Indicators and Dissemination

Question 2: What are the outcomes of institutional processes of recruitment and advancement for men and women?

Recruitment

- Number of faculty hired each year
  - Rank
  - Gender
  - Department
- Difficulties include:
  - Small Ns at department level

New Indicator

Advancement - Tenure

- Number of faculty awarded tenure vs. number who submitted packets
  - Gender
  - Department
- Refinement of original indicator #3: *tenure promotion outcomes by gender*
- Difficulties include:
  - Gathering data on tenure packets submitted
  - Small Ns at department level

Advancement - Promotion to Associate Professor

- Number of faculty who apply for promotion from assistant to associate professor vs. number promoted
  - Gender
  - Department
- *The same as previous indicator for most institutions!*
- Difficulties include:
  - Gathering data on promotions “applied for”
  - Small Ns at department level

New Indicator

Advancement - Promotion to Full Professor

- Number of faculty who apply for promotion from associate to full professor vs. number promoted
  - Gender
  - Department
- Difficulties include:
  - Gathering data on promotions “applied for”
  - Small Ns at department level

New Indicator

Advancement – Time in Associate Rank

- Number of tenured associate professors in each of 6 time categories for years-in-rank
  - 0-2 years; 3-5 years; 6-8 years; 9-11 years; 12-14 years; 15+ years
  - Gender
  - Department
  - Initial rank at time of hire
- Refinement of original indicator #4: *years in rank by gender*
- Difficulties include:
  - No more mean/median reporting
  - Small Ns at department level

Table 5a: Years in Rank at the Associate Professor Level for STEM and SBS Faculty Hired as Assistant Professors

	STEM				SBS			
Years in Rank	Women		Men		Women		Men	
	Number	% of Women	Number	% of Men	Number	% of Women	Number	% of Men
0-2								
3-5								
6-8								
9-11								
12-14								
15 or more								

Advancement - Attrition

- Number of faculty who leave
  - Exclude those who died or retired
  - Rank
  - Gender
  - Department
- Refinement of original indicator #5b: *attrition by gender*
- Difficulties include:
  - When does someone “leave”?
  - How do you tell the difference between retiring and other attrition?
  - Small Ns at department level

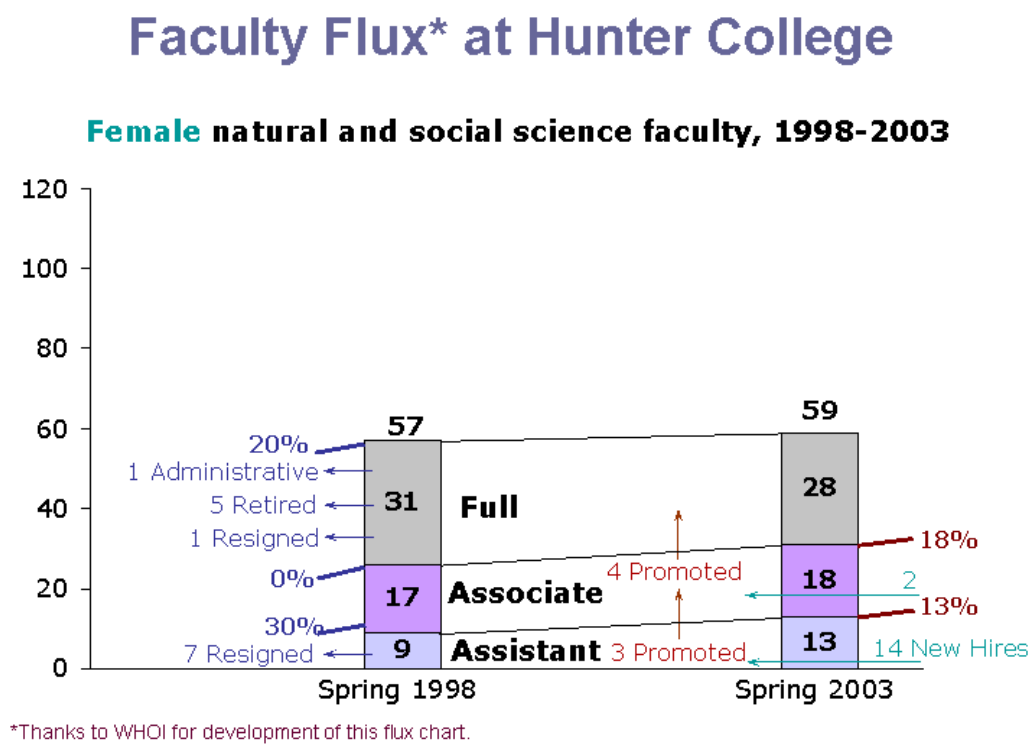
Advancement – Cohort Analyses

- Compare rates of advancement by gender factoring in promotion and attrition simultaneously
  - Periodic report
  - Many different ways to track!

New Indicator

Cohort Analyses – Example 1

- Flux Charts (e.g., Hunter College)



Cohort Analyses – Example 2

- Tables (e.g., University of Michigan)

U of M Assistant Professor Cohort 1990 – 1997, Outcomes by Gender*

	College of Engineering		Natural Sci (LSA)		Medical School	
	M	F	M	F	M	F
Promoted	36	7	32	6	11	10
Left	23	7	17	7	12	2
Off Track	2	0	3	0	0	0
Total N	61	14	52	13	23	12

Note: Left = Retired & Terminated
* Outcomes are as of AY2004

Cohort Analyses – Example 2

- Tables (e.g., University of Wisconsin-Madison)

Table 3b. Tenure Promotion Outcomes by Gender, 2004

Physical Sciences

Entering Cohort	Women Total Hired	Women % Still Probation	Women % Left w/o Tenure	Women % Tenured	Men Total Hired	Men % Still Probation	Men % Left w/o Tenure	Men % Tenured
1987-91	**17**	**0.0%**	**11.8%**	**88.2%**	**87**	**0.0%**	**24.1%**	**75.9%**
1991-95	**7**	**0.0%**	**57.1%**	**42.9%**	**35**	**0.0%**	**20.0%**	**80.0%**
1995-99	**10**	**0.0%**	**40.0%**	**60.0%**	**34**	**0.0%**	**11.8%**	**88.2%**
1999-03	**15**	66.7%	6.7%	26.7%	**76**	65.8%	7.9%	26.3%
2003-07	12	100.0%	0.0%	0.0%	23	95.7%	0.0%	4.3%

Biological Sciences

Entering Cohort	Women Total Hired	Women % Still Probation	Women % Left w/o Tenure	Women % Tenured	Men Total Hired	Men % Still Probation	Men % Left w/o Tenure	Men % Tenured
1987-91	**29**	**0.0%**	**44.8%**	**55.2%**	**101**	**0.0%**	**30.7%**	**69.3%**
1991-95	**26**	**0.0%**	**26.9%**	**73.1%**	**82**	**0.0%**	**24.4%**	**75.6%**
1995-99	**23**	21.7%	8.7%	69.6%	**49**	6.1%	24.5%	69.4%
1999-03	**46**	80.4%	13.0%	6.5%	**86**	83.7%	8.1%	8.1%
2003-07	18	100.0%	0.0%	0.0%	30	100.0%	0.0%	0.0%

Cohort Analyses – Example 3

- Event History Analysis
  - Basic variables: date of hire, date of tenure/promotion,date of departure, gender
  - Additional controls: department, part-time appointment, tenure clock extension, date of PhD, productivity, others?

Table 1: Cox Proportional Hazard Model with Different Variables for Childbearing

	M1 with "num of kids"			M2 with "duration"			M3 With "time dependent var"		
	Haz. Ratio	Std. Err.	P>z	Haz. Ratio	Std. Err.	P>z	Haz. Ratio	Std. Err.	P>z
With 0 kid[1]									
With 1 kid	**1.40**	0.35	0.18						
With >= 2 kid	**1.20**	0.25	0.37						
Aduration[2]				**0.997**	0.01	0.69			
Before Child									
ChildY6							**0.43**	0.12	0.00
ChildO6							**0.90**	0.15	0.54
Age30-39									
Age40-59	0.47	0.34	0.30	0.51	0.37	0.35	0.57	0.42	0.44
Age50+	0.35	0.26	0.15	0.40	0.29	0.21	0.44	0.33	0.27
Male	1.00								
Female	1.10	0.21	0.62	1.04	0.19	0.82	1.05	0.19	0.79
noS/PUWMad									
WorkUWMad	1.20	0.20	0.27	1.23	0.20	0.21	1.20	0.19	0.26
PHS									
BIO	0.60	0.12	0.01	0.58	0.12	0.01	0.55	0.11	0.00
HUM	0.66	0.15	0.07	0.64	0.15	0.06	0.62	0.14	0.04
SOC	0.88	0.19	0.54	0.88	0.18	0.53	0.83	0.18	0.39
Model fits:									
loglikelihood	-923.70			-942.55			-931.59		
AIC	1865.39			1901.10			1881.19		
BIC	1898.17			1930.35			1915.91		

Notes:
1. All the covariates here are categorical variables, except Aduration which has a person-year scale. In each group of categorical variables, the first bolded category is the baseline.
2. Aduration is the accumulated person-years devoted to childbearing after a person got tenure.