

Diversity Committee Report

Summer Policy Council Meeting 2012

Submitted by

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Executive Summary

This report provides an overview of the System Dynamics Society demographics for 2011 membership and Diversity Committee activities. Total membership increased from 1067 members in 2010 to 1125 in 2011. Overall, the reporting of demographic information remained high at 89%. Moreover, updated information on member demographics continued to improve demographic estimates for prior years. Results using revised estimates show a steady increase in the percentage of women, from 11.8% in 2004 when the Diversity Committee was first formed to 17.5% in 2011, while the age distribution has remained relatively stable. However, student membership appears to be declining from a peak of 21.3% in 2007 to 17.8% in 2011. A social network analysis study of the System Dynamics Society membership is proposed for 2012-2013 to better understand the relationships between the existing social networks and the diversity of the field.

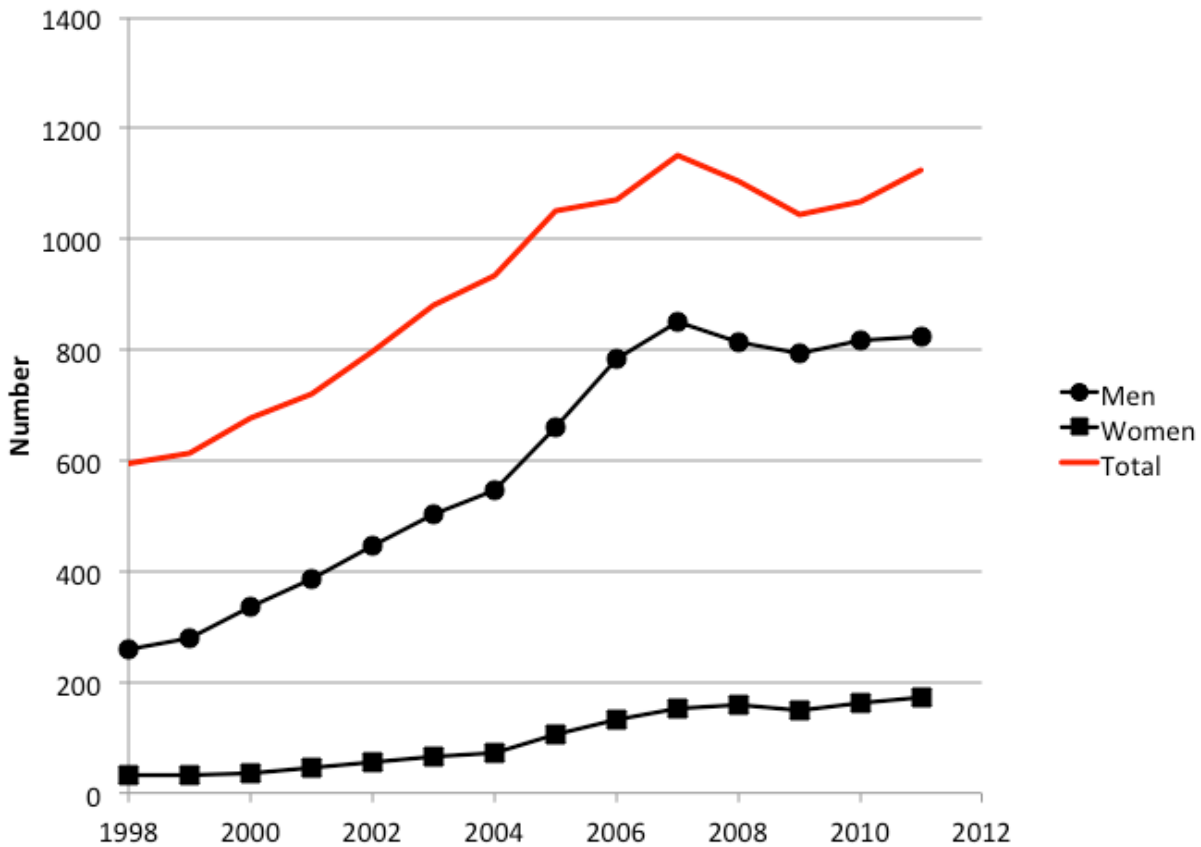
This report summarizes membership demographics for the System Dynamics Society through the 2011 calendar year. Reports prior to 2011 used a July snapshot of the membership database. However, since many members join or renew their membership as part of the conference registration fees, the results for the present year were distorted. To address this limitation and facilitate better year-on-year comparisons, starting in 2011, membership demographics are reported based on a snapshot of the membership database from the last complete calendar year.

It is important to note that some new members and conference participants elect to not disclose demographic information the first year they join the society or attend a conference, but in subsequent years voluntarily provide demographic information. As a consequence, the percentage of missing data for a particular year tends to decrease with each additional year. However, no substantial differences were found in the trends based on the 2011 snapshot versus the 2010 snapshot. Hence, this report uses data from the 2011 snapshot.

Overall Membership Demographics and Trends

Total membership increased slightly from 1067 in 2010 to 1125 in 2011 (see Figure 1 and Table 1), with an increase in both men and women.

Figure 1 Membership by Year and Gender



Membership by Gender and Year

Figure 2 shows the composition of membership by gender and year using several estimates, including the 2004 report to the Policy Council based on gender imputation from names, 2005 membership

survey, and data from the revised membership forms asking for demographic information. The number and percentage of women members has continued to increase from 11.8% in 2004 to 17.5% in 2011 (see Figure 2 and Table 1).

Figure 2 Composition of Membership by Gender and Year as Percentage

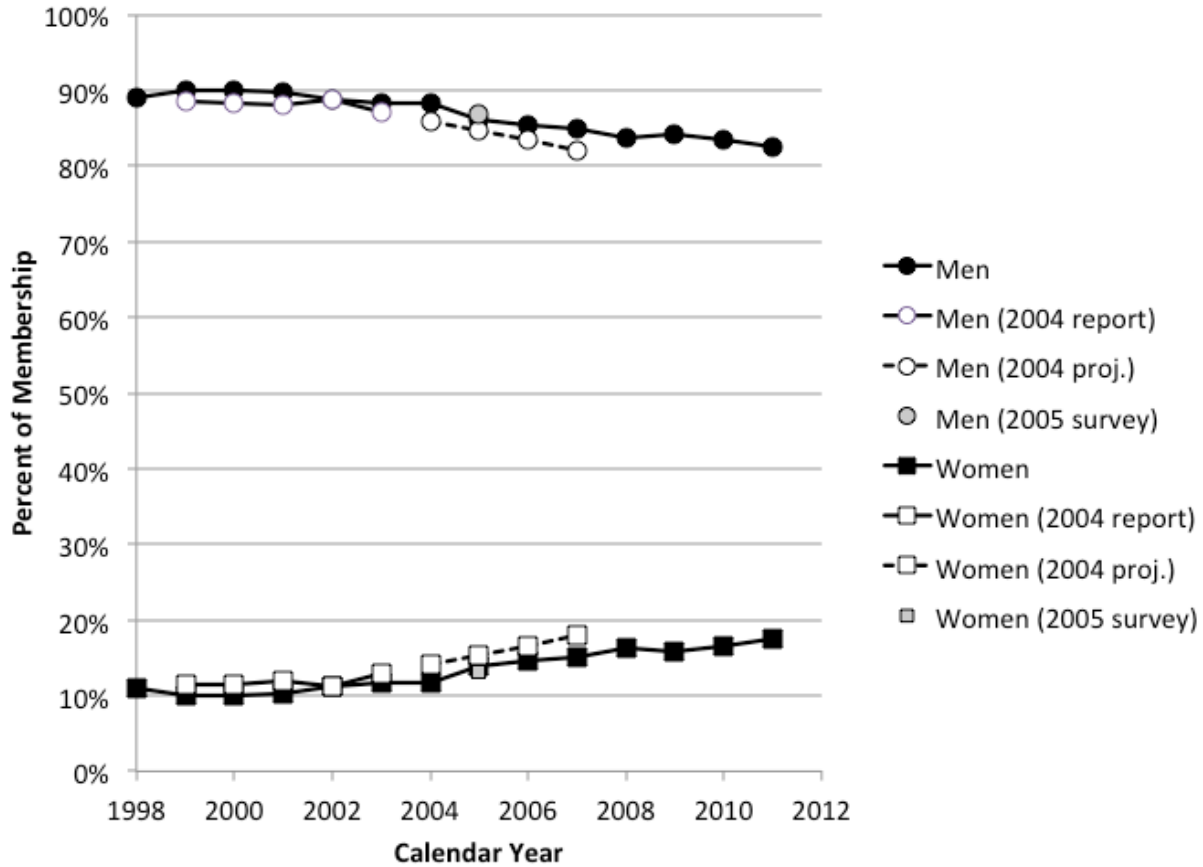


Table 1 Membership by Gender and Year

Gender	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Women ¹	56 11.2%	66 11.6%	73 11.8%	107 13.9%	134 14.6%	151 15.1%	158 16.3%	149 15.8%	163 16.6%	174 17.5%
Men ¹	445 88.8%	503 88.4%	547 88.2%	661 86.1%	785 85.4%	852 84.9%	813 83.7%	795 84.2%	817 83.4%	823 82.5%
Unknown ²	296 37.1%	311 35.3%	314 33.6%	282 26.9%	151 14.1%	149 12.9%	135 12.2%	99 9.5%	87 8.2%	128 11.4%
Total	797	880	934	1050	1070	1152	1106	1043	1067	1125

¹ Reported by frequency and as a percent of known gender. ² Reported by frequency and as a percent of total membership. ³ Based on 2011 membership data as of December 28, 2011.

Membership by Age

In contrast to last year's report, which suggested shifts in the age distribution of members, analysis of data from the 2011 snapshot suggests that the age distribution of membership is relatively stable (see Table 2). There could be a variety of reasons for changes in age distribution unrelated to actual demographics of the System Dynamics Society. Probably the most important reason to consider is a shift in age distributions due missing data. In contrast to gender, which is relatively stable, members must update their age related information each year for the reported distribution to be accurate. Hence, inconsistent patterns of members reporting age categories could lead to year-to-year fluctuations in the age distribution.

Conference Attendance by Gender

Conference attendance by gender showed a continued decrease in women attending the conference, down from a peak of 25.2% in 2008 to 11.5% in 2011 (see Table 3). However, it is important to note that the percentage of conference participants where gender is unknown is much higher than membership (45.6% unknown for conference participants vs. 11.4% for membership) and is sufficiently large that one should view small changes in the gender of conference participants with caution. The difference in reporting between conference participants and members can be explained by the greater tendency of new members to not report gender, and that people renewing their membership tend to eventually report their gender.

Table 2 Membership by Age Group and Year

Age	2007	2008	2009	2010	2011
Under 25 ¹	1.1%	1.3%	1.4%	1.1%	1.8%
25 to 29 ¹	5.1%	4.7%	4.9%	6.6%	7.1%
30 to 39 ¹	20.8%	20.4%	19.8%	22.1%	22.0%
40 to 49 ¹	24.1%	26.7%	25.3%	25.6%	24.9%
50 to 59 ¹	27.0%	25.4%	25.9%	23.6%	23.0%
60 or older ¹	21.9%	21.6%	22.7%	20.9%	21.2%
Unknown ²	14.4%	13.8%	10.7%	9.2%	12.6%

¹ As percent of known ages

² As percent of total membership

Table 3 Conference Attendance by Gender and Year

	2007	2008	2009	2010	2011
Women	80	61	65	30	61
% ¹	20.6%	25.2%	22.5%	19.2%	11.5%
Men	309	181	224	126	238
% ¹	79.4%	74.8%	77.5%	80.8%	79.6%
Unknown	168	143	194	150	251
% ²	30.2%	37.1%	40.2%	49.0%	45.6%
Total	557	385	483	306	550

¹ As percent of known gender.

² As percent of total membership

Students

Students represented an estimated 17.8% of the membership in 2011 continuing a decline from a peak of 21.3% in 2007. The vast majority of students were enrolled in doctoral programs (11.5% of membership) followed by students in masters programs (4.9% of membership).

Table 4 Student Membership by Year

	2007	2008	2009	2010	2011
Doctoral % ¹	121 14.5%	111 13.9%	121 13.5%	100 11.7%	97 11.5%
Masters % ¹	38 4.5%	31 3.9%	42 4.7%	41 4.8%	41 4.9%
Undergraduate % ¹	9 1.1%	13 1.6%	8 0.9%	6 0.7%	4 0.5%
Other % ¹	10 1.2%	5 0.6%	4 0.4%	9 1.1%	8 0.9%
Total students % ¹	178 21.3%	160 20.1%	175 19.6%	156 18.3%	150 17.8%
Unknown % ²	316 27.4%	306 27.7%	149 14.3%	215 20.1%	280 33.1%

¹ As percent of members with known student status.

² As percent of all members.

Diversity Committee Activities for 2012-2013

Beginning with the Athens Conference, the Diversity Committee has focused increasingly on understanding the trends in the international diversity of the System Dynamics Society by considering relationships between conference locations, chapters, and nationality of members. These analyses have been used to support discussions in the Policy Council over the last year and half on policies for selecting conference locations and how to promote system dynamics globally. In particular, prior analyses suggested that conferences provided, at best, a temporary boost to participation in the System Dynamics Society and were ultimately not the best mechanism for developing the field of system dynamics globally. Instead, it was argued, it was better to support the growth and diversity of the field by promoting chapter development in countries with new and emerging interests in system dynamics. The Policy Council has acted to improve chapter development through the allocation of chapter development fund.

While the distribution of members by national is tracked and known from year to year, very little is understood about the social network ties within regions, and between regions through the System Dynamics Society. Early focus groups run by the Diversity Committee highlighted the important role that networks plays in developing mentoring relationships along with training and professional opportunities. Hence, the Diversity Committee proposes to conduct a network analysis study of the System Dynamics Society to better understand the relationships between the existing social networks and the diversity of the field. It is expected that this will provide better information for the Policy Council for assessing the sustainability of regional activities and making better decisions about how and where to invest in chapter development to promote the diversity of the System Dynamics Society.