner (Dept. of Computer Science), Maya Kopylova (Dept. of Earth & Ocean Sciences), Leah Keshet and Jim Bryan (Dept. of Mathematics), Pauline Johnson (Dept. of Microbiology & Immunology), Vesna Sossi (Dept. of Physics & Astronomy), Jane Roskams (Dept. of Zoology).
[4] The survey consultant was Dr. Catherine Sabiston, McGill University, Faculty of Education (Dept. of Kinesiology & Physical Education) and the survey advisor was Dr. Wendy Frisby, UBC, Faculty of Education (School of Human Kinetics).
[5] Report consultants were Rosalind Currie and Qin Liu, with technical and administrative assistance from Ricky Cheng and Trina Ojo.
[6] The Focus Group coordinators were Lori Charvat and Maura Da Cruz, with administrative assistance from Wynnie Lau.

professors emeriti. Completion of the survey was on a voluntary basis. Cross-appointed faculty were asked to complete the survey once as a member of their primary department. A total of 129 completed surveys were returned and used in the faculty survey data analysis, giving response rates of 35% (125 out of 360) for tenured/tenure-track, 3% (4 out of 119) for emeriti, and 27% overall (129 out of 479).

Of the 129 respondents, 100 (78%) were male and 29 (22%) were female. By rank, the tenured/tenure-track respondents were 49% full professors, 24% associate professors, 21% assistant professors, and 6% instructors. To compare, the total FoS tenured/tenure-track faculty composition is, by gender: 18% female and 82% male and, by rank, 44% full professors, 25% associate professors, 21% assistant professors, and 10% instructors. Other breakdowns summarizing the respondents are charted in the Appendix.

The Heads Survey was completed separately by each of the nine department heads within the Faculty of Science (Botany, Chemistry, Computer Science, Earth & Ocean Sciences, Mathematics, Microbiology & Immunology, Physics & Astronomy, Statistics, and Zoology). Other research institutes or labs were not included. Department heads provided information covering faculty members appointed before July 1, 2005, only.

Complementary to the survey results, quantitative data sets were collected by the FoS Dean's Office, with the exception of the data on tenure and promotion of faculty cohorts in FoS and UBC, provided courtesy of the UBC Equity Office.

Of the 44 Focus Group participants, 40% were female and 60% were male. By rank, they were 45% full professors, 23% associate professors, 16% assistant professors, and 16% instructors.

The Faculty Survey respondents were 26% LS, 36% PS and 38% MCS, which was closely representative of the total FoS faculty (27% LS, 38 % PS and 35% MCS). The departmental representation in the Focus Groups was 35% LS, 42% PS and 23% MCS.

Abbreviations Used

Faculty of Science = FoS

Surveys[7]:
FS = Faculty Survey
HS = Heads Survey

Comparisons of departmental groups:
LS = Life Sciences (Botany, Microbiology & Immunology, Zoology)
PS = Physical Sciences (Chemistry, Earth & Ocean Sciences, Physics)
MCS = Mathematical and Computer Sciences (Computer Science, Mathematics, Statistics)

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[7] The documents can be found at www.science.ubc.ca/content/view/42/.

Statistical Analyses

In addition to results based on total respondents, group differences in terms of departmental grouping, gender, rank and years from obtaining PhD were investigated. Statistically significant differences for these different breakdowns were obtained by analyzing mean scores for each question. In appropriate cases, responses of "not applicable" were not included in computing the mean scores. For rank, only assistant professors, associate professors, and full professors were compared, since there were too few responses from instructor and emeriti to be included in the analysis. For gender, an additional analysis gave similar results, based on mean scores of separate gender-based response categories for each question on the Faculty Survey, that is, comparing male/female responses for each possible response. This second type of analysis was not possible for comparisons among departmental groupings, ranks and groups by years from PhD since more than two subgroups were being compared for those breakdowns.

Confidentiality

Information has been grouped in order to protect confidentiality and to ensure anonymity. The Advisory Committee and Task Force did not have access to the "raw data" from the Faculty Survey and the Heads Survey, or to the data provided by the Dean's Office. They only had access to the summary data and graphs, which were produced by three consultants to the project in an effort to protect confidentiality of respondents.

1. RESOURCES: ACCESS AND ALLOCATION

1.1 Faculty Views

Faculty members were asked to rate their current access to six areas of departmental support (FS Q1) and their perception of fairness in the allocation of those resources in their departments (FS Q2); see Figure 1.

Figure 1:

Perceived fairness in resource allocation by gender
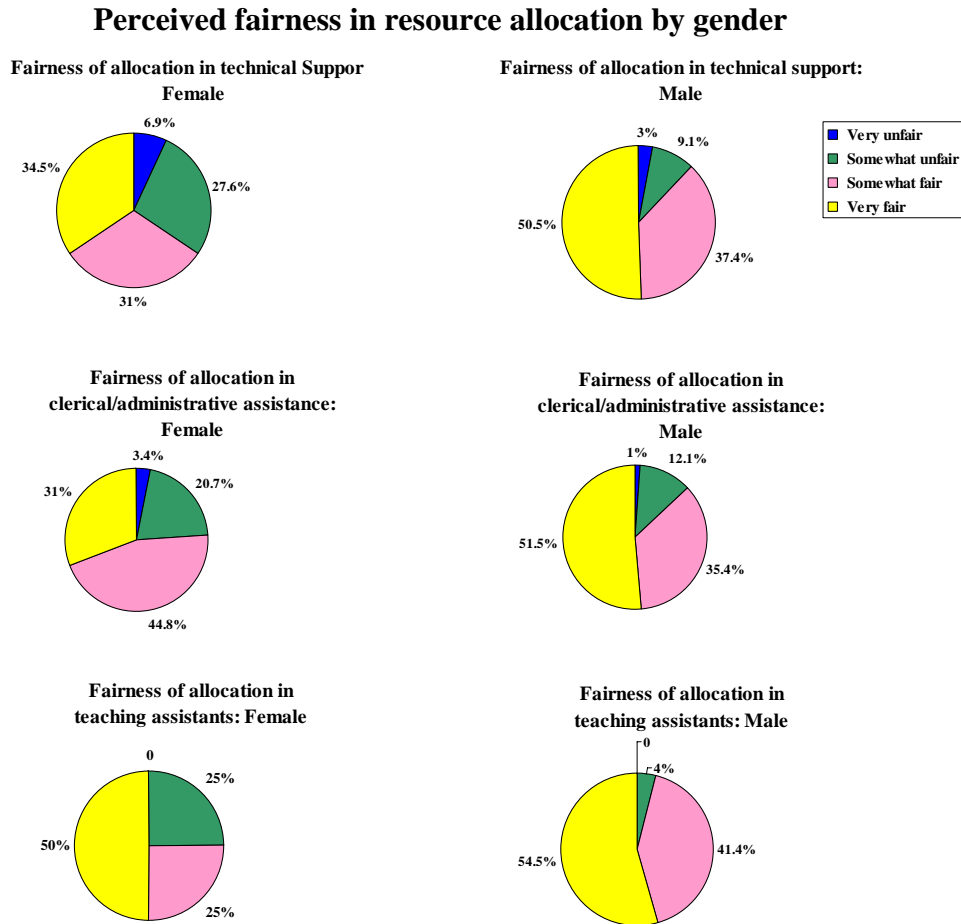
The respondents reported the least amount of support in internal special funds, with 3% indicating "a lot of access." They received the most support in lab space and teaching assistants, with 44% and 45% reporting "a lot of access" respectively.

The perceived fairness in allocation of special internal funds was reported the lowest among all the resources; 63% of the respondents viewed allocation of special internal funds as "somewhat fair" or "very fair."

Male respondents perceived significantly higher levels of fairness in allocation of technical support, clerical/administrative assistance, and teaching assistants (FS Q2) than

female respondents. The percentages of respondents relating to these areas are shown in Figure 1.

As shown in Figure 2, MCS faculty members responded more positively than PS and LS faculty members in rating fairness for allocation of resources (FS Q2). MCS faculty fairness ratings for allocation of technical support, lab equipment and lab space were significantly higher than LS faculty. MCS faculty ratings for allocation of clerical/administrative assistance were also significantly higher than PS faculty. Furthermore, MCS faculty ratings of fairness in allocation of internal special funds were significantly higher than both PS and LS. There was no significant difference among the three groups in perception of fairness in teaching assistant allocation.

Figure 2:

Perceived fairness in resource allocation by departmental grouping
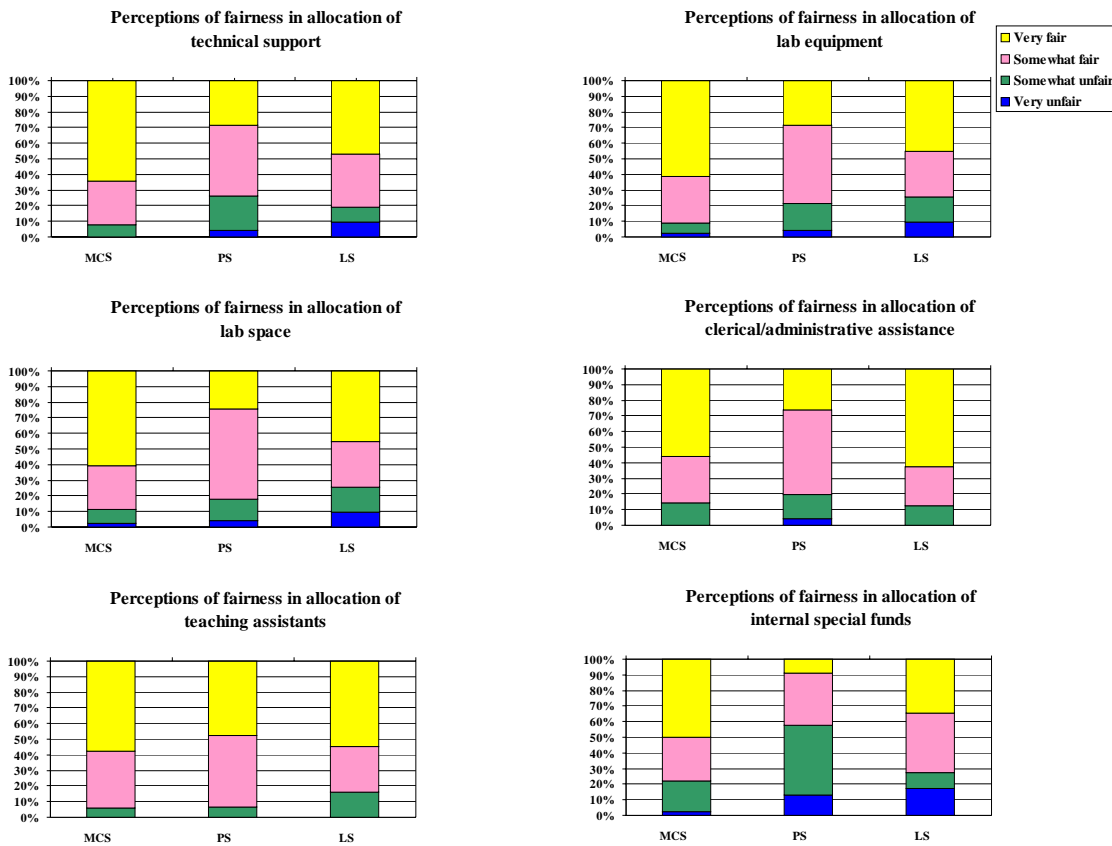
Focus Groups also noted a perceived gender-based inequity in the way resources were allocated. Their responses highlighted the non-trickle-down and non-transparent use of indirect costs (e.g., from Tri-Council grants [8]) and noted the challenges of limited administrative and infrastructure support at all levels. Focus Group participants also recommended that the FoS and departments both develop transparent processes/policies for resource allocation and administration cost coverage, and centralize and streamline resource access.

1.2 Departmental Formulae

Department heads were asked whether they had a departmental formula on assignment of, or access to, technician support (HS Q3) and teaching assistants (HS Q4) and, if so, to provide a copy of the formula.

One out of the nine departments had a departmental formula on assignment of, or access to, technician support per faculty member. A document outlining the details of this policy was also included. Three departments responded that this question was not applicable to them. Five departments indicated that they did not have a formula. One of these qualified the response by stating that while they did not have a formula per se, the department provided the overall infrastructure support and that each research lab was given a base level of IT support and had a single-point contact with the technical staff. Labs requiring more support were responsible for paying for and managing additional technical staff. Another department responded that assignment of technician support was mostly done through subsidized fees for service.

All but one department head reported that they had a departmental formula on the assignment of or access to TAs per course. Most formulae were based on the number of students enrolled in a course and whether the course had a lab or tutorial.

2. TENURE, PROMOTION AND LEADERSHIP

2.1 Tenure /Promotion at UBC and in FoS

Comparison of promotion rates for assistant professor cohorts at UBC and FoS hired between 1992 and 2006 (Figures 3 and 4) suggests that there was not much difference in the overall rate of promotion to associate professors for men and women at UBC, but that there was a difference in FoS (data from the UBC Equity Office). Five years after being hired, 31% of women and 33% of men in the UBC cohort were promoted to associate professors, whereas 30% of women and 45% of men in the FoS cohort reached associate professor rank. Seven years after being hired, the inequality became greater: 40% of women and 61% of men in the FoS cohort were promoted to associate professors,

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[8] Essentially NSERC (The Natural Sciences and Engineering Research Council of Canada), CIHR (Canadian Institutes of Health Research) and SSHRC (The Social Sciences and Humanities Research Council), with CRC (Canada's Communications Research Centre) and NCE (the Networks of Centres of Excellence) as related branches.

whereas 51% of both men and women in the UBC cohort became associate professors. When excluding those faculty members who had left UBC or FoS from the calculation, the inequality grew wider: 43% of women and 73% of men in the FoS cohort were promoted to associate professors seven years after they were hired.

Figure 3:

Promotion of UBC faculty: Combined 1992–2006 cohort

Promotion of UBC 1992-2006 faculty cohort: Female
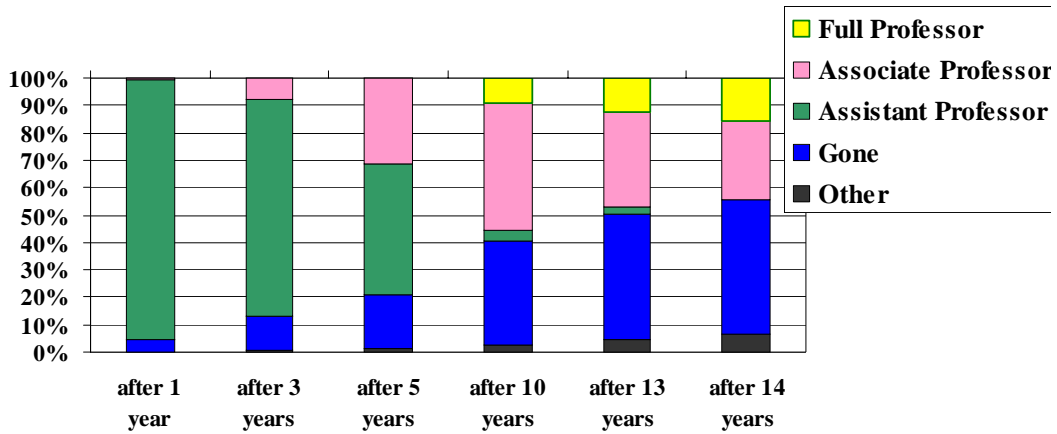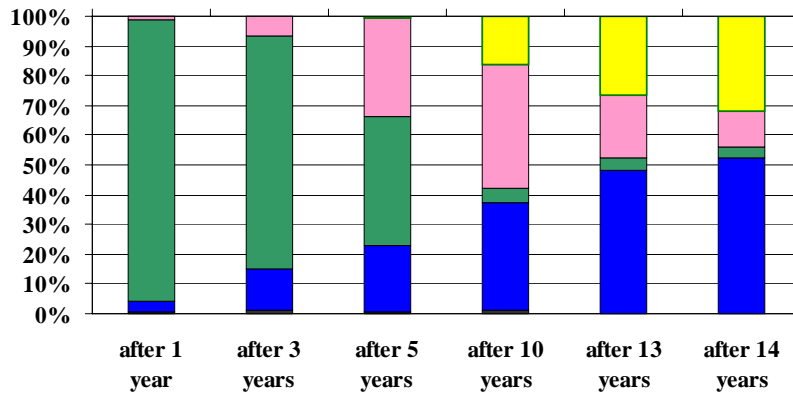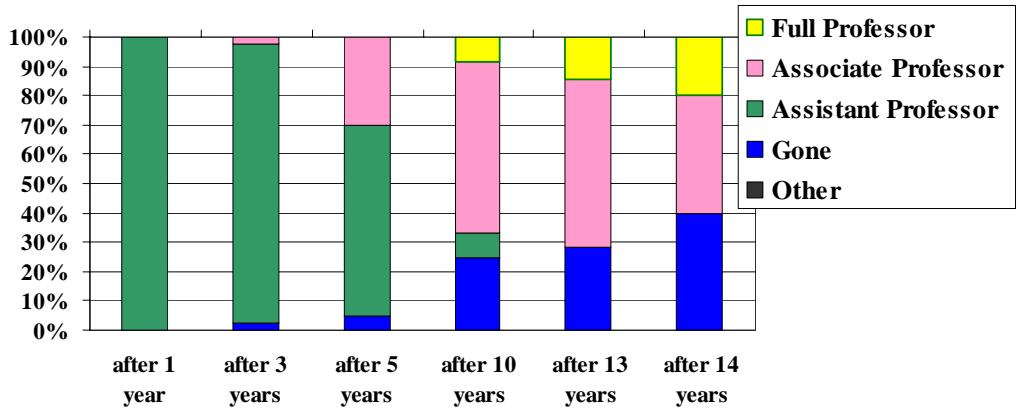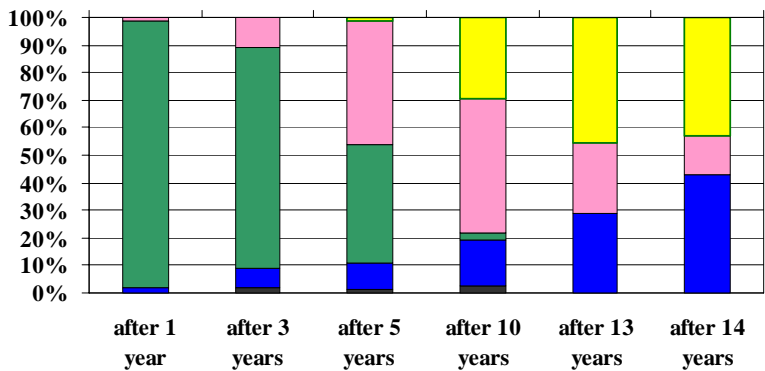

Promotion of UBC 1992-2006 faculty cohort: Male

Figure 4:

Promotion of FoS faculty: Combined 1992-2006 cohort

Promotion of FoS 1992-2006 faculty cohort: Female

Promotion of FoS 1992-2006 faculty cohort: Male

Overall at UBC, women were not promoted to full professors as quickly as men. At its largest, a gap of 16% existed between men and women who had become full professors 12 and 14 years after being hired by UBC. In FoS, promotion to full professors came sooner than the UBC average, but women still lagged behind: by the time the first women were promoted to full professor—10 years after being hired—29% of the men had become full professors in FoS. The largest gap occurred 13 years after being hired: 14% of women and 46% of men in the FoS cohort were promoted to full professors at that stage.

Additional cohort information from the UBC Equity Office was provided for cohorts of assistant professors hired in the FoS in the years 1980 and 1988 through 1991. The data showed similar trends: 28% (10 out of 36) of the male faculty had been promoted to full professors 10 years after their hire, whereas over the same period none of the nine females had become full professors.

2.2 Tenure/Promotion Policies and Procedures

When asked to rate fairness in tenure and promotion policies/procedures in the last five years (FS Q32.6), faculty members primarily gave a positive response, with 39% of the respondents agreeing "somewhat" and 56% agreeing "strongly" that these policies/procedures were fair. Full professors reported a significantly more positive perception of fairness in tenure and promotion policies/procedures than assistant professors: 62% and 34% of the full professors, as opposed to 39% and 54% of the assistant professors respectively reported "strongly agree" and "somewhat agree" that the procedures were fair.

Faculty members reported how clear the policies and procedures for faculty tenure and promotion were in their departments (FS Q29). Of the total respondents, 50% indicated "somewhat clear" and 43% "very clear." Still, 7% reported that the policies/procedures were "somewhat unclear," "very unclear" or "ad hoc."

In the Focus Groups, both men and women expressed dismay at the lack of clarity as to the tenure review process, with additional comments citing lack of mentors or role models as negatively impacting promotion.

Department heads were asked for their opinions regarding the major hindrances to career advancement that had disproportionately affected women faculty members in their departments over the last five years (HS Q11). Three out of the nine departments reported that women's continued role as the primary caregiver to children, parental leave and higher administrative workload for some female faculty members were found to impact female faculty more than male faculty.

2.3 Leadership at UBC

When asked about the affiliation of the mentor or senior person in the field who had recommended them for awards (FS Q13.3), a higher percentage of male respondents than females (16% versus 4%) reported that they had been recommended by someone outside UBC. A higher percentage of female respondents than males indicated that they had been recommended for an award by their department (26% versus 14%) and reported that they were not recipients (33% versus 25%).

Faculty members reported how much time they had spent on committees (or other service) that benefited their careers in the last five years, relative to their departmental peers (FS Q15). A significantly larger proportion of the male respondents than that of the female respondents (26% versus 14%) reported that they had spent more time on beneficial committees/services; 16% of the males and 38% of the females reported "less time" on beneficial committees/services.

Figure 5 shows the proportions of female faculty members of FoS by rank from 1995 to 2005. During this period, the percentage of total female faculty increased from 10% to

19%. The proportion of female associate professors in all associate professors increased steadily from 5% in 1995 to 28% in 2005. In the meantime, the percentages of female full professors in all full professors remained almost static, ranging from 2% to 4%.

Figure 5:

Percentages of female faculty by rank: 1995-2005
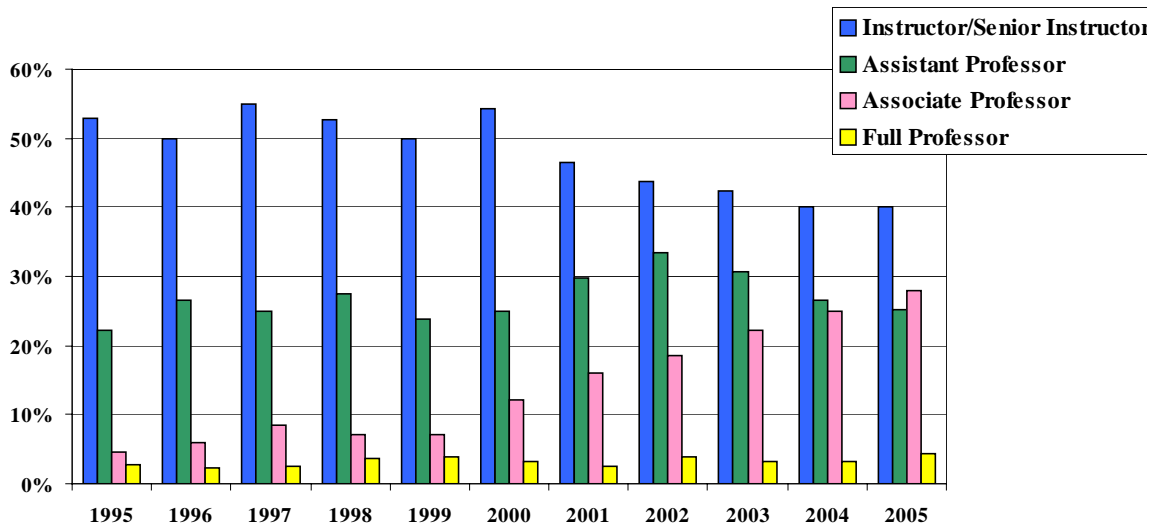
The low percentages of senior female faculty members may be related to the very low proportion of females holding a senior administration position (few senior women available for these positions) and the relatively low percentages of female award winners (depending on seniority requirements and process), as shown in Table 1 and Figure 6. It may also be related to females reporting less time than males on committees benefiting their careers, as reported earlier, depending on whether appointment to these committees correlates with seniority.

Table 1 shows the numbers of female and male faculty members holding a senior administration position in FoS (in the Dean's Office and the nine departments) from 1995 to 2005. Over the period, all department heads were male. From 2002 to 2005, no deans or associate deans were female.

Table 1: **Numbers of faculty members in senior administration positions: 1995–2005**

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Dean/ Associate Dean (FoS)	Female	1	2	2	2	2	1	1	0	0	0	0
	Male	4	3	3	2	3	4	3	4	4	5	4
Dept. Head	Female	0	0	0	0	0	0	0	0	0	0	0
	Male	12	9	10	9	9	9	10	9	8	9	9

The Focus Group participants stated that while there were formal channels for promotion and leadership, informal measures commonly circumvented these channels. The lack of a clear, transparent process resulted in confusion about selection and decision criteria. Many participants felt that being selected for leadership positions was not necessarily a desired goal, but rather something that individuals did to be of service. Furthermore, they called for stability in leadership, especially at the dean and VP-research levels.

2.4 Awards

Figure 6:

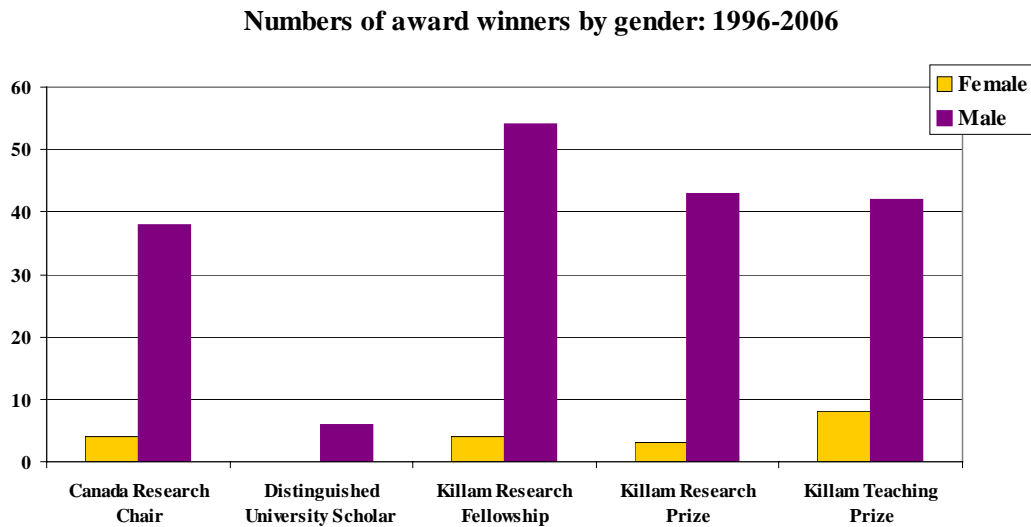**Numbers of award winners by gender: 1996-2006**

Figure 6 shows the numbers of male and female faculty members in FoS who won the five key research and teaching awards from 1996 to 2006. Over the 11 years, no female faculty won the Distinguished University Scholar award. And, 7% of the Killam Research Fellowship award and the Killam Research Prize award went to females. Female recipients of the Canada Research Chair and the Killam Teaching Prize awards constituted 10% and 16% respectively. However, the proportion of female faculty in FoS increased from 11% in 1996 to 19% in 2005.

Table 2 shows that the great majority of CIAR, CIHR and NSERC grant winners in 2004/05 were male.

Table 2: **Numbers of CIAR, CIHR and NSERC grant winners and the percentages of total recipients: 2004/2005**

		CIAR	CIHR	NSERC
Female	Number	0	14	66
	Percentage	0	29%	17%
Male	Number	5	35	319
	Percentage	100%	71%	83%

Data over a longer time period and data on the success rates of the grant applications were not available. It would be helpful if the Dean's Office could keep track of these data in the future.

3. HIRING

3.1 Hiring Policies and Procedures

Faculty members were asked to what extent the policies and procedures for faculty recruitment and hiring were clear in their departments (FS Q30). Of the total respondents, 37% reported recruitment and hiring policies/procedures as "very clear" and 4% indicated "very unclear" or "ad hoc."

In response to the statement that the hiring and search policies at their departments served to increase diversity (FS Q32.3), 24% and 49% of the respondents reported "strongly agree" and "somewhat agree" with it.

Faculty members reported how much effort, in their opinion, their departments had made to identify and attract qualified women candidates for faculty positions (FS Q31). Overall, 52% and 46% of the respondents perceived "a lot of effort" and "some effort" on the part of their departments to recruit women faculty.

Significant difference was found between MCS and PS respondents in the perception that hiring and search policies had served to increase diversity in the last five years (FS Q32.3). While the proportion of the respondents reporting "somewhat agree" with the statement was almost the same (49%) in both departmental groupings, 31% of the MCS respondents, in contrast with 13% of the PS respondents, reported "strongly agree" with the statement.

Significant gender differences were found in the perceptions of hiring policies. On perceived recruitment and hiring policies, 24% of the female respondents and 41% of the male respondents reported "very clear". A total of 10% females reported that the policies were "very unclear" or "ad hoc," whereas 3% of males reported "very unclear." As shown in Figure 7, a significantly higher percentage of the male respondents "somewhat" or "strongly" agreed that hiring and search policies served to increase diversity (FS Q32.3). In addition, a significantly higher percentage of males than females (59% versus 28%) indicated that "a lot of effort" had been made to recruit female faculty (FS Q31).

**Perception that hiring and search policies served to
increase diversity: Gender difference**
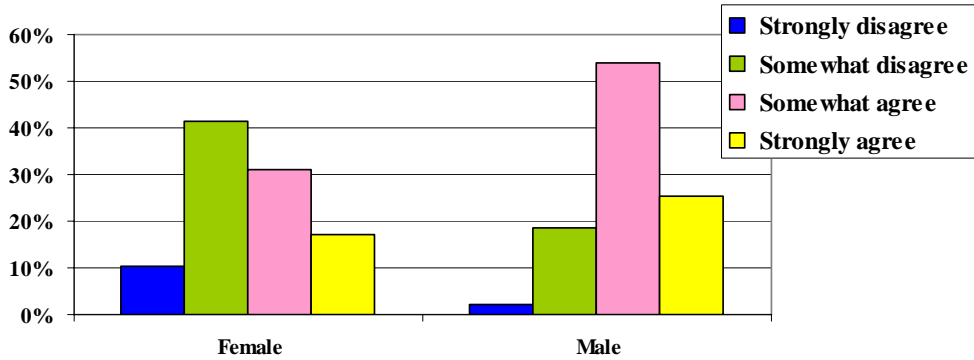
3.2 Hiring Trends

The numbers of earned master's and doctorate degrees in Science in Canada from 1992 to
2003 are shown in Figure 8. Over the 12 years, the percentages of master's degrees and
doctorate degrees awarded to females increased from 35% to 45% and from 25% to 32%
respectively.

Figure 8:

**Numbers of earned graduate degrees in Science
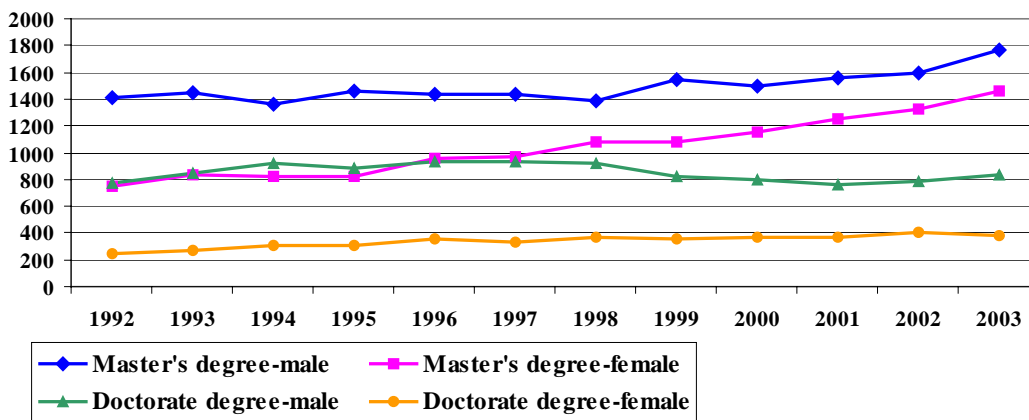in Canada: 1992-2003**

Figure 9 shows that, during the period from 1996 to 2005, the percentage of female PhD
students registered in FoS increased from 27% to 34%, peaking in 2003 (37%). Female
Master of Science student enrolment dropped from 45% to 39%. From 1999 to 2003,
female Master of Software Systems students constituted a range of 20% to 37%.

Figure 9:

**Percentages of female graduate student enrolment at FoS:
1996 to 2005**
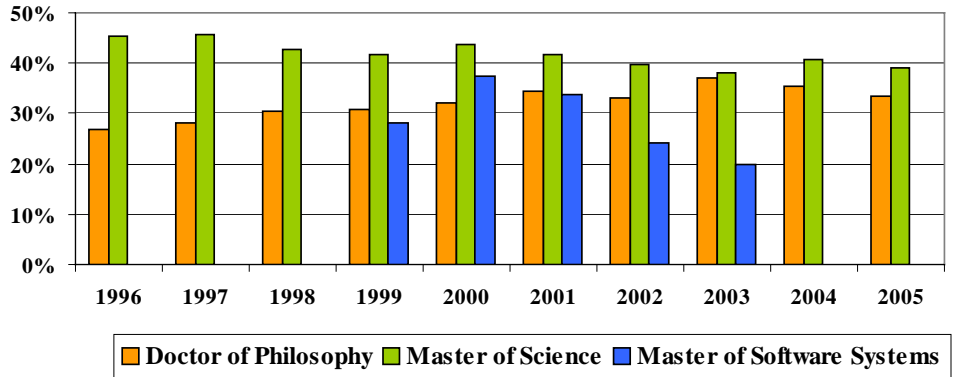
In all departmental groupings, there was a trend of increase in the proportions of female postdocs from 1995 to 2005. In LS, the percentages of female postdocs increased from 20% to 47%. In PS, the increase was from 13% to 33% in 2001 and dropped to 23% in 2005. In MCS, the increase was from 7% to 28%, with the highest percentage of 31% in 2001.

In LS and PS, the percentages of female research associates varied from year to year over the period of 1995 through 2005. The percentages were mostly from 40% to 50% in LS. In PS, the proportions were mostly between 15% and 25%. There had been no female research associates in MCS until 2004 and the percentages of females were 25% in 2004 and 50% in 2005.

The percentages of male and female faculty in all ranks hired in the past 11 years in FoS are shown in Figure 10. The average percentage of female new hires over the period was 20%. Assistant professors constituted over half (ranging from 50% to 88%) of the new hires each year.

Figure 10:

Percentages of new hires by gender: 1995-2005
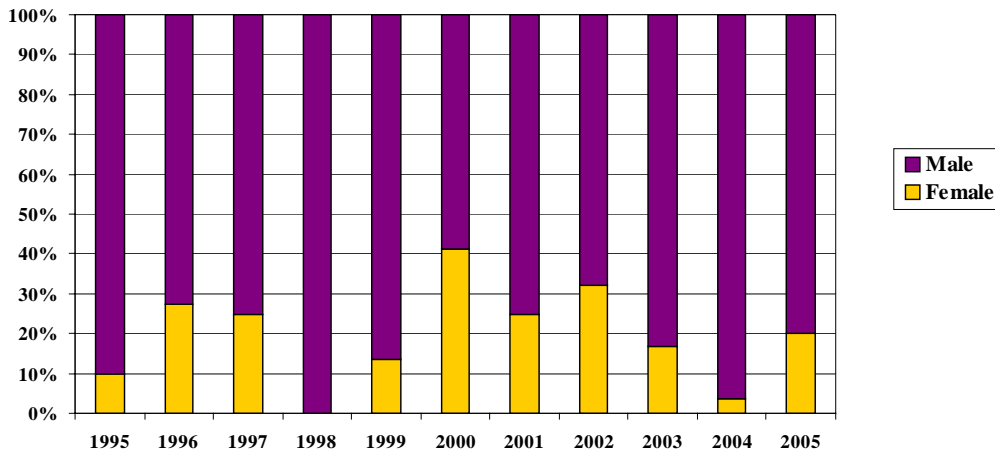
Figure 11 shows the total numbers of male and female faculty members from 1995 to 2005. Over the years, as previously shown in Figure 5, among the female faculty members, the proportion of associate professors increased steadily to 28%, while the percentages of full professors who were female remained almost constant, ranging from 2% to 4%. In 2005, 52% of male faculty and 11% of female faculty held the rank of full professor in FoS.

Figure 11:

Total faculty by gender: 1995-2005
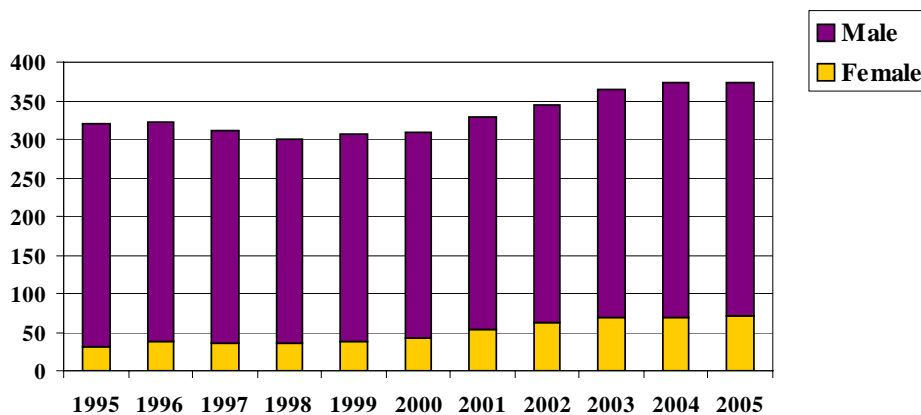
3.3 Hiring Policies, Challenges and Strategies

Department heads reported a variety of formats for communicating the hiring policies to the faculty in their departments (HS Q14c). Eight out of the nine departments responded to the question. The following ways of communication were reported:

- providing search committee members with copies of UBC's hiring policy, the *Faculty Recruitment Guide*, and the UBC Equity Office document *Promoting Equity in Employment at UBC*[9]
- listing hiring principles in the hiring plan, and circulating and discussing the hiring plan and recruitment strategies at departmental meetings and retreats
- posting and updating recruitment policies on departments' internal Web sites
- getting all the regular faculty to serve on the Committee on Appointments, where hiring-related matters are discussed

Department heads were asked whether there was a policy in their departments to have both women and men on hiring committees, and, if so, a copy of the written policy was requested (HS Q16). Five out of the nine departments reported that there was such a policy. However, none of the departments attached a written policy. Three of the four departments who answered "no" provided comments that it was the practice, or the unwritten rule/policy, to have at least one woman or a "balanced representation" on hiring committees. One department stated that this policy/practice was communicated through personal meetings with junior faculty.

Department heads listed major barriers to hiring women in their departments over the last five years (HS Q10a). The major barriers identified were:

- a less proactive spouse hiring policy at UBC than at other North American institutions
- insufficient candidate pool, including a shortage of qualified women from graduate schools
- the "two-body" problem[10] countered, more often, with female candidates than male candidates
- excessive bureaucracy of the UBC Senior Appointments Committee (SAC)[11] and the immigration policies in Canada

Focus Group participants repeatedly brought up the cost of housing in Vancouver as a hiring and retention challenge, noting that UBC housing and co-development housing were of minimal assistance. Comparison with other universities in expensive cities (e.g., University of California - Irvine, New York University or University of Chicago) was recommended for revising faculty housing assistance.

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[9] These documents can be found at www.equity.ubc.ca/brochures/index.htm.

[10] The "two-body" problem refers to the necessity of partner employment, e.g. in the case of a new hire.

[11] The roles of SAC can be found "Senate Policy Abstracts" at www.students.ubc.ca/senate/policies.cfm?ID=19/.

A second prominent issue in the discussion of recruitment was the lack of availability of child care. This is discussed further in Section 7.

Department heads were asked to report the numbers of UFA (University Faculty Award[12]) advertisements posted by their departments per year from 2000/01 to 2004/05 (HS Q12). The numbers by departmental grouping are shown in Table 3. Of the nine departments, three reported posting a UFA advertisement every year, two reported posting in some of the years, and four indicated no posting.

Table 3: **Numbers of UFA advertisements posted: 2000/01–2004/05**

	2000/01	2001/02	2002/03	2003/04	2004/05
MCS	2	3	2	1	1
PS	3	2	2	2	2
LS	0	0	0	0	0

Although using NSERC UFA programs was recognized by four departments as "wonderful" and a helpful strategy in hiring women (HS Q10b), the sustainability of UFA bridging strategies was reported by department heads as a major barrier to hiring women in their departments over the last five years (HS Q10a).

The NSERC UFA program was also raised as an issue in the Focus Groups, with several reports of a possible stigma to being hired under UFA.

Department heads were asked to describe strategies helpful in hiring women in their departments over the last five years (HS Q10b) and to list the elements in their hiring strategies that included gender, diversity and ethnicity considerations (HS Q14ab). The identified strategies and related elements, in addition to UFA, were

- *recruiting*: advertising positions in women-targeted newsletters; asking all female applicants for reference letter, broadening recruiting posts
- *hiring process*: making special efforts in candidate selection and interview decisions; getting all regular faculty to be on the departmental appointment committee; making sure the search committee is as representative as possible; having explicit discussions at department meetings before generating short lists; ensuring qualified women be represented on short lists; ensuring the presence of a female faculty member at lunch or dinner for female interviewees; highlighting the supportive departmental environment for women faculty during interviews with female applicants
- *principles*: merit-based employment and commitment to equity
- *decision-making*: giving special considerations to under-represented groups in the case of equal merit between two candidates; allowing flexibility in rank for appointment of applicants from under-represented groups who possess exceptional qualifications; allowing flexibility when the slot was specially for a woman.

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[12] NSERC program supporting hiring and retention of women and aboriginal researchers; see www.nserc.gc.ca/sf_e.asp?nav=sfnav&lbi=c7

- ***two-body problem***: removing research area considerations when evaluating spouse.

4. SALARY AND RETENTION

4.1 Salary

Faculty members were asked to rate their salary compared to peers in their departments in the last five years (FS Q4). Of the total respondents, 54% reported that their salary was "average" compared to peers, and 25% and 21% responded with "below average" and "above average" respectively.

MCS respondents reported significantly more positively about their salary than PS respondents when comparing to their peers in their departments (FS Q4). While a slightly higher percentage of the MCS respondents than that of the PS respondents (55% versus 50%) reported "average," 31% of the MCS respondents, compared to 14% of the PS respondents, perceived their salary as "above average."

Table 4 shows the 2004 average salaries of male and female faculty members by rank and departmental grouping as a percentage of the average salaries of their respective departmental group and rank. In MCS, female assistant and associate professors had average salaries that were 3% and 11% higher than their male counterparts. In PS, the average salary of female instructors was 3% above that of male instructors, while among assistant and associate professors, females had average salaries approximately 1% less than those of males. In LS, female instructors and assistant professors earned 3% more than their male counterparts, while female associate professors earned 15% less than male associate professors. Comparing all full professors, the average salary was about the same for males and females[13]. Average salaries by departmental group were not reported due to very small numbers in some cases.

Table 4: **Average salaries for male and female faculty members as a percentage of the average salaries of their departmental group and rank**

|	MCS		PS		LS	
	Female	Male	Female	Male	Female	Male
Associate Professor	110%	99%	99%	100%	92%	107%
Assistant Professor	102%	99%	99%	100%	102%	99%
Instructor/Sr. Instructor	*		102%	99%	101%	98%

* There was no female instructor or senior instructor in MCS.

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[13] Due to a very small number of female full professors in the nine departments (only 5), this finding needs to be viewed with caution. The breakdown by department grouping is not included in Table 4, due to these small numbers.

Figure 12 shows that there was gender difference in salaries from 2005 when compared by seniority. The difference widened as the number of years from getting PhD increased. For faculty with zero to six years from PhD, the average salary was slightly higher for females than for males. For faculty with seven years and more from PhD, females had lower average salaries. Female faculty with 25 years and more from PhD earned, on average, $30,440 less than males in this group, but the significance of this finding is limited due to the very small number of females in this group. Since rank was not reported with these data, it is impossible to check whether rank was a factor influencing salaries.

Figure 12:

Average salaries by gender and years from Ph. D. in 2004/2005
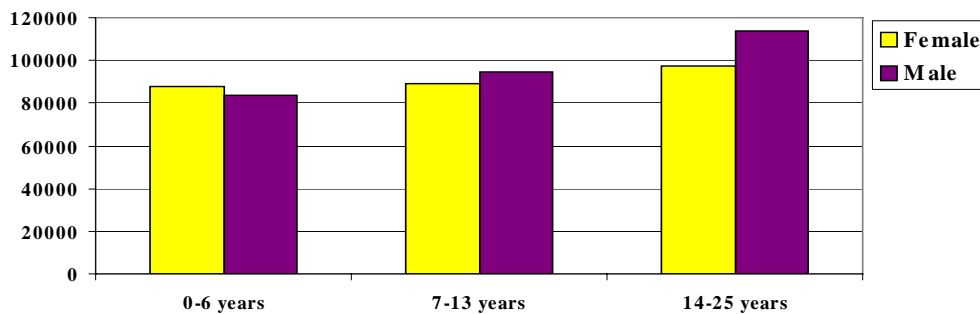
Significant difference was found between full professors and associate professors in perception of salary compared to peers in their departments (FS Q4). While almost the same proportion (48%) of the full professor and associate professor respondents reported "average," a significantly higher percentage of full professors perceived "above average" than associate professors (34% versus 14%).

Focus Group comments noted a feeling of second-class citizenship among some instructors, given the divergent salaries between the teaching and research streams.
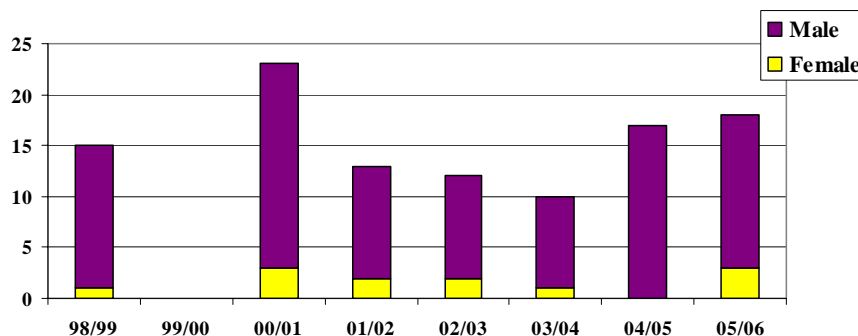
4.2 Retention

The numbers of faculty members who had received retention funding and the averages of the received retention funding from 1998 to 2005 are shown in Figure 13. Over the period, the percentages of female faculty members having received retention funding ranged from 0% (in 2004/05) to 17% (in 2002/03 and 2005/06). On average, females received $2,975 less than males. The annual average difference ranged from $739 (in 2005/06) to $7,441 (in 2004/05).
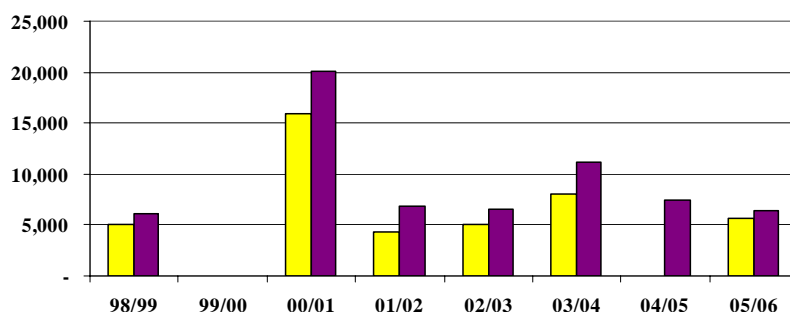
Figure 13:

Received retention funding: 1998-2005

Numbers of faculty having received retention funding:
1998-2005

Averages of received retention funding by gender:
1998-2005

Faculty members were asked to indicate whether they had ever sought outside positions since joining UBC and, if so, to report the reasons (FS Q36). Of the total respondents, 31% reported "yes," with 36% males and 14% females reporting having ever sought outside positions.

Low salary was a reason mentioned most often by male respondents. Other repeated reasons were heavy teaching loads, lack of opportunities for career advancement, lack of resources (funding, technical support), departmental climate (inadequate engagement with the university), and the "two body" problem.

Female respondents also reported financial issues (salary- and research-wise), teaching loads and department support as the reasons. In addition, they also mentioned unfair prejudice by university administration against work, difficulty in career advancement due to gender and scientific specialization that was different from senior department members, and intentions to be closer to family and go back to their home country.

In the Focus Groups, the cost of housing arose as an issue for retention.

5. DEPARTMENTAL CLIMATE, DISCRIMINATION AND HARASSMENT

A range of issues relating to working climate were covered in the assessment, with significant results falling into three categories: overall departmental climate, discrimination and harassment.

5.1 Departmental Climate

Faculty members were asked to rate various aspects of departmental climate, which were described by a battery of 11 "polar" adjectives placed on a four-point sliding scale (FS Q27). The adjectives were friendly vs. hostile, racist vs. non-racist, homogeneous vs. diverse, disrespectful vs. respectful, collegial vs. contentious, non-sexist vs. sexist, collaborative vs. individualistic, cooperative vs. competitive, homophobic vs. non-homophobic, threatening vs. supportive, and flexible vs. rigid.

In nine out of the 11 areas, 75% or more of the respondents reported on the positive side of the scale. Lower than the others were the responses in favour of "diverse" versus "homogeneous" (71%) and those in favour of "collaborative" versus "individualistic" (59%).

Significant differences by departmental grouping were found in seven out of the eleven areas regarding the departmental climate (FS Q27). As shown in Figure 14, PS respondents reported a significantly less "diverse" climate than LS respondents and a significantly less "non-sexist" and "supportive" climate than MCS respondents. PS respondents also perceived a significantly less "respectful," "cooperative." "flexible," and "promotes self-confidence" climate than both LS and MCS respondents. Two of the examples are shown in Figure 14.

Figure 14:

Perceptions of professional climate by departmental grouping
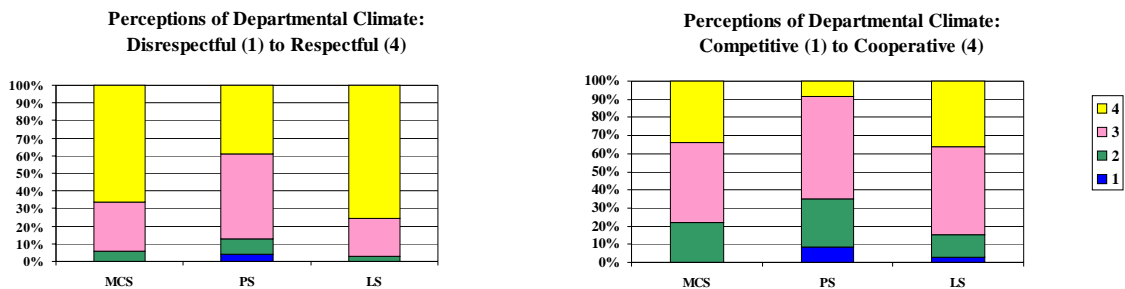
Male respondents reported a more positive perception that departmental reviews addressed diversity (FS Q32.9), with 42% male respondents and 25% female respondents indicating either "somewhat agree" or "strongly agree" with the statement that diversity was often addressed in departmental reviews. A significantly higher proportion of the

female respondents (36%) responded "strongly disagree" as compared to that of the males (15%).

Faculty members identified factors that contributed negatively and positively to the departmental climate (FS Q28). Positive comments included: strong sense of collegiality, collaborative, supportive, inclusive and caring community, enjoyable and friendly colleagues (faculty and staff), fantastic leadership (department heads and chairs), open and clear communication, and social activities. Repeated negative comments were: fragmentation of the department, some hostile actions leading to tension and space allocation problems, undue reward of those faculty members who neglected teaching and administrative duties in favour of research, unfairness in teaching loads, overwhelming or unevenly distributed administrative work loads, and racist comments and slurs.

5.2 Discrimination

Faculty members were asked to indicate whether they had perceived any discrimination in nine job-related areas within the past five years on the basis of ethnicity, gender, sexual orientation, physical disability, religious affiliation, and age (FS Q35). The nine areas were hiring, tenure or promotion, salary, space/equipment/resources, access to administrative staff, graduate student assignments, mentor availability, and leadership opportunities.

Between 88% and 94% of the respondents did not perceive discrimination of any kind in access to administrative staff, graduate student and teaching assistant assignments, tenure or promotion, and mentor availability. However, discriminations were reported in the areas of salary, space/equipment/resources, hiring, and leadership opportunities (Figure 15). The figure shows that salary- and leadership-related discriminations were most highly based on gender and that resources- and hiring-related discriminations were most highly based on age or a combination of these factors.

Figure 15:

**Percentages of respondents perceiving job-related discrimination
on the basis of ethnicity, gender and age**

Across all nine job-related areas (FS Q35), a greater percentage of males than females reported no discrimination. Significant gender differences were found in the areas of salary, space/equipment/resources, leadership opportunities, and access to administrative staff.

Gender differences were also found in the perceived basis for discrimination (FS Q35). A greater proportion of the male respondents reported age-based discrimination in salary, space/equipment/resources, and access to administrative staff. A greater proportion of the female respondents reported gender-based discrimination in salary, access to administrative staff, and mentoring availability. For hiring, females reported age-, ethnicity- and gender-based discriminations, or a combination of these, approximately twice as often as males. For leadership opportunities, females reported age-, ethnicity- and gender-based discriminations, or a combination of these, over six times as often as males.

Focus Group participants emphasized the importance of having women represented on committees to help create mechanisms that ensure equity in hiring and nomination decisions. Federal funding agencies and UBC often require one or two women on grant review committees to ensure fairness and compliance with employment equity or anti-discrimination laws. This requirement, however, puts an extra demand on women.

5.3 Harassment

When asked about their perceptions of harassment[14] in the departments in the past five years (FS Q32.11, 12, 13), the vast majority of the respondents reported that they "somewhat" or "strongly" agreed that cases of harassment were rarely experienced (27% and 64%, respectively) and that reporting harassment was encouraged (60% and 25%, respectively). A majority of respondents indicated that they "somewhat" (29%) or "strongly" (37%) agreed that cases of harassment were rarely reported.

Figure 16 shows that all LS respondents and 94% MCS respondents strongly or somewhat agreed with the statement that harassment had been rarely experienced (FS Q32.11), whereas 80% PS respondents had the same perceptions.

Figure 16:

**Perception that cases of harassment are rarely experienced: Differences among departmental groupings**
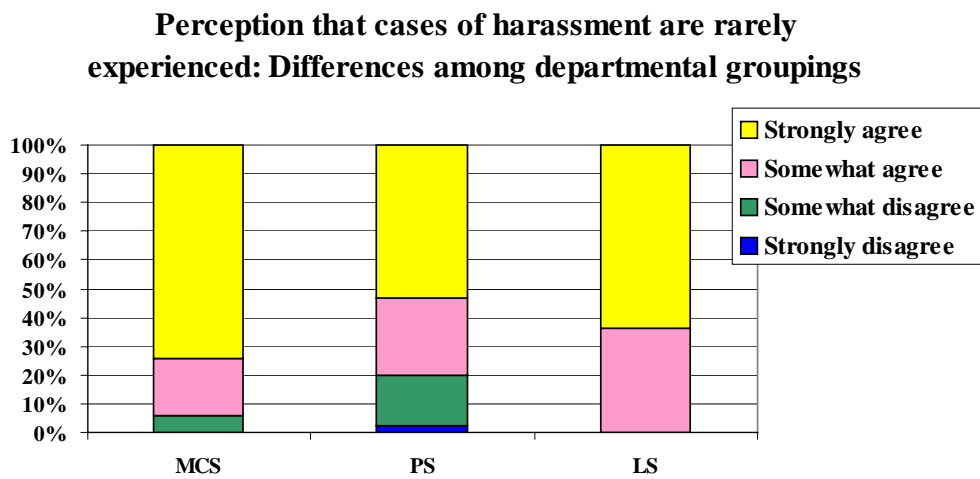
Faculty members were asked to indicate whether they had ever experienced cases of harassment at UBC and whether they were reported (FS Q33). Figure 17 shows that a higher percentage of females than that of males experienced harassment and that this was true in both reported and non-reported cases of harassment.

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[14] The definition of "harassment" used in the Faculty Survey, i.e., "physical, visual or verbal behaviour directed against a person for which there is no bona fide and reasonable justification according to the UBC Equity Policy" (see www.equity.ubc.ca), is only a partial definition of the UBC Harassment Policy because it leaves out a discussion of personal harassment, which is not covered under the *BC Human Rights Code* in the UBC policy. This means that some respondents may have reported personal harassment which is not covered by the *BC Human Rights Code*.

Figure 17:

Reported experiences of harassment
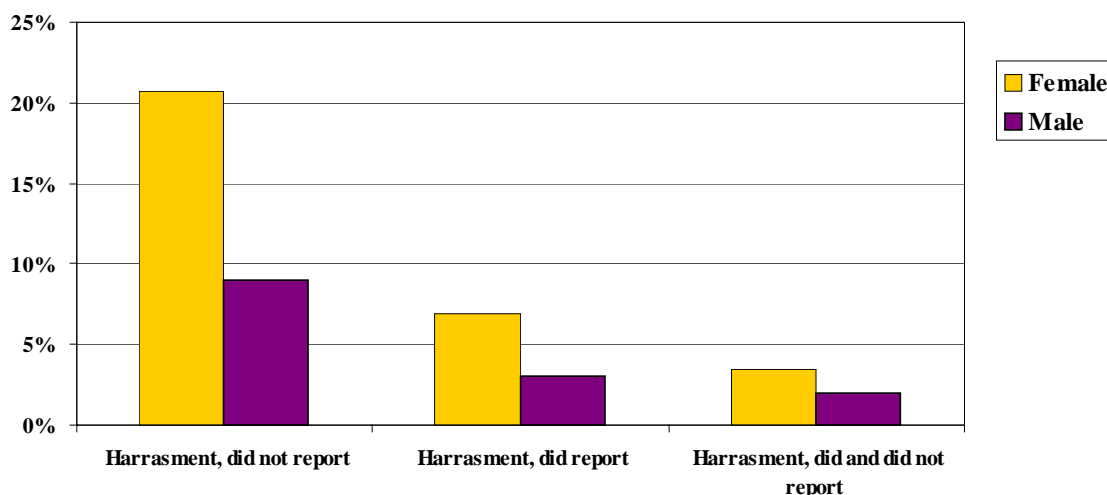
A significantly higher percentage of associate professors (84%) than that of both assistant professors (50%) and full professors (63%) agreed "somewhat" or "strongly" that harassment had been rarely experienced (FS Q32.11).

Department heads were asked to provide the numbers of harassment cases reported in the past five years (HS Q19). Three out of the nine department heads indicated that harassment cases had been reported.
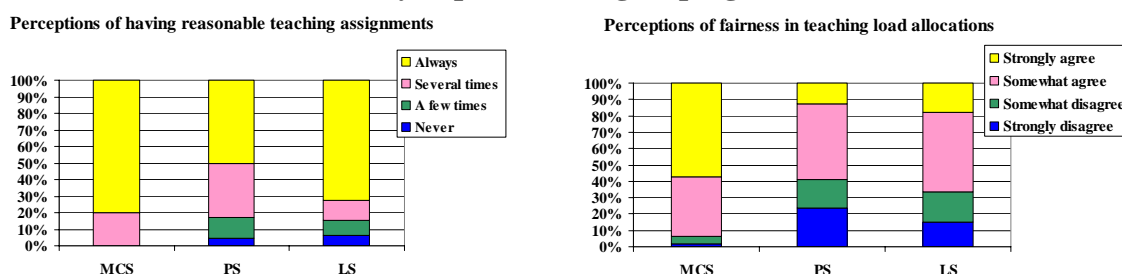
6. TEACHING AND MENTORING

6.1 Teaching Loads

When asked about their teaching loads compared to peers in their departments in the past five years (FS Q7), 68% of the total respondents reported that their teaching loads were "average," and 12% and 19% indicated "below average" and "above average" respectively when compared with peers.

Faculty members reported how many times they had reasonable teaching assignments compared to peers in their departments in the past five years (FS Q8). Two-thirds of the total respondents indicated that they "always" had reasonable teaching assignments. Those reporting "several times," "a few times" and "never" accounted for 23%, 7% and 3%.

Figure 18:
Perceived reasonable teaching loads and fairness in distribution by departmental grouping

Perceptions of having reasonable teaching assignments

Legend: Always, Several times, A few times, Never

Perceptions of fairness in teaching load allocations

Legend: Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree

There were significant differences among departmental groupings in respondents' perceptions of having reasonable teaching assignments (FS Q8) and fairness in teaching load distribution (FS Q32.10). Figure 18 shows that MCS respondents perceived having had reasonable teaching assignments significantly more often than their PS counterparts and rated distribution of teaching loads as significantly fairer than both PS and LS respondents.

Focus Group participants identified inequitable teaching loads as one of the major challenges FoS faced, as this created a two-class system and bred resentment among departmental members.

6.2 Teaching Release

Department heads were asked to provide percentage of teaching release for administrative service, percentage of teaching release for research or non-administration reasons, and gender for each of faculty members in their departments who had received releases for more than five of the past 10 years (HS Q9). As shown in Table 5, all the recipients of these releases were male.

Table 5: **Number of faculty members granted teaching release in 1995-2005**

	Release for administrative service		Release for research or non-administrative reasons	
	100% release	**Less than 100% release**	**100% release**	**Less than 100% release**
Male	4	5 (release ranging from 25% to 90%)	5	7 (release ranging from 33% to 66%)
Female	0	0	0	0

Focus Groups reported that some individuals were able to buy out teaching, using funding from external grants. This suggests that those with recurring course buy-outs may not have been reported, as these buy-outs may not have been perceived as leaves. Transparency on decision-making in teaching load allocation and clarity on buy-out

policies were recommended. Lack of transparency suggests necessity of further investigation.

6.3 Sabbatical Leaves

Department heads were asked to report whether there was a policy in their departments for approval of sabbatical leave and, if so, to provide a written sabbatical leave policy (HS Q7a). Five out of the nine department heads responded "yes" to this question, but only one attached a written sabbatical leave policy. The common comments included: evaluation by the department head on a case-by-case basis, ensuring that courses and graduate student supervision would be covered while on leave, availability of funds for sessionals, and granting reasonable requests.

Department heads were also asked how the sabbatical leave policy was communicated to faculty in their departments (HS Q7b). Two of the nine department heads responded with "n/a." One of the departments reported that, each year, eligible faculty members were contacted and provided with a copy of the UBC policy and a checklist of things that would go with their applications. The other departments did not address the question directly, but several of them suggested that faculty members initiated the process.

6.4 Mentoring

When asked whether their department had a formal mentoring program/policy (FS Q10), 62% of the total respondents reported "yes" and 38% indicated either "don't know" or "no" to this question.

Department heads were asked whether there was a mentoring program/policy in their departments and, if so, to provide a written mentoring policy (HS Q5). All but one department head reported that they had a mentoring policy; however, only five departments attached their mentoring policy to the survey. The provided policies varied in substance and clarity.

Gender difference was found in informal or formal mentoring that faculty had received at UBC in the areas of teaching, supervising graduate students, and balancing work and family (FS Q11). A significantly higher percentage of female respondents than that of males reported having received "some" or "a lot" of mentoring in these areas.

A higher percentage of female respondents than that of males reported "somewhat" or "very dissatisfied" with the amount and quality of both informal and formal mentoring provided to them (FS Q12) . Males reported having "mentors available but not needed" more frequently than females on all types of mentoring.

Significant differences were found among respondents by years from obtaining PhD who had in received mentoring in writing grant proposals, obtaining necessary resources/paper work, or supervising graduate students (FS Q11). In these areas, those faculty members with 7 to 13 years and/or 14 to 25 years from PhD reported having received significantly

more mentoring than those with more than 25 years from PhD. This pattern may reflect recent trends of increased mentoring for faculty.

# 7. BALANCE OF WORK AND PERSONAL LIFE

7.1 Child Care and Family Leave

Faculty members were asked to indicate whether they had children and, if so, to report the number of children and the current ages of the youngest and oldest child (FS Q21). Overall, 66% of the respondents (85 out of 129) reported having children; 52% of females and 70% of males indicated having children. An average of 1.22 children was reported by the 85 respondents with children. The average ages of the youngest and oldest child were nearly 12 years old and a bit over 15 years old respectively.

Faculty members were asked to what degree career considerations had affected their decisions around having children (FS Q26). Figure 19 shows a significantly higher percentage of females (38%) than that of males (11%) that reported career considerations affecting their decisions "a lot."

Figure 19:
Impact of career considerations on decisions around having children
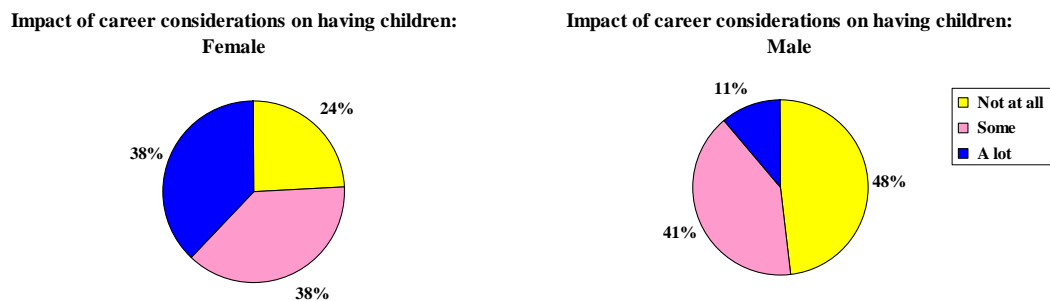
Also, a significantly higher percentage of assistant professors (42%) than that of full professors (13%) reported that career considerations had affected their decisions about having children "a lot" (FS Q26). A significantly greater proportion of PS respondents (28%) than that of LS respondents (9%) indicated "a lot" of impact of career considerations on having children. In the Focus Groups, women reported having made conscious choices to put their careers or family on hold. An observation of one department reported 14 out of 15 women were junior tenure-track appointments with no children.

Faculty members were asked whether they felt UBC had provided adequate access to child care for their children (FS Q23). Of the 54 respondents with children, who indicated that the question was applicable, 46% reported that UBC had provided adequate access to

child care. The Focus Groups reported that the lack of access to adequate on-site child care, due to long waiting lists, was an issue for recruiting.

When asked whether they had taken maternity/parental leave in the last five years and, if so, how long the most recent leave was (FS Q24), a significantly higher percentage of females (53%) than that of males (11%) reported having taken parental leave in the previous five years (Figure 20).

Figure 20:

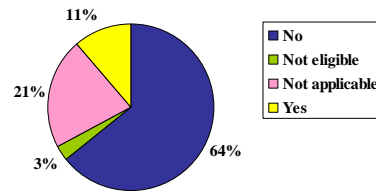**Percentages of respondents taking maternity/parental leave:**
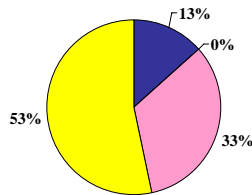
Table 6 suggests that the length of the most recent family leave for the female respondents was typically four to seven months, whereas the leave for the male respondents was typically one to three months.

*Table 6:* **Number of respondents reporting the length of the most recent maternity/parental leave**

	1-3 months	4-7 months	8-11 months	More than 12 months
Female		7		1
Male	7		1	

In the Focus Groups, it was recognized that while women and men both shared family responsibilities, the societal expectation placed a greater burden on women.

Faculty members who had taken maternity/parental leave in the last five years were asked to report their faculty responsibilities during the most recent leave (FS Q25). Figure 21 suggests that out of the 16 respondents who had taken family leave during the past five years, 31% and 38% spent "a lot of the time" on research and graduate student supervision respectively while taking the leave; 63%, 56% and 44% spent "some time" on administration, research, and graduate student supervision; and 94% spent no time on teaching.

Figure 21:

Number of respondents reporting responsibilities during maternity/parental leave
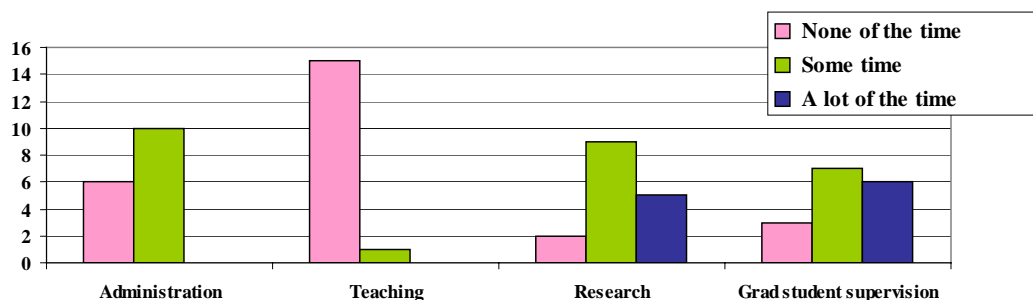
The Focus Groups noted that taking maternity/parental leave had a negative effect on women's careers and that even though 12-month maternity/parental leave was available, it was rarely taken by UBC faculty, but almost always taken by UBC staff. The fact that faculty reported teaching or administrative duties during maternity/parental leave underlines the need for a review of policy.[15]

Federal and provincial government guidelines[16] indicate that it is the responsibility of the employer to maintain the conditions of an employee's position during maternity/parental leave. However, there is no UBC or FoS policy on how this is done, especially with regard to maintaining research labs and graduate student supervision.

Another concern raised in the Focus Groups was the impact of maternity/parental leave on sabbatical leave. In one instance reported, a female faculty took six days more than her permitted six months maternity leave,[17] which then resulted in her sabbatical being pushed back an entire six months.

Department heads were asked whether there was a policy in their department on maternity/parental leave beyond UBC policy (HS Q6). None of the departments reported having any other policy than UBC policy on maternity/paternity leave.

In 2004, an ad-hoc group of faculty members from the Faculty of Science, appointed by the Dean and chaired by Dr. Sarah Otto, made some recommendations on parental leave-related issues in their *Report on Parental Leave Policies at UBC[18]*. This report may serve as a basis for developing departmental policies on parental leave.

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[15] Top-ups for maternity/parental leave (Supplemental Unemployment Benefits, known as SUB plan, see www.hr.ubc.ca/faculty_relations/agreements/loa.html) come from a separate university fund and are not from the departments. Departments keep all the funds from a person's salary while on leave, and the use of these funds is at the head's discretion.

[16] The guidelines can be found at www.hrsdc.gc.ca/en/ei/application/right_responsibilities.shtml, www.labour.gov.bc.ca/esb/igm/esa-part-6/igm-esa-s-54.htm.

[17] Current federal regulations allow for 12 months of maternity/parental leave.

[18] The document can be found at www.science.ubc.ca/content/view/8/19/

When asked how many times, in general, departmental events were scheduled to accommodate family care responsibilities (FS Q22), 27% and 31% of the respondents reported "all the time" and "several times" respectively.

Department heads were asked whether their departments made efforts to avoid conflicts between departmental events and child care/family care/elder care responsibilities (HS Q8a). Eight out of the nine departments provided a positive response to the question. Seven departments reported procedures that were perceived as helpful in avoiding such conflicts (HS Q8b). The procedures included: scheduling events at mid-day or during regular business hours, offering flexibility and closely coordinating with instructors in course scheduling, and canvassing for most convenient times well in advance.

In the Focus Groups, the issue of accommodations was raised. Some participants shared that they were not supported to observe religious holidays and were even refused assistance to make alternative arrangements.

7.2 Partner Employment

Faculty members reported how much effort they perceived their departments and UBC had made in assisting to find a faculty position or university appointment for their partners (FS Q17). Of the 40 respondents to whom this question was applicable, 48% and 13% indicated that their departments and UBC had made "a lot of effort" and "some effort" respectively in helping their partners find employment at UBC. When asked how much effort they perceived their departments and UBC had made in assisting to find suitable employment for their partners anywhere in Vancouver (FS Q18), 24% and 13% of the respondents relevant to the question indicated "a lot of effort" and "some effort" respectively. Of those 89 respondents to whom the question was not applicable, 88% reported that their partners did not need assistance from UBC.

Department heads reported whether they assisted candidates/new hires in their departments in finding suitable employment anywhere in Vancouver for their partners (HS Q13). Eight out of the nine departments responded with "yes" to the question. The reported steps they took in the assistance were: referring candidates to UBC resources; exploring employment possibilities through departmental committees, employment agencies or their own contacts; and providing temporary academic and administrative employment. Some department heads were not aware that some university resources were already available. Further investigation revealed that in the late 1990's the Senior Faculty Opportunity Fund enabled departments to appoint at senior ranks women and minorities with exceptional qualifications (UBC Equity Office annual reports 1995-1999). At least two department heads recommended that UBC have an office and funds to support departments in addressing spousal issues.

When asked about their partners' current employment status (FS Q19), a higher percentage of males than females (21% versus 3%) reported that their partners were not currently employed. A higher percentage of females than males (62% versus 51%) indicated that their partners were employed full-time.

The Focus Groups recommended that a specific resource person be appointed to deal with immigration matters for new hires.

UBC Human Resources reported that departments were repeatedly being asked by job candidates to provide spousal/partner career assistance.[19] The *Trek 2000* and *Trek 2010* documents both refer to eventual implementation of a "spousal job placement program." The *Trek 2000* document specified targets in the recruitment and retention of faculty and staff that included implementation of a spousal job placement program by summer in 1999.[20]

The *Trek 2010* document, however, has dropped this issue from its list of recruitment and retentions goals.[21] The Vice-President, Research, simply directs new recruits to contact their department head/director for spousal job placement assistance.[22] Thus, to date, each unit or department appears to have its own policies, and no general UBC program is in place—particularly when it comes to spouses seeking employment outside of UBC. If UBC is to remain competitive with top universities in Canada and abroad, a central and uniform policy would be of great help.

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[19] The document of *Reinventing Recruitment, Hiring & Orientation at the University of British Columbia* can be found at www.hr.ubc.ca/files/pdf/bpr/report_17sep2004.pdf
[20] www.trek2000.ubc.ca/targets/1999.html
[21] www.trek2000.ubc.ca/targets/index.html
[22] www.research.ubc.ca/FacultyBefore.aspx

Appendix

Demographic information about total faculty of FoS, total survey respondents, and total Focus Group participants is shown in Figures I and II.

Figure I:

Total faculty, total survey respondents, and total focus group participants by gender, departmental grouping and rank
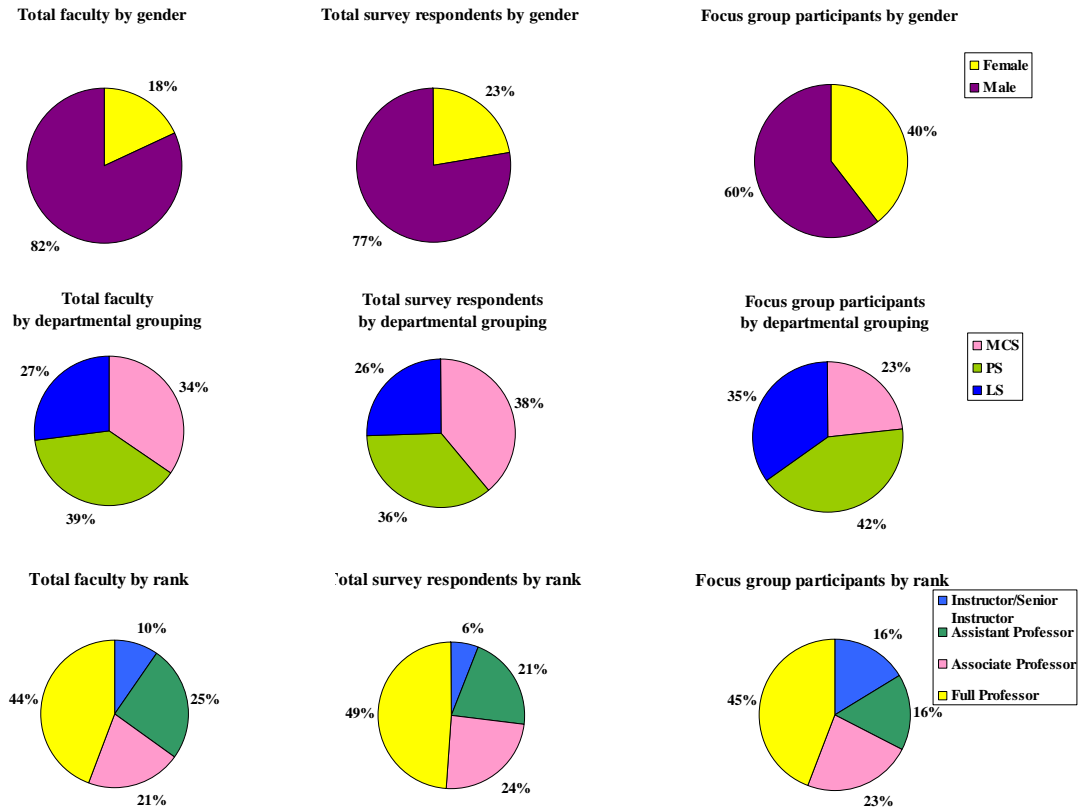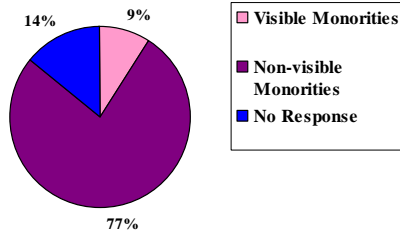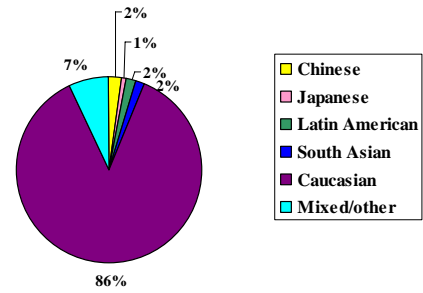
Figure II:

Total faculty and total survey respondents by ethnicity: 2006

Total faculty by ethnicity: 2006

☐ Visible Monorities	
■ Non-visible Monorities	
■ No Response	

Total survey respondents by ethnicity

☐ Chinese	
☐ Japanese	
■ Latin American	
■ South Asian	
■ Caucasian	
☐ Mixed/other	

Note: Total faculty ethnicity data courtesy of UBC Equity Office.