IEEE All Society Research Project: 2003
The Big Picture

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Corporate Strategy and Communications

Table of Contents

IEEE

Overview of Project

Overview of Project

- In February 2003, Society presidents endorsed a research project that would, for the first time, survey all 37 IEEE Societies.

- Each Society appointed a representative to this project team.

- The team of 37 Society representatives, one staff member from RAD, one staff member from TAD, and the two-person IEEE Research staff oversaw this project.

Research Goals

- Provide each Society with membership information in order to:
  - Plan for the future
  - Measure membership satisfaction with Society and IEEE
  - Develop strategies for membership growth and retention
  - Assess the value and importance of existing programs and services and of membership in general
  - Highlight "hot" content areas
  - Determine membership demographics (employment status, industry, years of professional experience, etc.)

- Understand IEEE Society members, in general, by combining the results from all 37 Society surveys.

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Methodology: Questionnaire Development

- The team came to a consensus on the format and wording of a template questionnaire.

- This template questionnaire provided a framework for each Society's questionnaire.

- The template contained both standard and customizable questions.

- Each Society representative customized the questionnaire for his or her own Society.

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Methodology: Stratified Sample

- IEEE Higher-grade Society members (no Life members, Students, or Affiliates) with an email address on file ($\cong$ 88%).

- 1,200 members were randomly selected per Society (with two exceptions for the two smallest Societies).

- A sample of 1,800 IEEE members with no Society membership received a similar survey.

- Each member only received one questionnaire regardless of how many Society memberships she or he holds.

- Comparisons were made to ensure representative samples.

Methodology: Data Collection

- Data collection began in early June 2003:

    1) Alert from Society Presidents (optional)
    2) Email invitation to each sample explaining the project along with the survey URL
    3) Reminder email sent approximately 14 days after the initial email message

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Response Rates

- Approximately 42,000 IEEE members were invited to participate in this survey.

- A total of 13,511 members responded for a response rate of 32%.

- Response rates by sample ranged from 26% to 43%.

- For a randomly-drawn, representative sample of members with an email address on file
  - the margin-of-error is within ±4% with a 95% degree of confidence

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Reporting Aggregate Society Data

- A stratified sample necessitates weighting the Society data to accurately represent the total population.
  - Population weights based upon the May 2003 Membership Development were used.
  - The weights represent the proportion of the total IEEE Higher Grade membership accounted for by each Society.

- When relevant differences between different-sized Societies are noted, the following categories apply:
  - Fewer than 5,000 HG members = Small (23)
  - 5,000 to 20,000 HG members = Medium (12)
  - 20,000+ HG members = Large (2)

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Society Sizing

From May 2003 Membership Development Progress Report -- Higher Grade Membership

Small		Medium	
Professional Communication	1,125	Engineering in Medicine & Biology	5,688
Oceanic Engineering	1,287	Engineering Management	5,740
Broadcast Technology	1,783	Lasers & Electro-Optics	6,519
Social Implications of Technology	1,786	Antennas & Propagation	6,959
Ultrasonic, Ferroelec, Freq Ctrl	1,902	Control Systems	7,251
Dielectrics & Electrical Insulation	2,026	Industry Applications	9,264
Geo Remote Sensing	2,056	Microwave Theory & Techniques	10,116
Reliability	2,193	Electron Devices	10,641
Magnetics	2,450	Solid-State Circuits	11,152
Nuclear Plasma	2,503	Circuits & Systems	11,960
Consumer Electronics	2,694	Signal Processing	13,184
Education	2,777	Power Engineering	19,241
Components, Pkg & Mfg Tech	2,924		
Industrial Electronics	3,245		
Systems, Man & Cybernetics	3,276	**Large**	
Information Theory	3,588	Communications	41,260
Instrumentation & Measurements	3,910	Computer	58,595
Vehicular Technology	3,949		
Electromagnetic Compatibility	4,008		
Robotics & Automation	4,051		
Neural Networks	4,145		
Aerospace & Electronic Systems	4,463		
Power Electronics	4,896		

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Detailed Findings

Respondent Profile

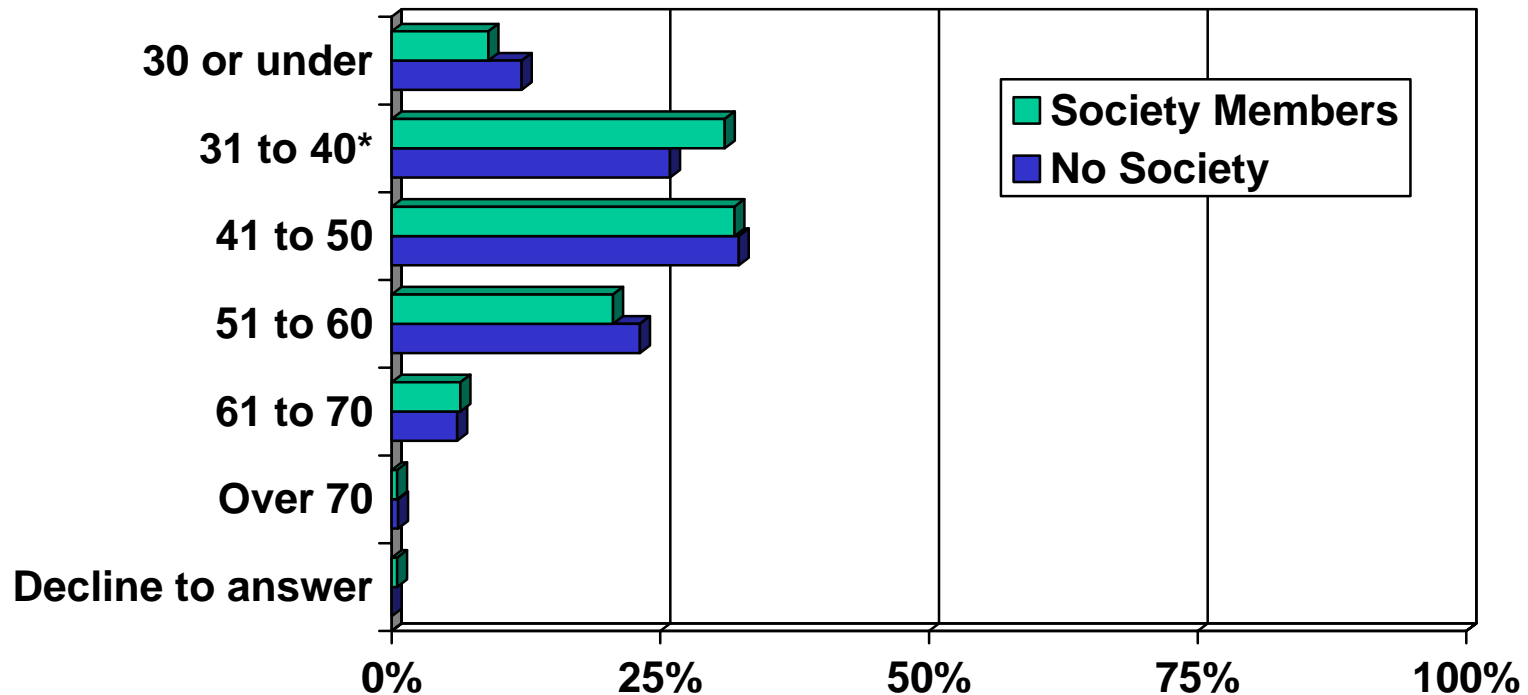# Years of Professional Experience

ALL SOCIETIES:
- Average = 19 Years
- Median = 18 Years
- Mode = 20 Years (8% of all respondents)
- Range = 0 to 60 Years

NO SOCIETY:
- Average = 19 Years
- Median = 19 Years
- Mode = 30 Years (8% of all respondents)
- Range = 0 to 45 Years

There were no significant differences across Society Size.

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Respondent Age

Chart showing Respondent Age by Society Members (green) and No Society (blue):

Age Group	
30 or under	
31 to 40*	
41 to 50	
51 to 60	
61 to 70	
Over 70	
Decline to answer	

Horizontal axis: 0%, 25%, 50%, 75%, 100%

Legend:
- ■ Society Members
- ■ No Society
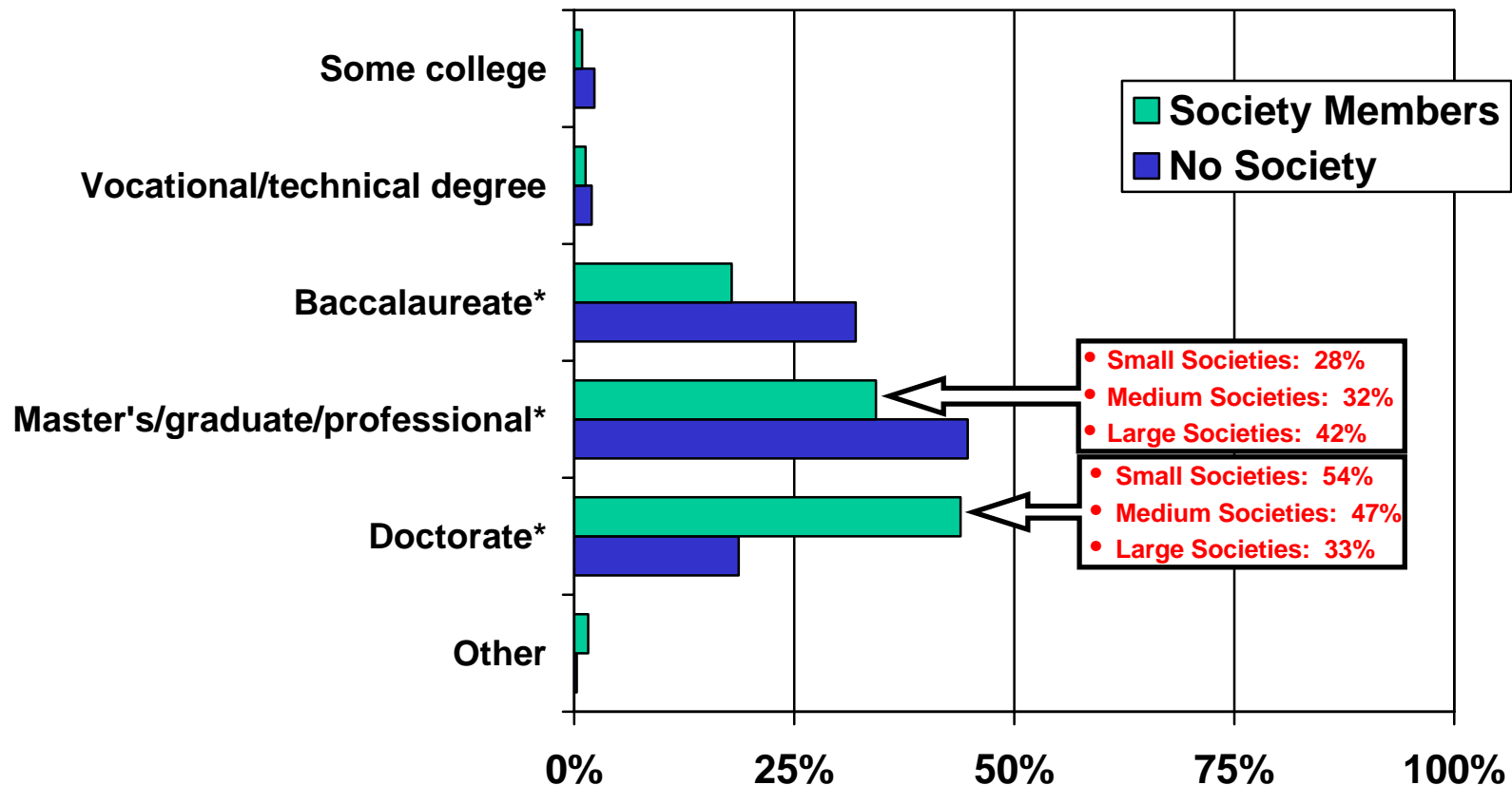
There were no significant differences across Society Size.

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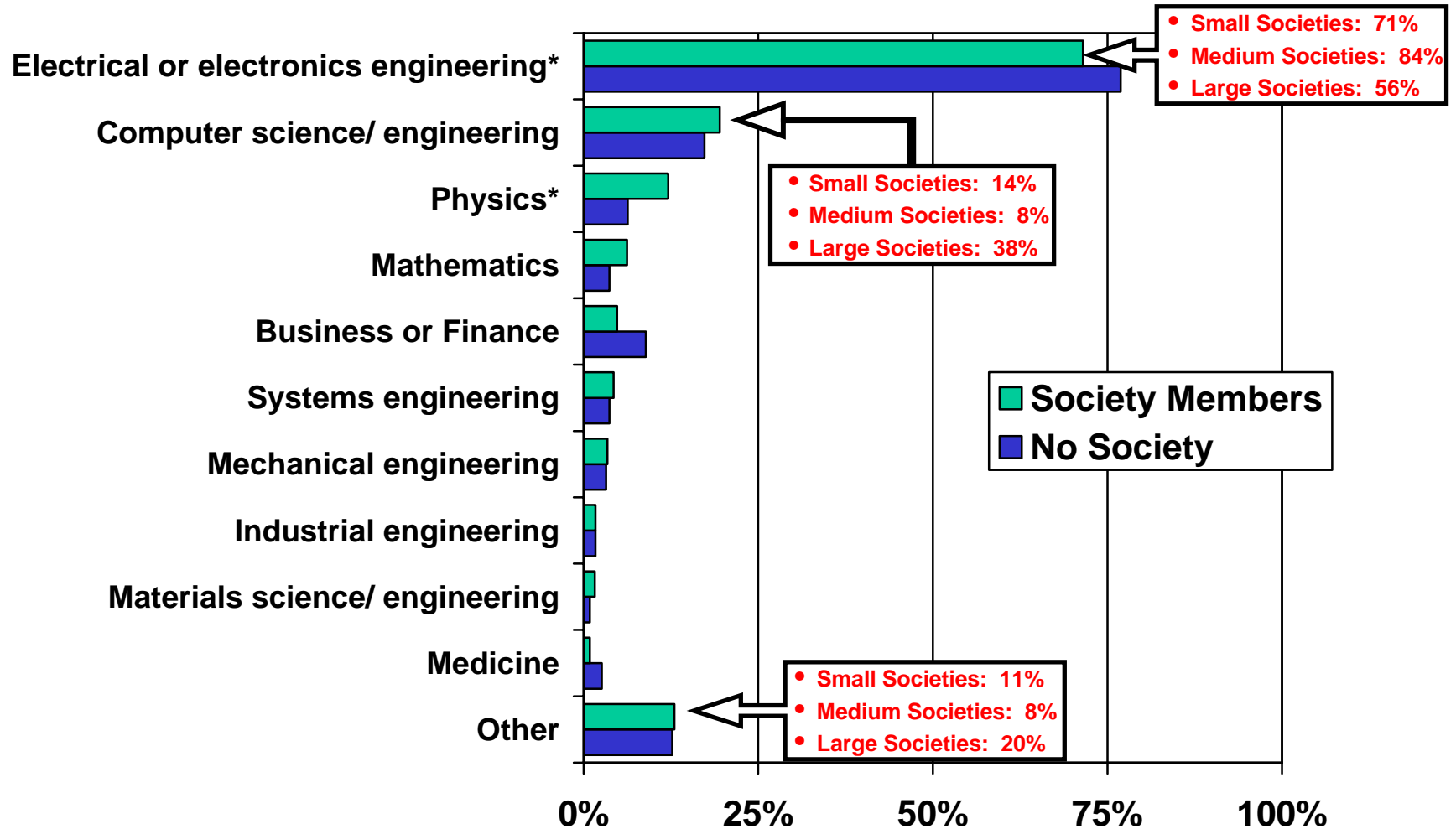Note: The difference (*) between Society Members and No Society for those aged 31-40 is significant at the p<.05 level.

Highest Educational Degree

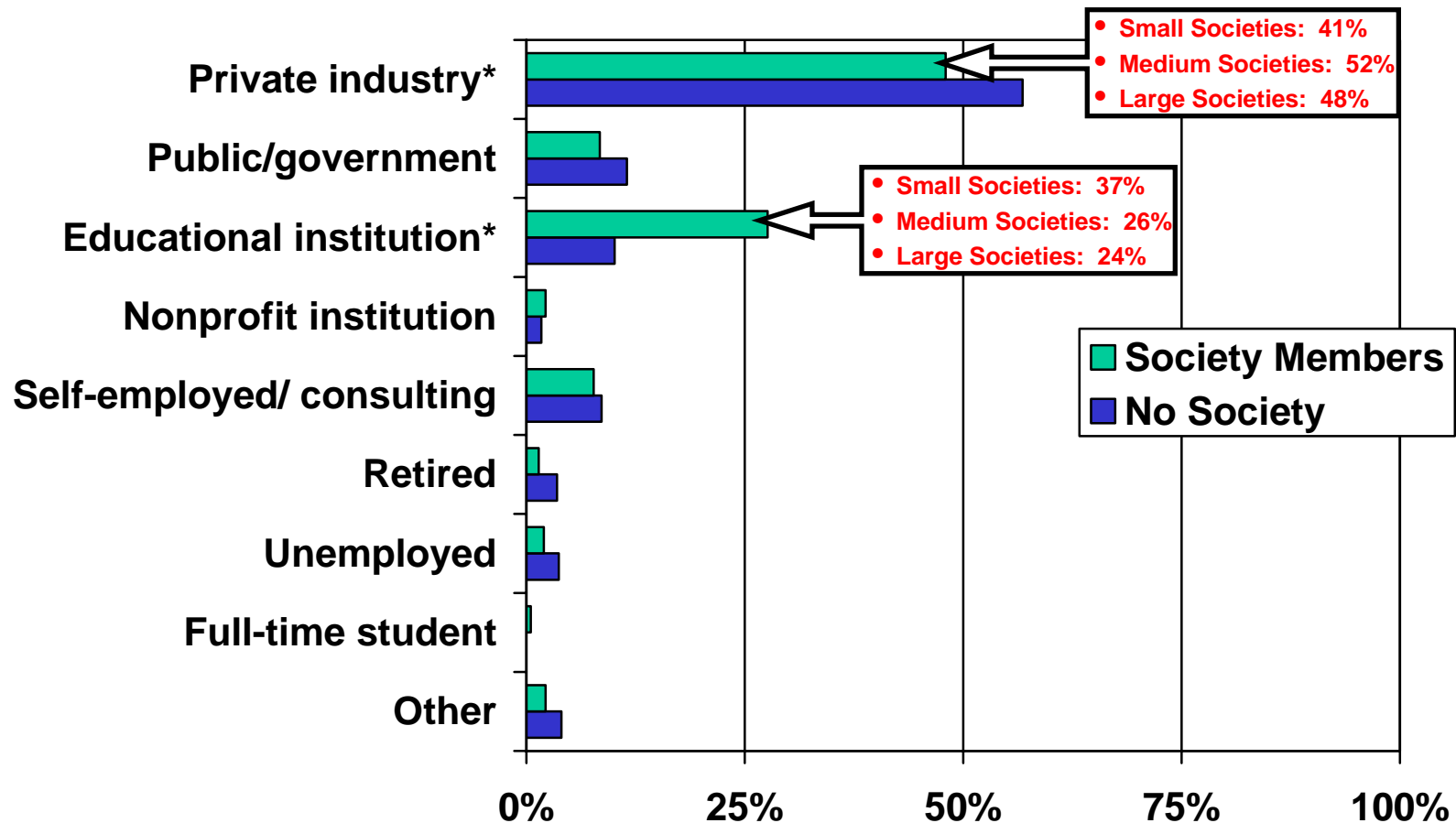**Far fewer Non-Society members have doctorates (19%) than do Society members (44%).**

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Degree Fields

Electrical or electronics engineering*
- Small Societies: 71%
- Medium Societies: 84%
- Large Societies: 56%

Computer science/ engineering
- Small Societies: 14%
- Medium Societies: 8%
- Large Societies: 38%

Physics*

Mathematics

Business or Finance

Systems engineering

Mechanical engineering

Industrial engineering

Materials science/ engineering

Medicine

Other
- Small Societies: 11%
- Medium Societies: 8%
- Large Societies: 20%

■ **Society Members**
■ **No Society**

0%   25%   50%   75%   100%

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Current Employment

Far fewer Non-Society members work in educational institutions (10%) and more work in private industry (57%) than do Society members (28% and 48%, respectively).

Regional Breakdown of Current Employment
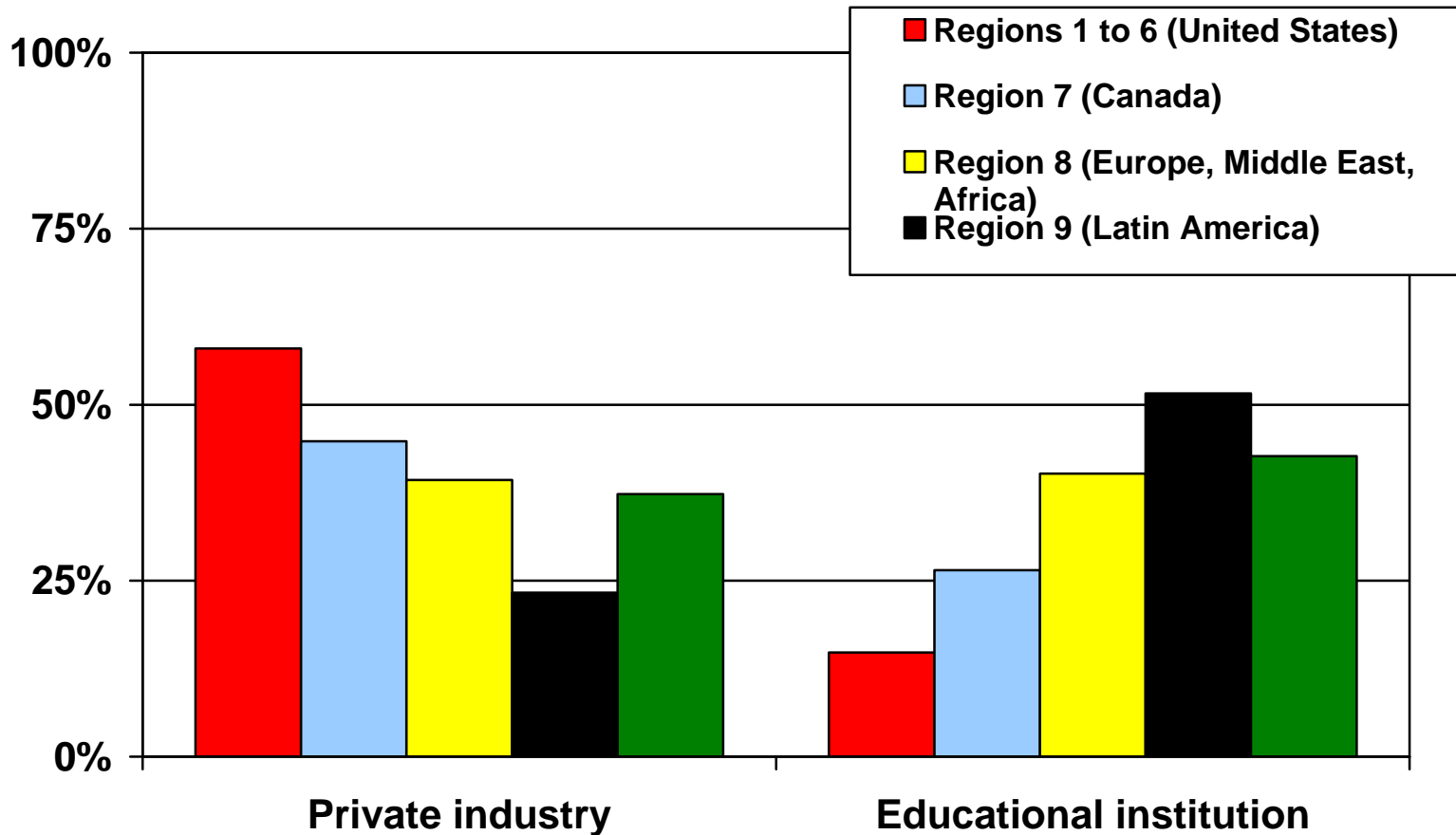
Members in R1-6 are more likely to work in private industry (58%) and less likely to work in an educational institution (15%) than are members in other regions, while members in R9 are more likely to work in an educational institution (52%) and less likely to work in private industry (23%) than are other members.

Note: The noted differences between regions are significant at the p<.01 level.

IEEE Grade
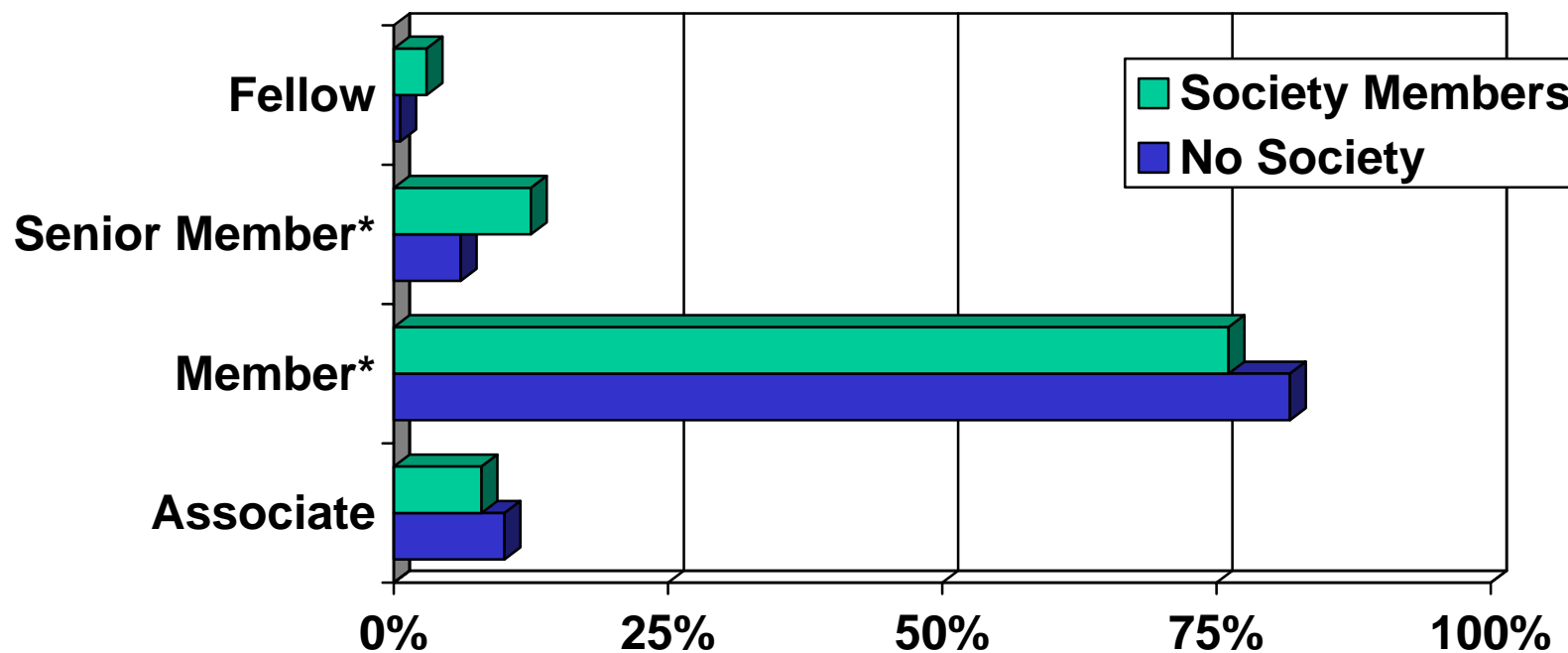
Legend: Society Members, No Society

Categories: Fellow, Senior Member*, Member*, Associate

X-axis: 0%, 25%, 50%, 75%, 100%

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IEEE Region
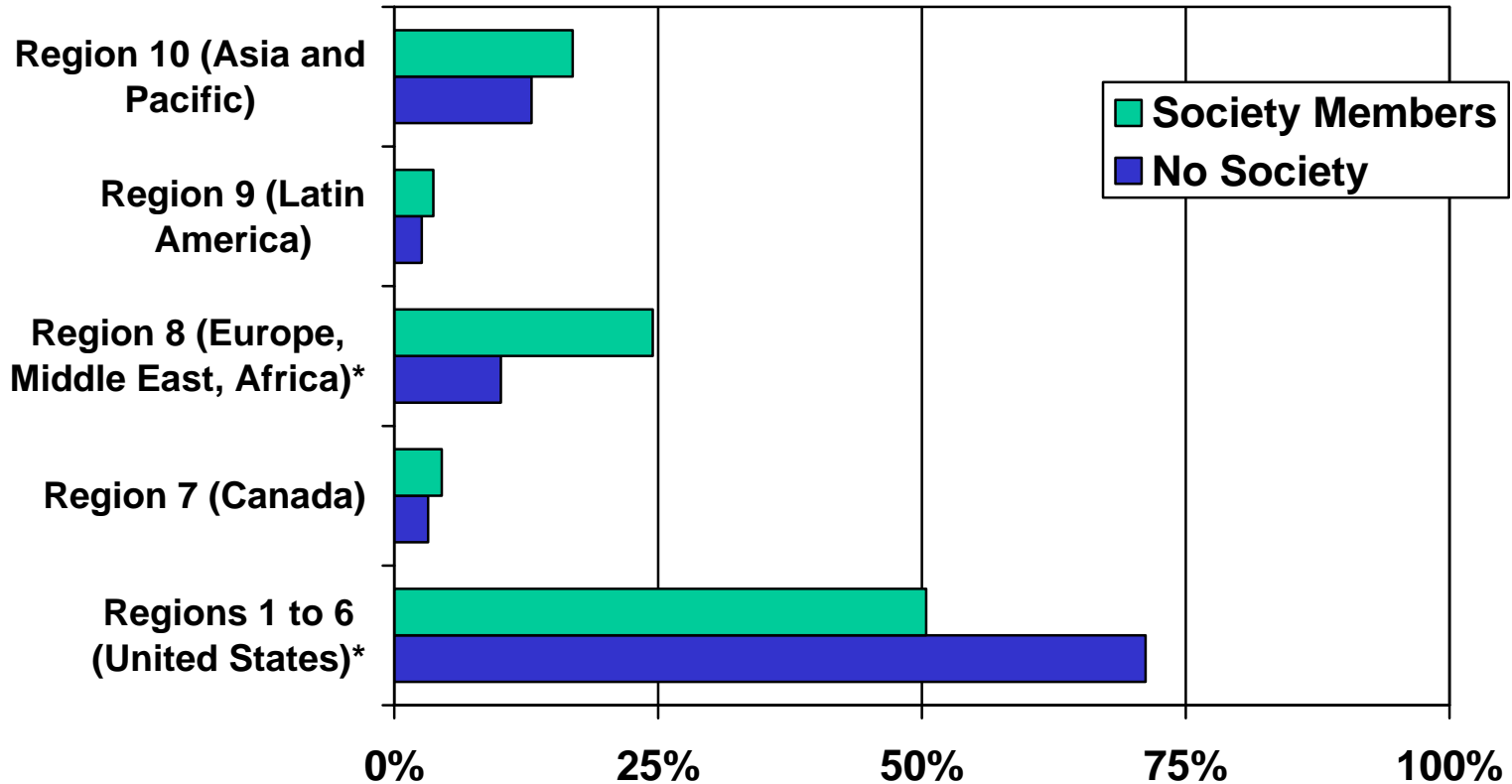
Far more Non-Society members live in the United States (71%) and fewer live in Europe, the Middle East, or Africa (10%) than do Society members (50% and 25%, respectively).

Notes: There were no significant differences across Society Size. The differences (*) between Society Members and No Society for Regions 1-6 and Region 8 are significant at the p<.001 level.

Number of IEEE Society Memberships

Only asked of Society Members.
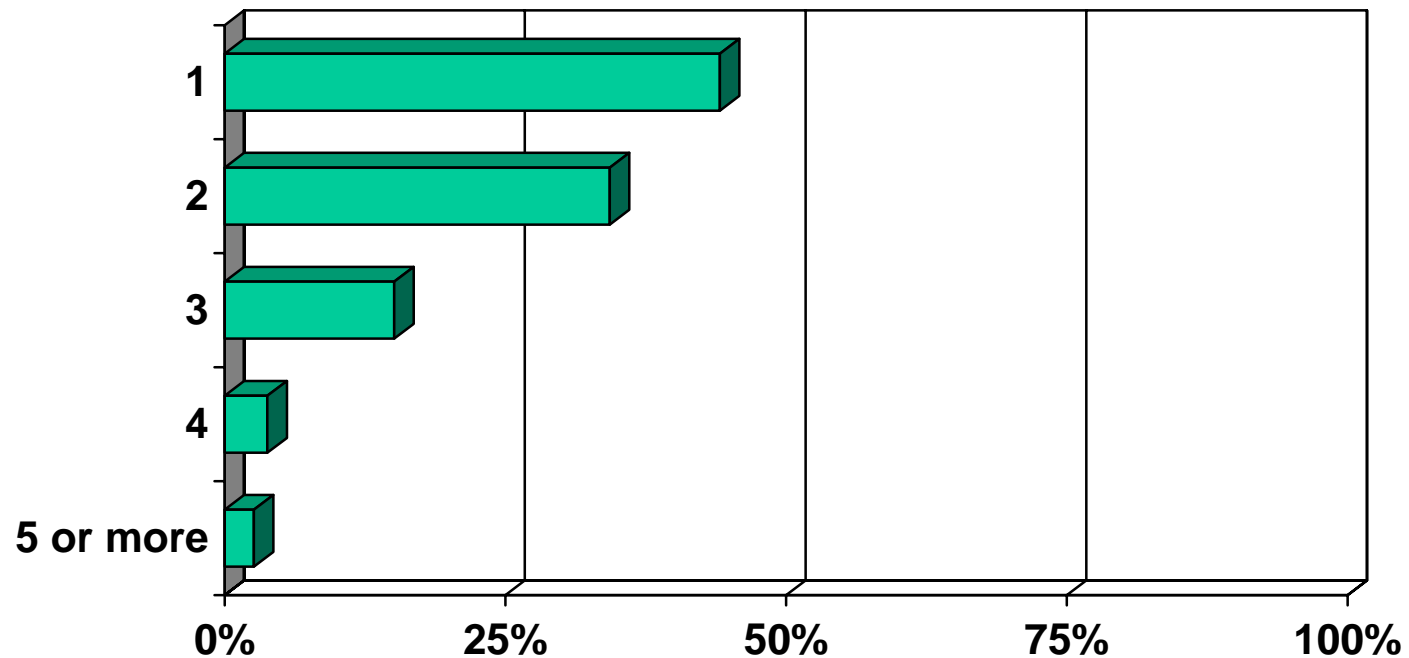
Note: There were no significant differences across Society Size.

Primary IEEE Society

Only asked of Society Members who indicated belonging to more than one Society.

Yes, [this] is my primary Society

No, another IEEE Society is my primary Society

0%   25%   50%   75%   100%
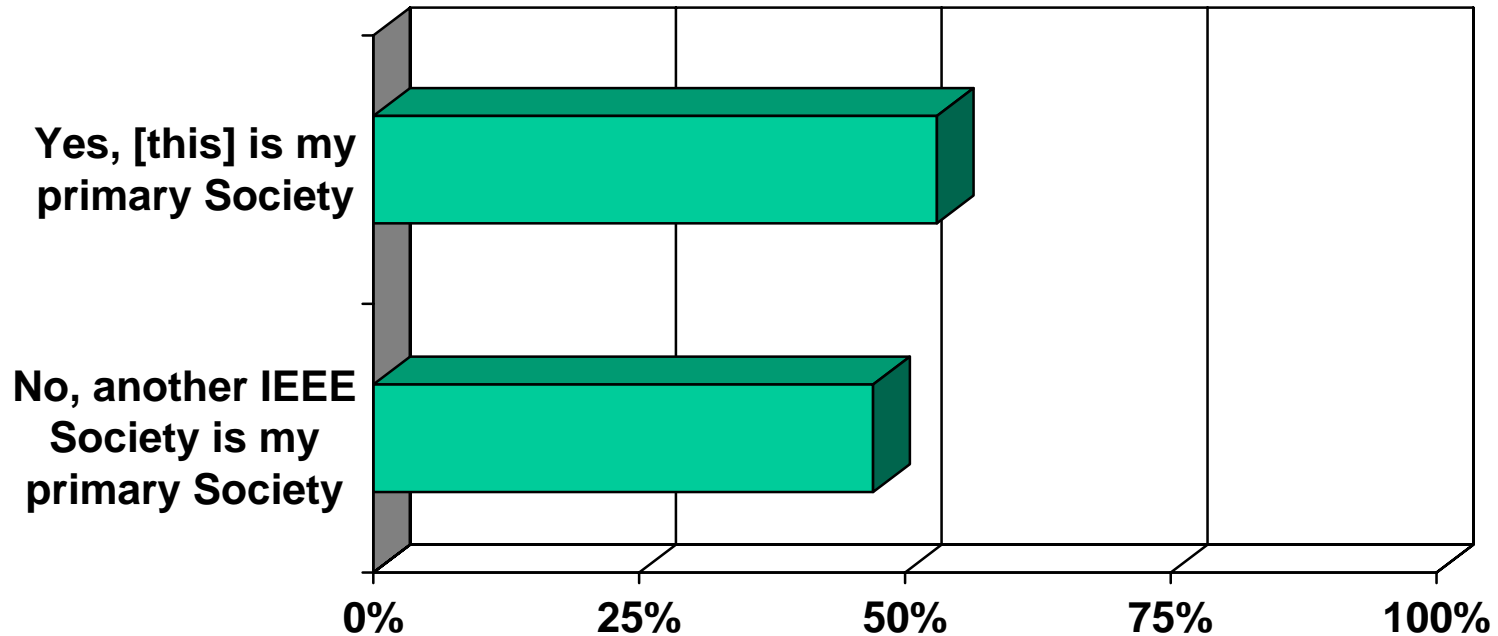
IEEE

Q: Do you consider [this] Society to be your primary IEEE Society?

Notes: Base: 7,500 respondents who indicated that they belong to more than one IEEE Society. There were no significant differences across Society Size.

Membership Issues

Main Reasons for Society/IEEE Membership

Obtain technical information

Keep informed in my field*
- Small Societies: 65%
- Medium Societies: 67%
- Large Societies: 75%

Obtain Society/IEEE publications*

Networking
- Small Societies: 27%
- Medium Societies: 25%
- Large Societies: 16%

Contribute to my profession

Access to continuing education
- Small Societies: 4%
- Medium Societies: 4%
- Large Societies: 14%

Serve as a volunteer

Discounts on Society/IEEE conference fees

Attend local chapter activities

Other*

■ Society Members
■ No Society

0%   25%   50%   75%   100%

Far more Society members maintain their Society membership for publications (63%) and fewer for unspecified reasons (2%) than Non-Society members maintaining their IEEE membership (43% and 22%, respectively). The majority of "other" reasons mentioned by Non-Society members were related to insurance and other related products.

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Notes: Because Respondents were allowed multiple responses to this question, percentages will not add to 100%. The indicated Society Size differences are significant at the p<.05 level. The differences (*) between Society Members and No Society for "Obtain Society/IEEE publications," "Keep informed in my field," and "Other" are significant at the p<.01 level.

Main Reasons for Society Membership
Ranges Across Societies

Choice	Range Across Societies
To obtain technical information and resources	45% - 84%
To meet and interact with others who share my professional interests (networking)	13% - 41%
To obtain Society publications (paper and/or electronic)	49% - 79%
To receive discounts on Society conference fees	1% - 13%
To serve as a volunteer (for example, write or review articles, speak at conferences or serve on committees)	4% - 15%
To contribute to my profession	12% - 29%
To keep myself informed of the advancements in my field	55% - 76%
To attend local chapter activities	1% - 10%
To get access to continuing education opportunities	1% - 17%
Other, please specify	0.4% - 13%

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Main Reasons for Society Membership

- Some reasons for Society membership are more important to certain groups of members:
  - Members who work in educational institutions are less likely to select obtaining technical information as a reason for maintaining their Society membership (67% chose this reason) than members in all other employment categories (range: 75 - 92%).
  - Members who work in educational institutions are also less likely to select keeping informed as a membership reason (59%) than are members in other employment categories (68 - 83%). Retirees and self-employed members are most likely to choose this reason (82%, and 78%, respectively).
  - In addition, fewer Senior Members and Fellows select keeping informed (59% and 52%, respectively) than Associates and Members (71% for both).

Note: All differences noted above are significant at the p<.01 level.

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Main Reasons for Society Membership

- As Grade status increases, networking becomes a more popular membership reason: from 18 - 19% of Associates and Members who chose this reason to 36% of Senior Members to 52% of Fellows.

- Further, members who consider the Society queried in the survey to be their primary one are somewhat more likely to select networking (26%) than members whose were not queried about their primary Society (16%).

- Members in Region 8 are more likely to choose obtaining Society publications (75%) than members in all other regions (59 - 62%).

- More Senior Members and Fellows choose serving as a volunteer (16% and 18%, respectively) than Associates and Members (5% and 6%, respectively).

- More Senior Members and Fellows also select contributing to the profession (24% and 29%, respectively) than Associates and Members (18% and 16%, respectively).

Note: All differences noted above are significant at the p<.01 level.
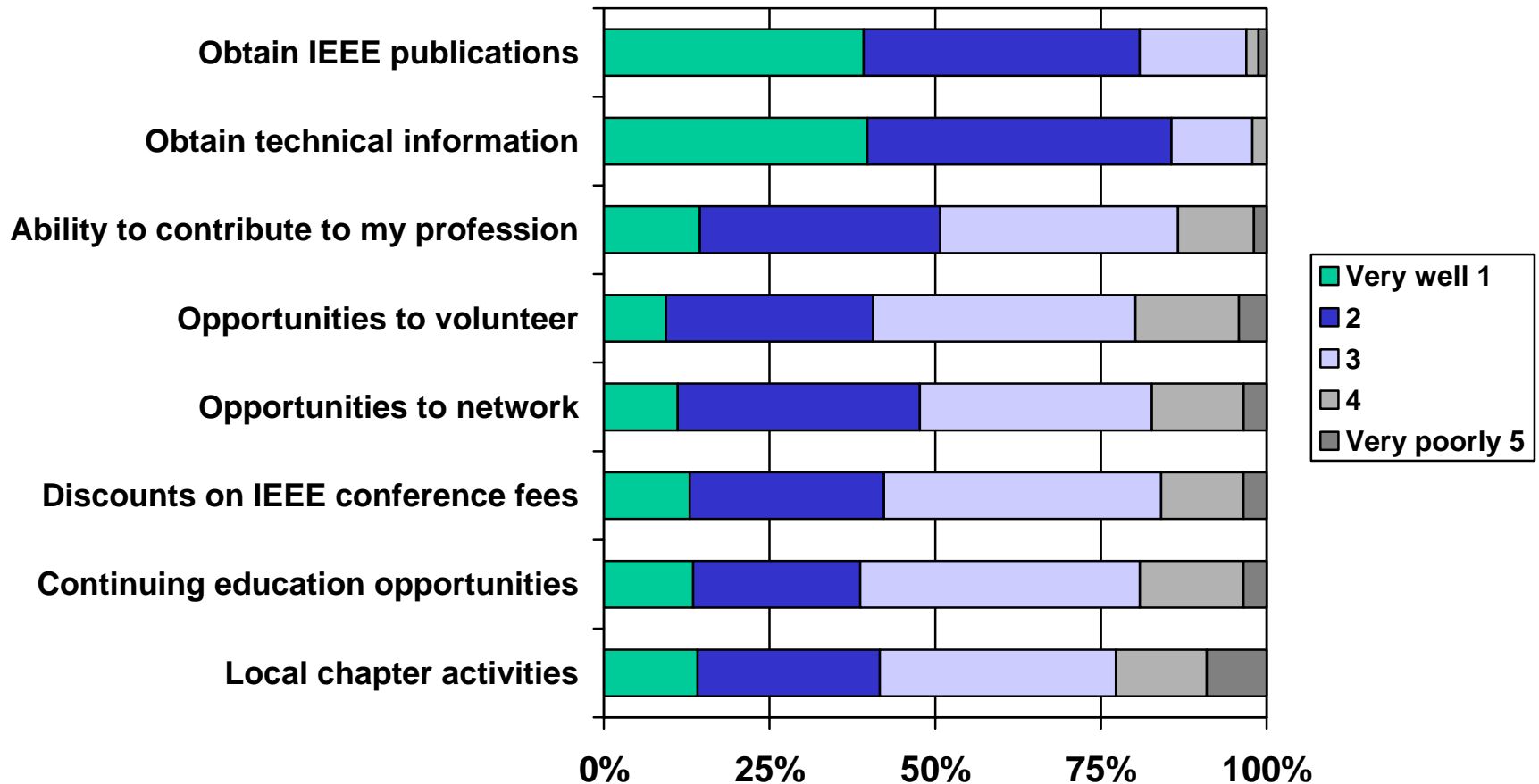
IEEE

Evaluating IEEE Society Opportunities and Services: Society Members
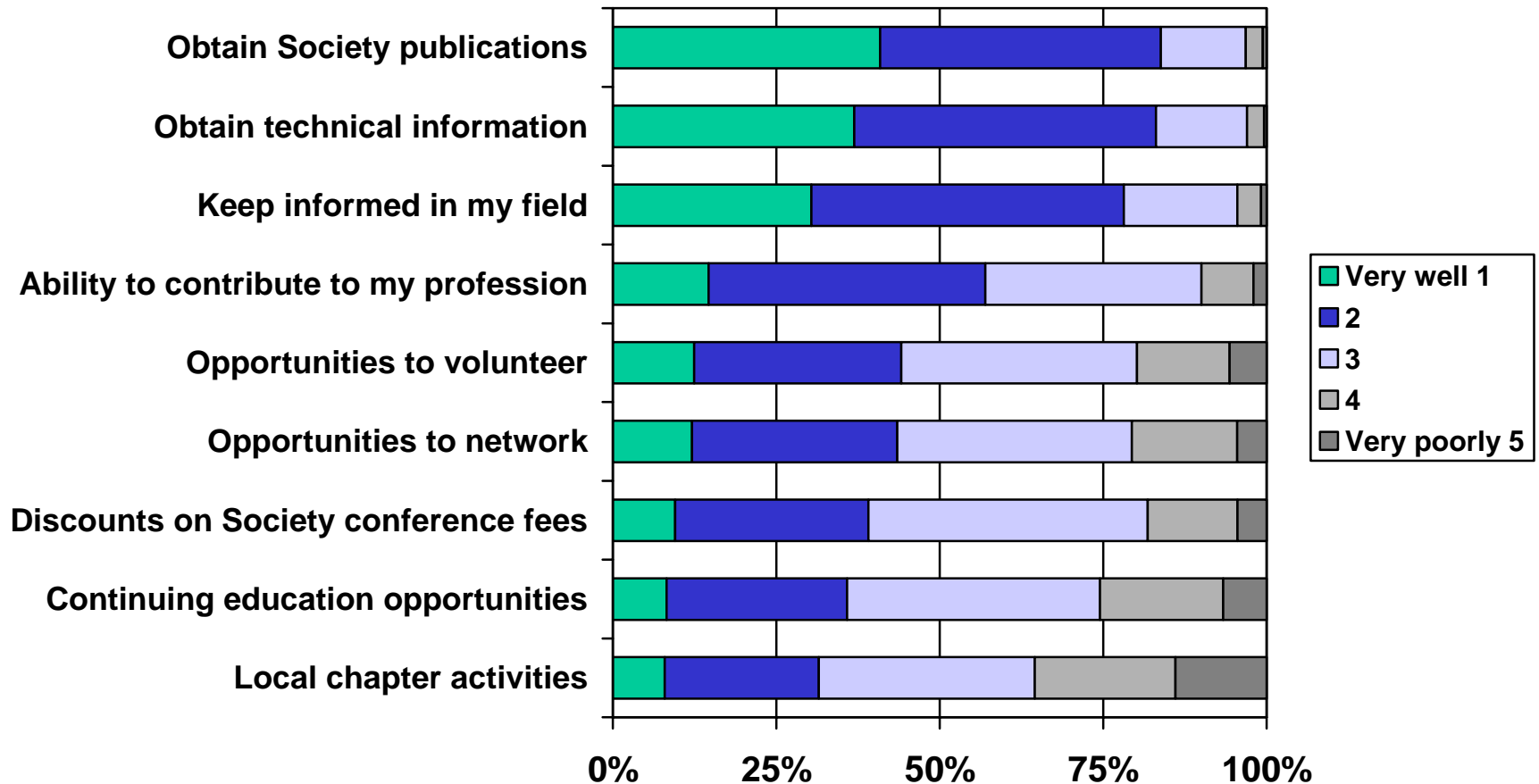
Note: There were no significant differences across Society Size.

Evaluating IEEE Opportunities and Services: No Society Members

Evaluating IEEE Opportunities and Services

- Society members' ratings of the opportunities and services offered by IEEE were remarkably similar to those of members with no Society affiliation.

- While there were no substantial differences in the overall distribution of these ratings, four items did produce statistically significant differences:

  - "Ability to contribute to my profession"—More Society members (42%) rated this item a "2" than did Non-Society members (36%)

  - "Opportunities to network"—More Non-Society members (37%) rated this item a "2" than did Society members (31%)

  - "Continuing education opportunities"—More Non-Society members (13%) rated this item a "1" than did Society members (8%)

  - "Local chapter activities"—More Non-Society members (14%) rated this item a "1" than did Society members (8%), and more Society members rated this item a "4" or "5" (22% and 14%, respectively) than did Non-Society members (14% and 9%, respectively)

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Overall Satisfaction with Society and IEEE Memberships
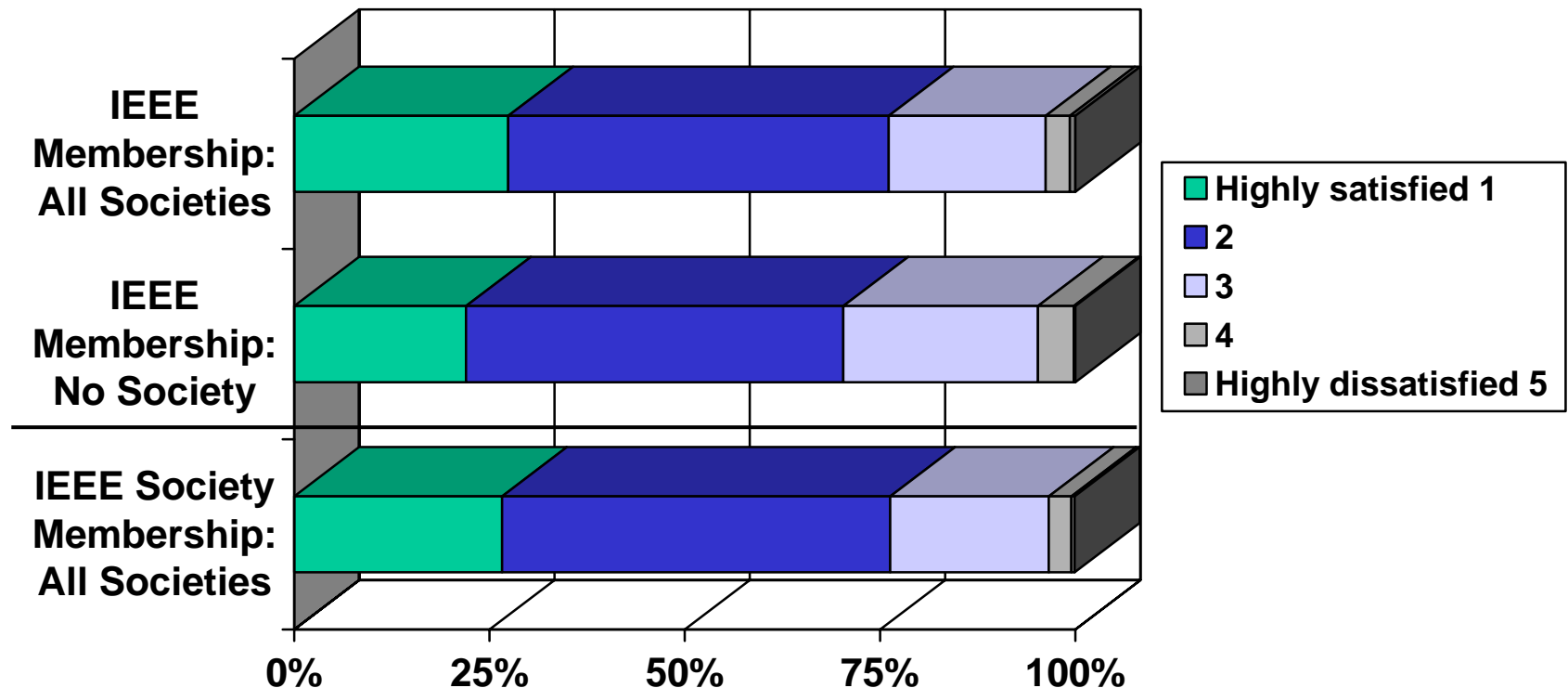
Legend:
- Highly satisfied 1
- 2
- 3
- 4
- Highly dissatisfied 5

Categories:
- IEEE Membership: All Societies
- IEEE Membership: No Society
- IEEE Society Membership: All Societies

Axis: 0% 25% 50% 75% 100%

Overall Satisfaction with Society Membership

Legend:
- Highly satisfied 1
- 2
- 3
- 4
- Highly dissatisfied 5

Categories: Primary Society, Non-Primary Society
Axis: 0%, 25%, 50%, 75%, 100%
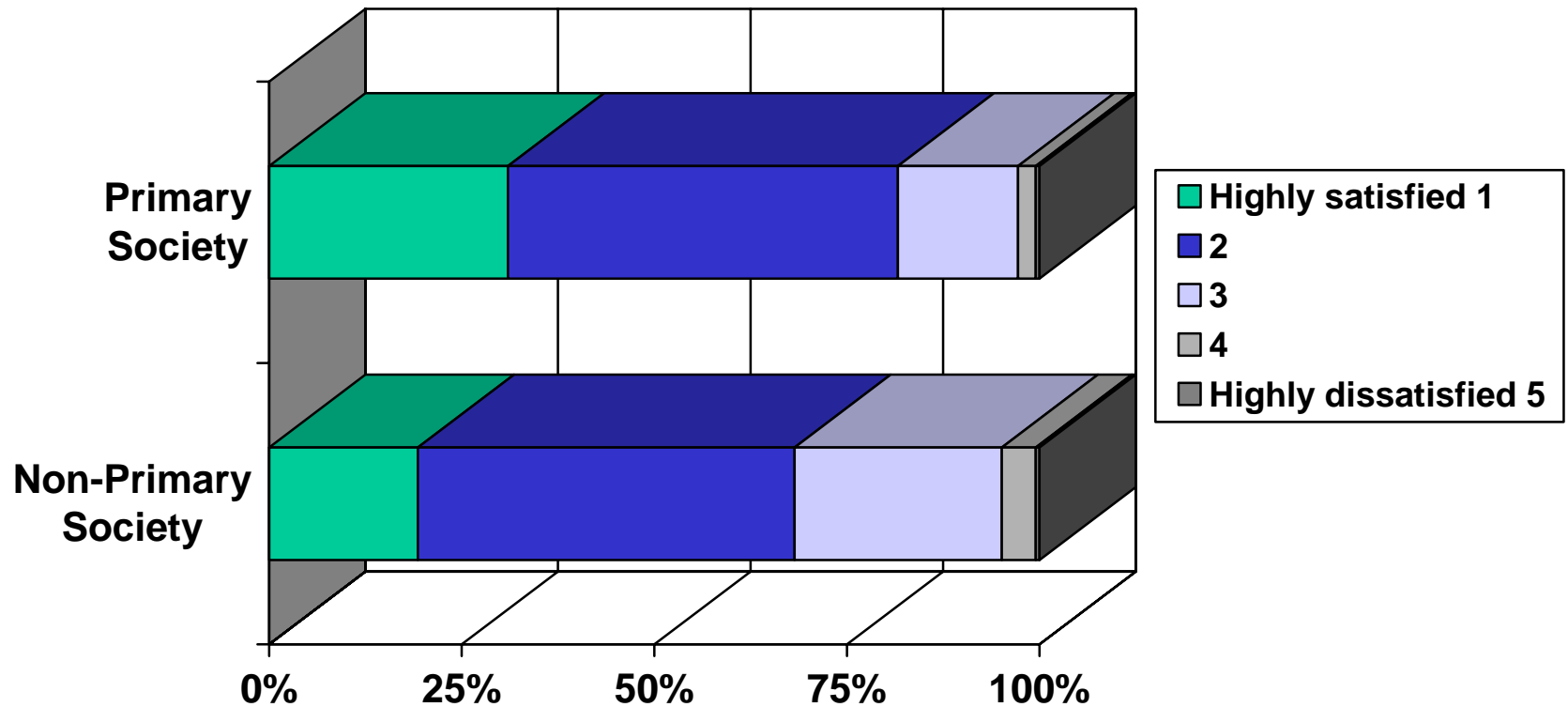
Members are more satisfied with their primary Society memberships (82% are satisfied) than with their memberships in Societies not considered primary (68%).

Notes: The noted difference between Primary and Non-Primary Societies is significant at the p<.001 level. For the purposes of the above analysis, the scale above was collapsed as follows: 1-2 = Satisfied, 3 = Neither Satisfied Nor Dissatisfied, and 4-5 = Dissatisfied.

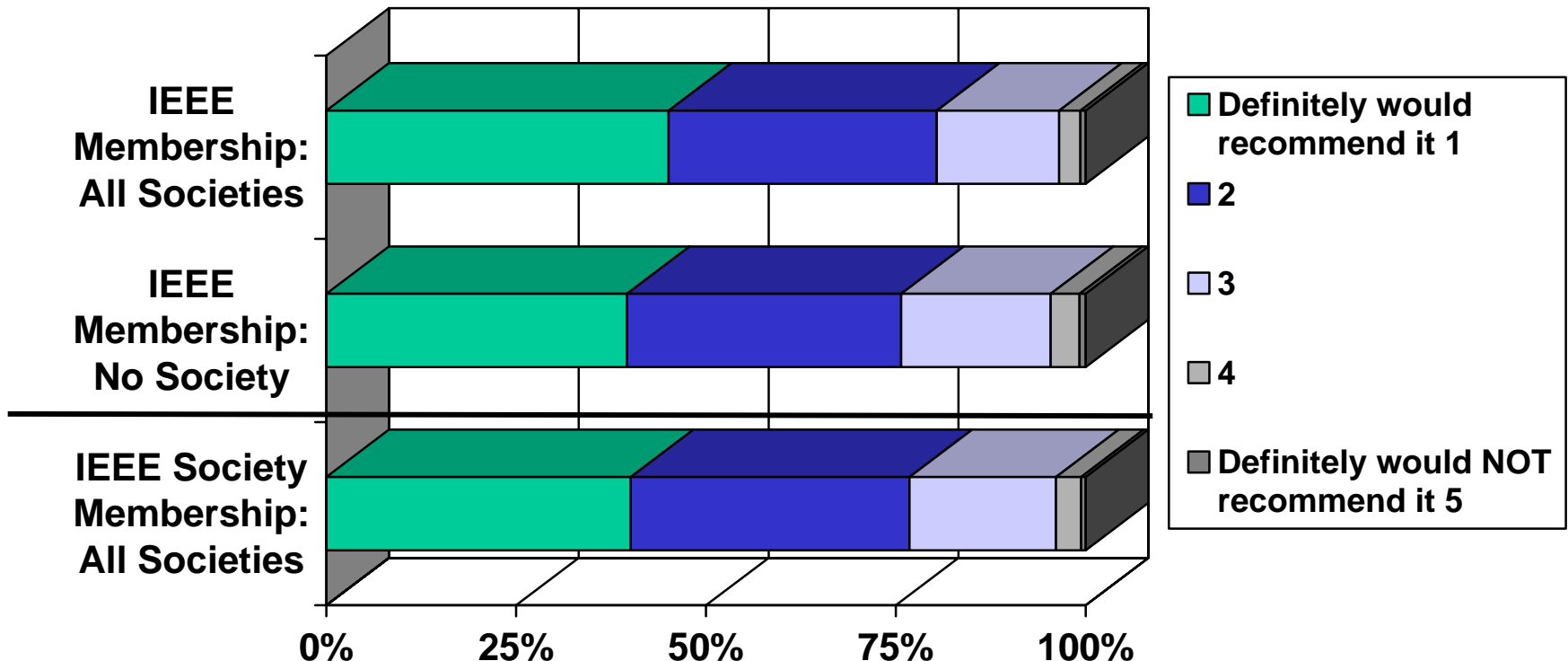# Recommending Society and IEEE Memberships to Colleagues

Notes: There were no significant differences across Society Size. The difference between Society Members and No Society at Recommendation Level 1 is significant at the p<.05 level.

Recommending Society Membership to Colleagues

Chart legend:
- ■ Definitely would recommend it 1 (teal/green)
- ■ 2 (blue)
- □ 3 (light purple)
- □ 4 (grey)
- ■ Definitely would NOT recommend it 5 (dark grey)

Categories: Primary Society, Non-Primary Society

X-axis: 0%, 25%, 50%, 75%, 100%
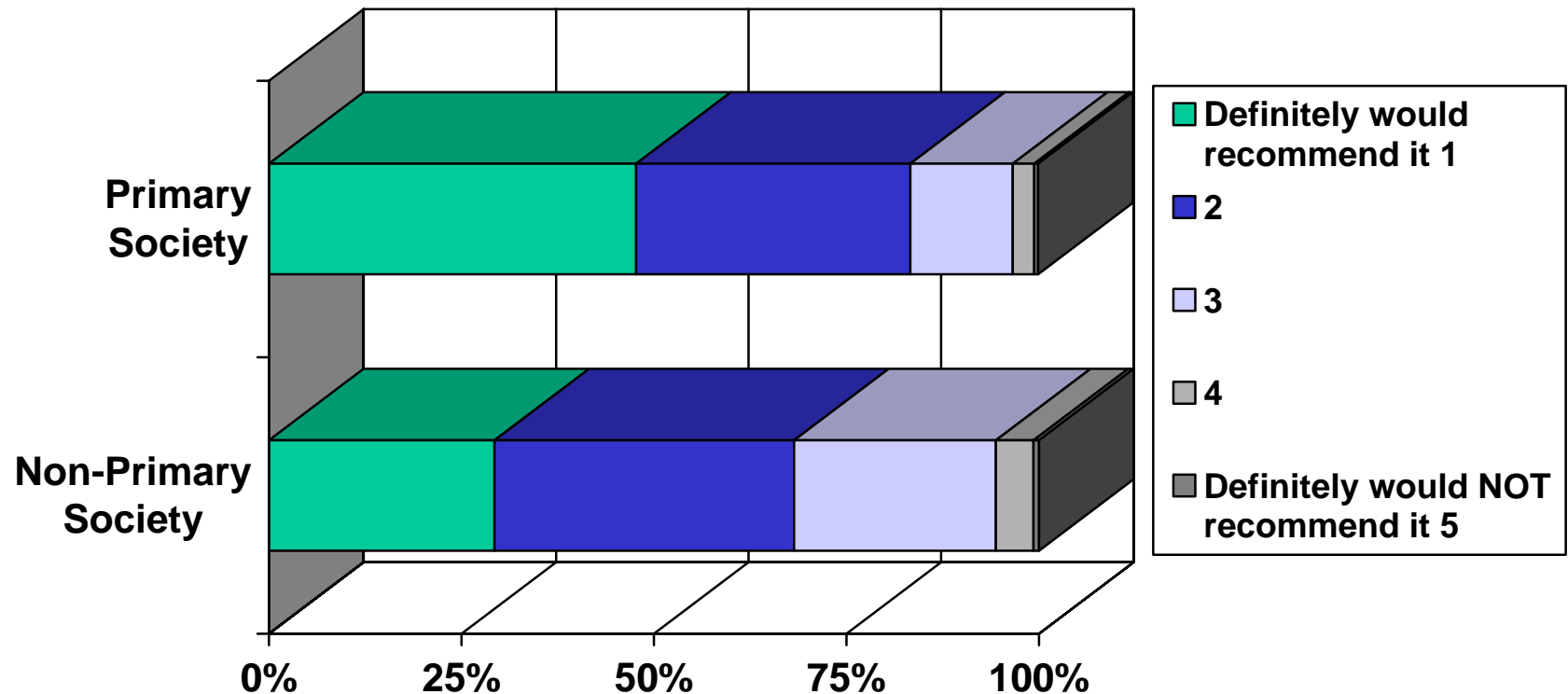
Members are more likely to recommend their primary Society memberships to colleagues (83% would recommend) than their memberships in Societies not considered primary (68%).

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Recommending Society Membership to Colleagues
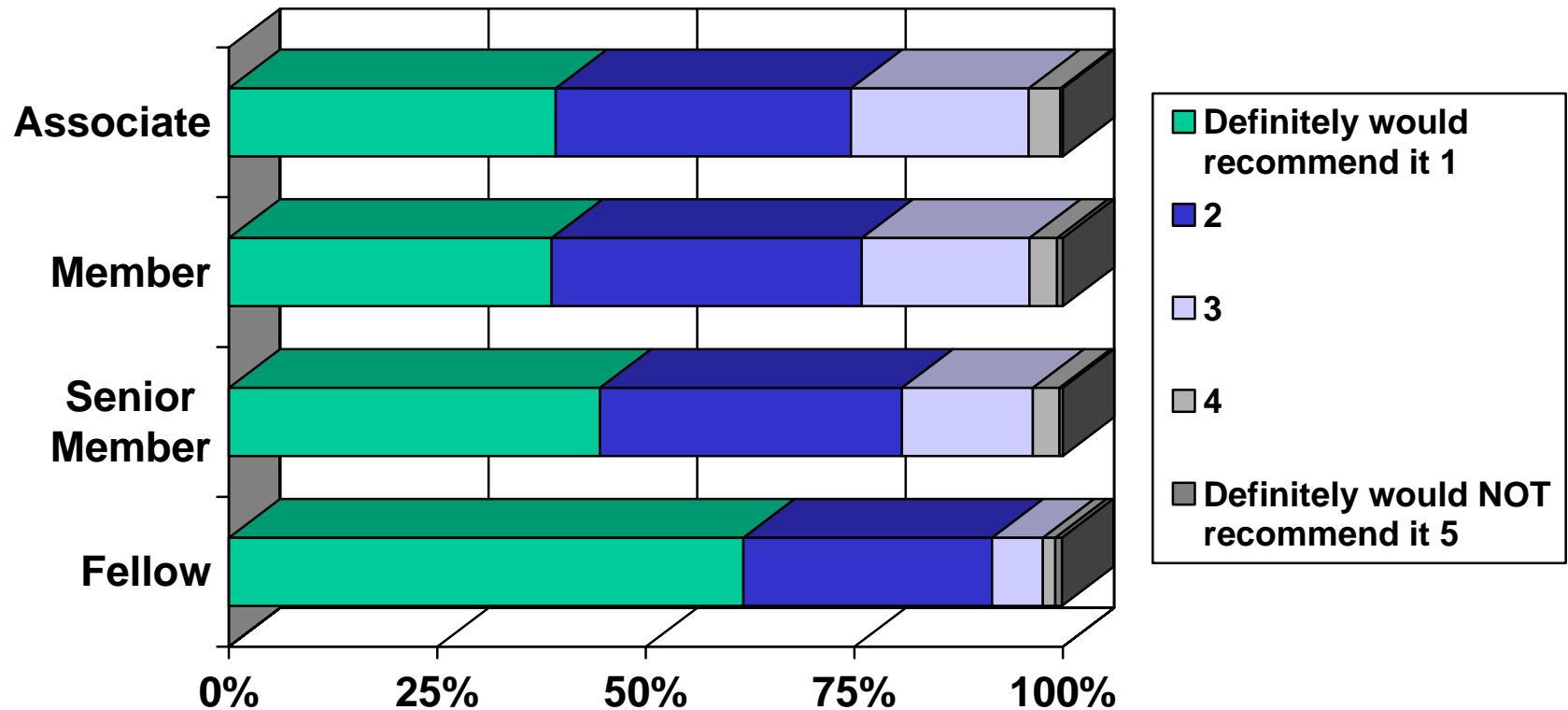
As grade level increases, members are more likely to recommend their Society membership to colleagues: from 75-76% of Associates and Members who would recommend to 81% of Senior Members to 92% of Fellows.

Notes: The noted differences between Associates/Members, Senior Members, and Fellows are significant at the p<.01 level. For the purposes of this analysis, the scale above was collapsed as follows: 1-2 = Would Recommend, 3 = Would Neither Recommend Nor Not Recommend, and 4-5 = Would Not Recommend.

Recommending IEEE Membership to Colleagues

Legend:
- Definitely would recommend it 1
- 2
- 3
- 4
- Definitely would NOT recommend it 5
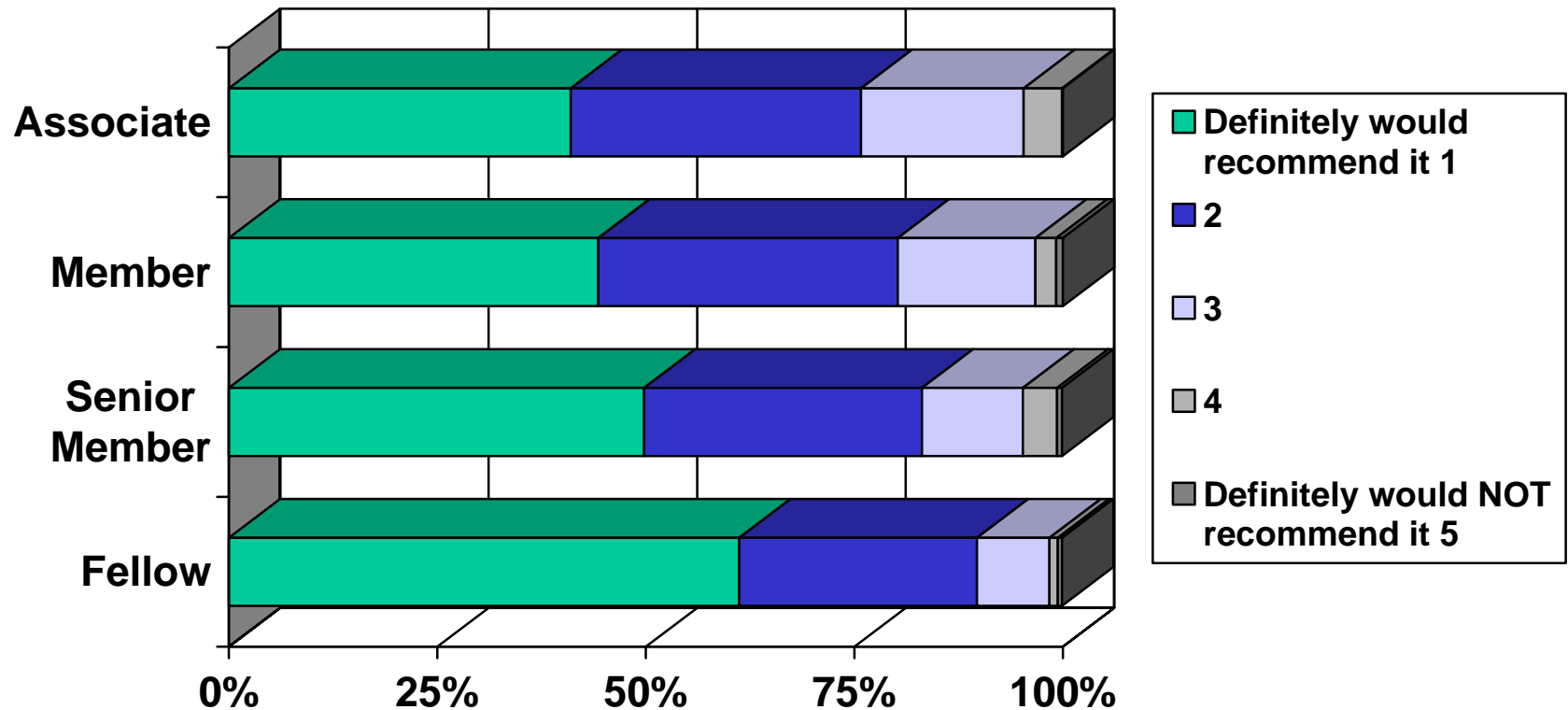
As grade level increases, members are more likely to recommend their IEEE membership to colleagues: from 76% of Associates who would recommend to 80% of Members to 83% of Senior Members to 90% of Fellows.

Notes: The noted differences between Associates, Members, Senior Members, and Fellows are significant at the p<.05 level. For the purposes of the above analysis, the scale above was collapsed as follows: 1-2 = Would Recommend, 3 = Would Neither Recommend Nor Not Recommend, and 4-5 = Would Not Recommend.

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Planned Renewal of Society and IEEE Memberships
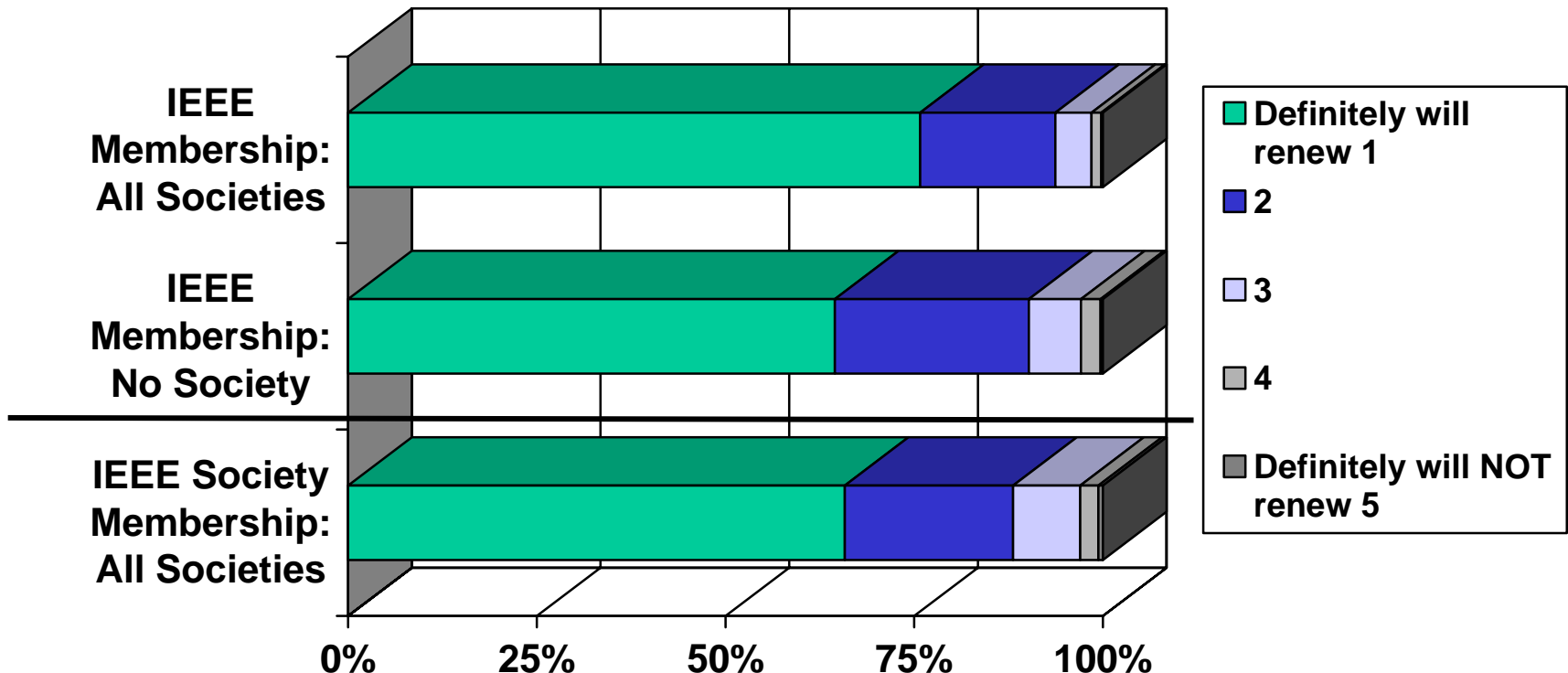
Legend:
- Definitely will renew 1
- 2
- 3
- 4
- Definitely will NOT renew 5

Categories:
- IEEE Membership: All Societies
- IEEE Membership: No Society
- IEEE Society Membership: All Societies

X-axis: 0%, 25%, 50%, 75%, 100%

Notes: There were no significant differences across Society Size. The differences between Society Members and No Society at Renewal Levels 1 and 2 are significant at the p<.01 level.

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Planned Renewal of Society Membership
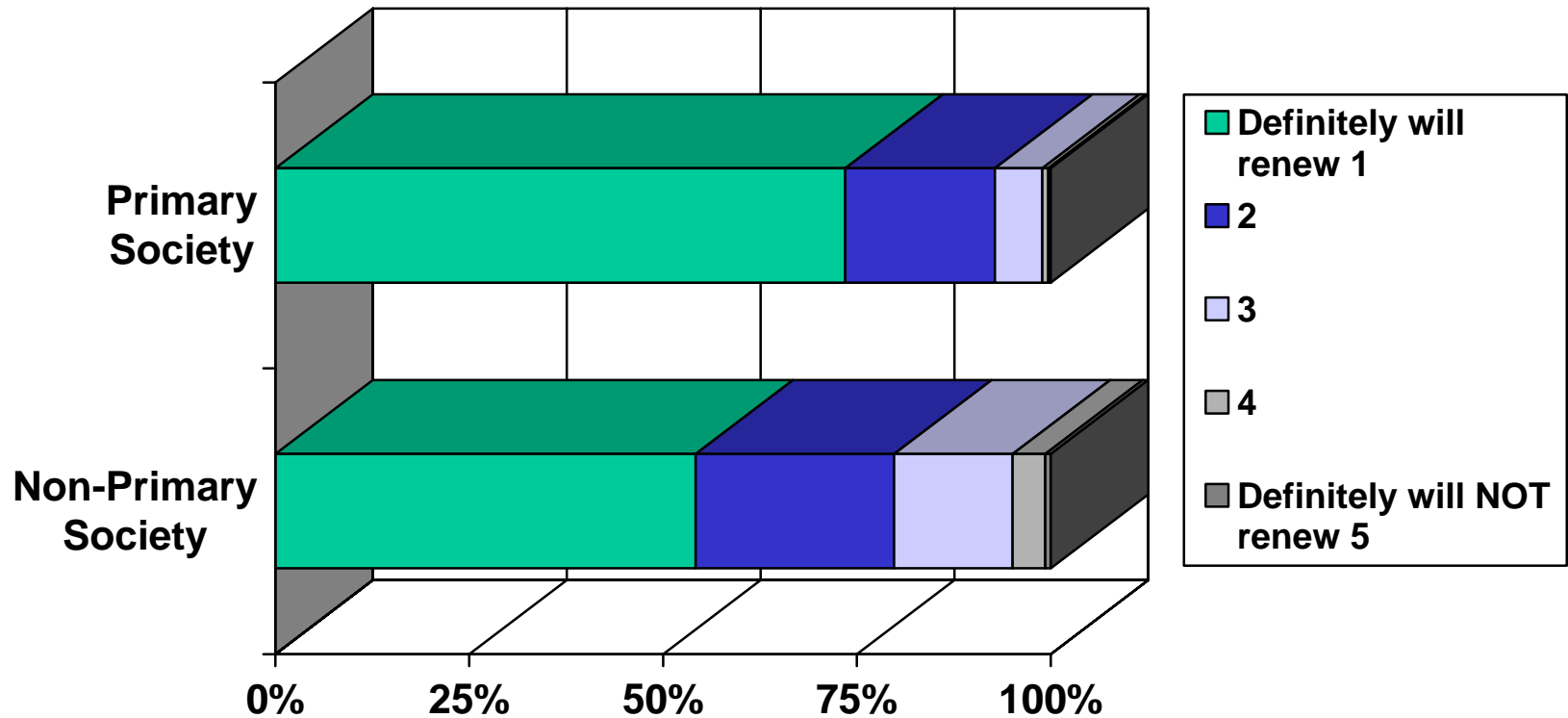
Members are more likely to renew their primary Society memberships (93% plan to renew) than their memberships in Societies not considered primary (80%).

Reimbursement of Dues

Employer Reimbursement of Society and IEEE Membership Dues
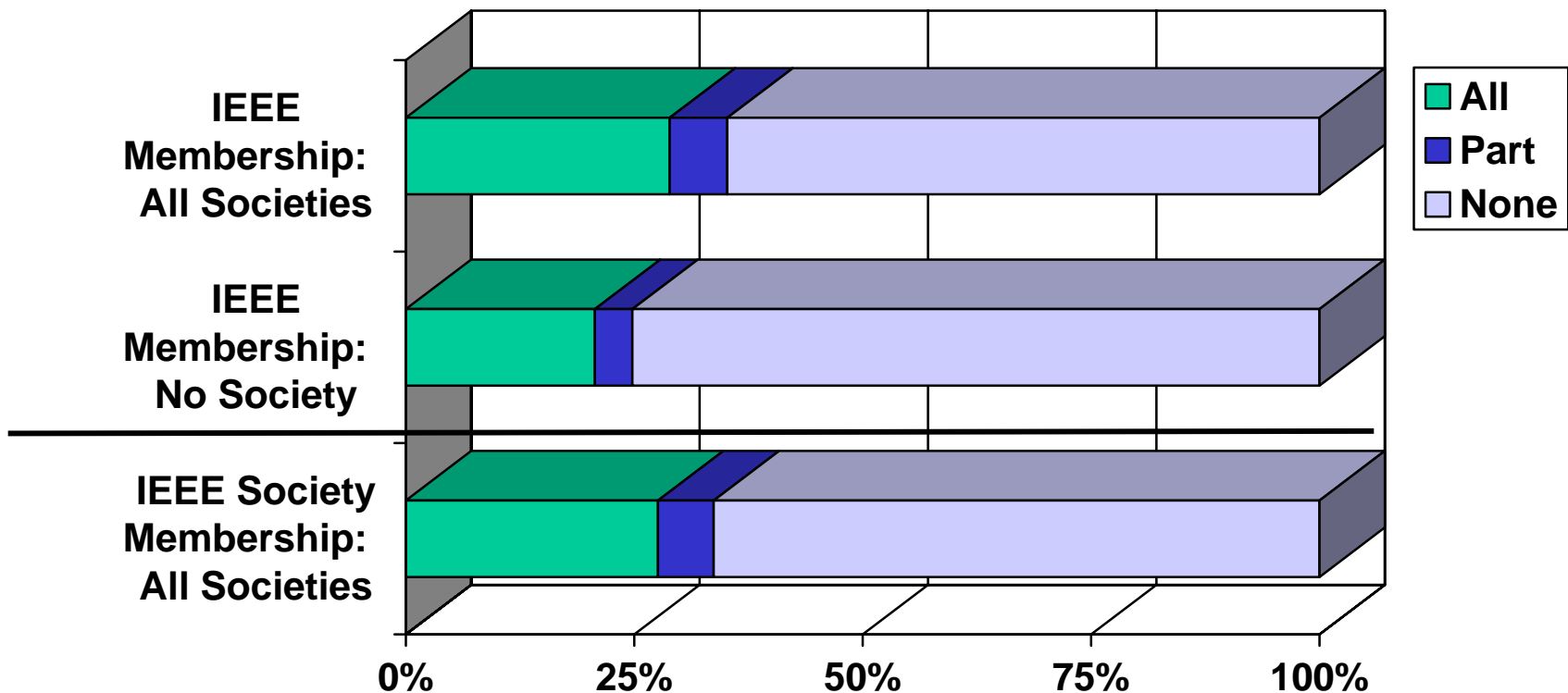
More Non-Society members pay their full dues themselves (75%) than do Society members (65%).

Employer Reimbursement of Society and IEEE Membership Dues

Far fewer members working in private industry pay their full dues themselves (56% pay their IEEE dues and 58% pay their Society dues) than do all other members (73% and 74%, respectively).

Note: The noted differences between Private Industry and All Other Employment Types are significant at the p<.001 level.

Employer Reimbursement of <u>IEEE</u> Membership Dues
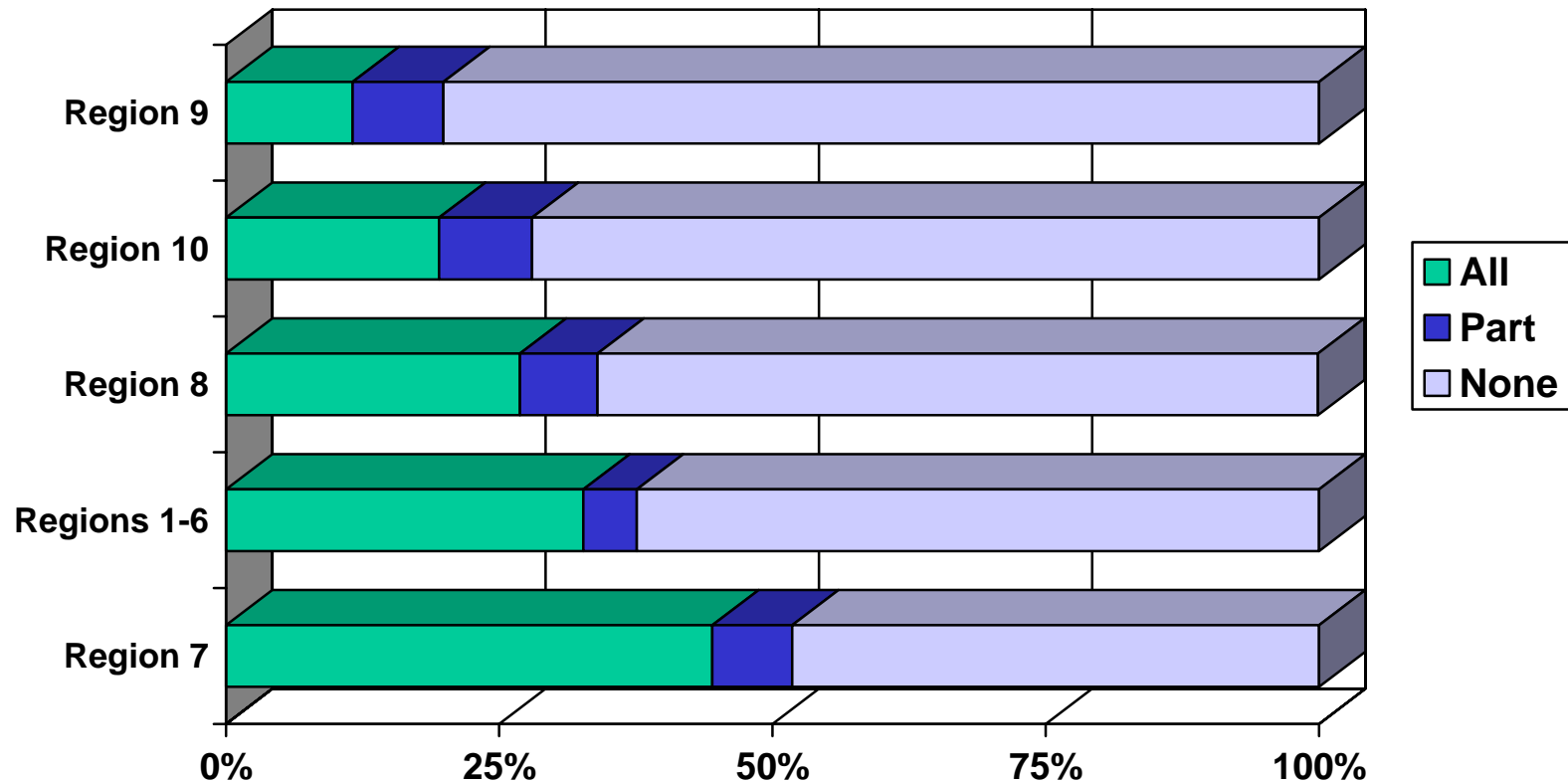
More members in R9 and R10 pay their full IEEE dues themselves (80% and 72%, respectively) and fewer members in R7 do so (48%) than do members in R1-6 and R8 (62% and 66%, respectively).

Note: The noted differences between regions are significant at the p<.01 level.

Employer Reimbursement of <u>Society</u> Membership Dues
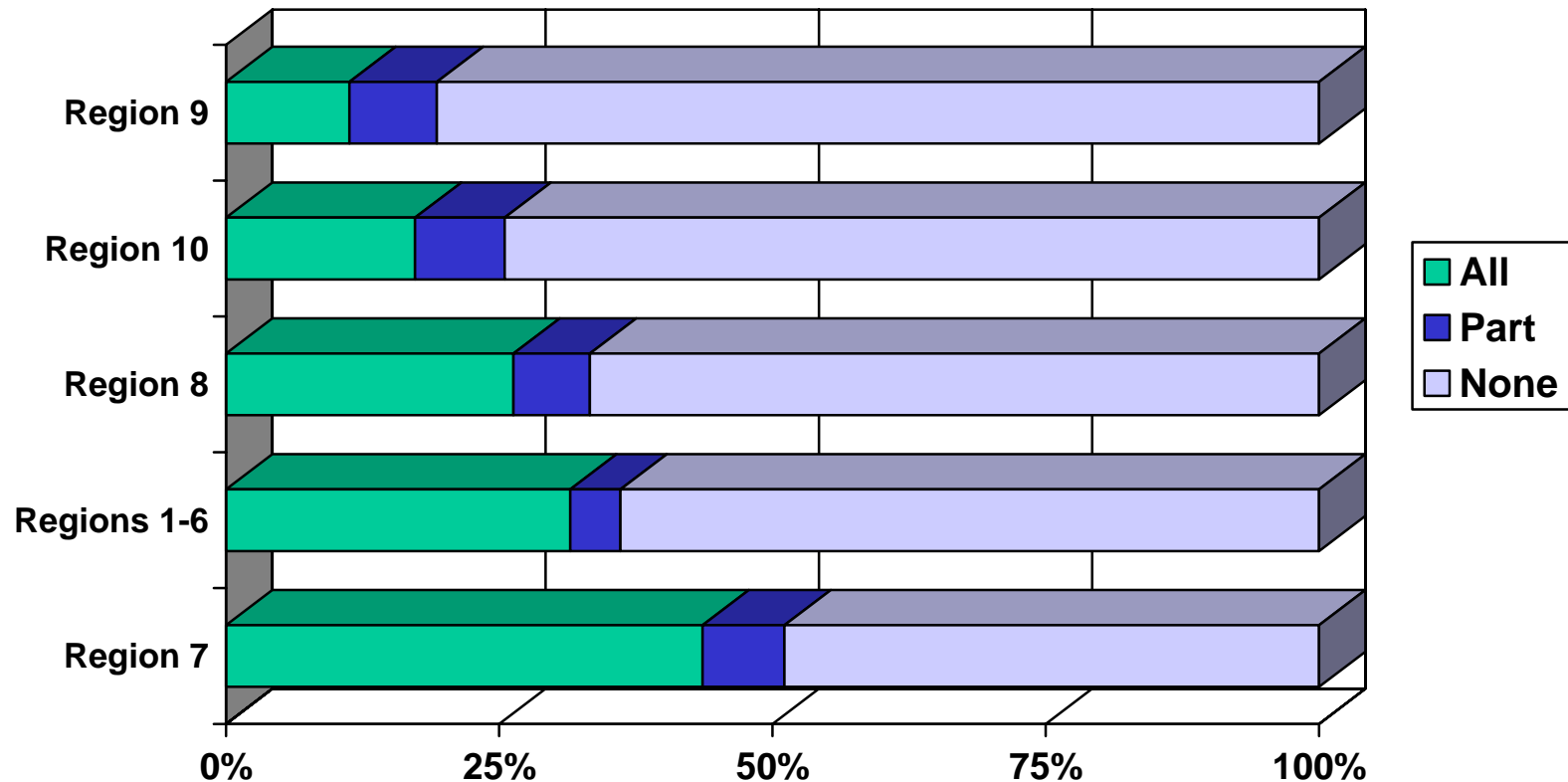
More members in R9 and R10 pay their full Society dues themselves (81% and 75%, respectively) and fewer members in R7 do so (49%) than do members in R1-6 and R8 (64% and 67%, respectively).

Note: The noted differences between regions are significant at the p<.01 level.

Websites and Educational Opportunities

Frequency of Website Visits

Categories (legend):
- 11+ times a month
- 4 to 10 times a month
- 1 to 3 times a month
- Less than once a month
- Aware of, but never visited
- Not aware

Y-axis labels:
- IEEE Society Website: All Societies
- IEEE Website: All Societies
- IEEE Xplore®: No Society
- Other prof associations' websites: All Societies
- General search engines: No Society

X-axis: 0%, 25%, 50%, 75%, 100%
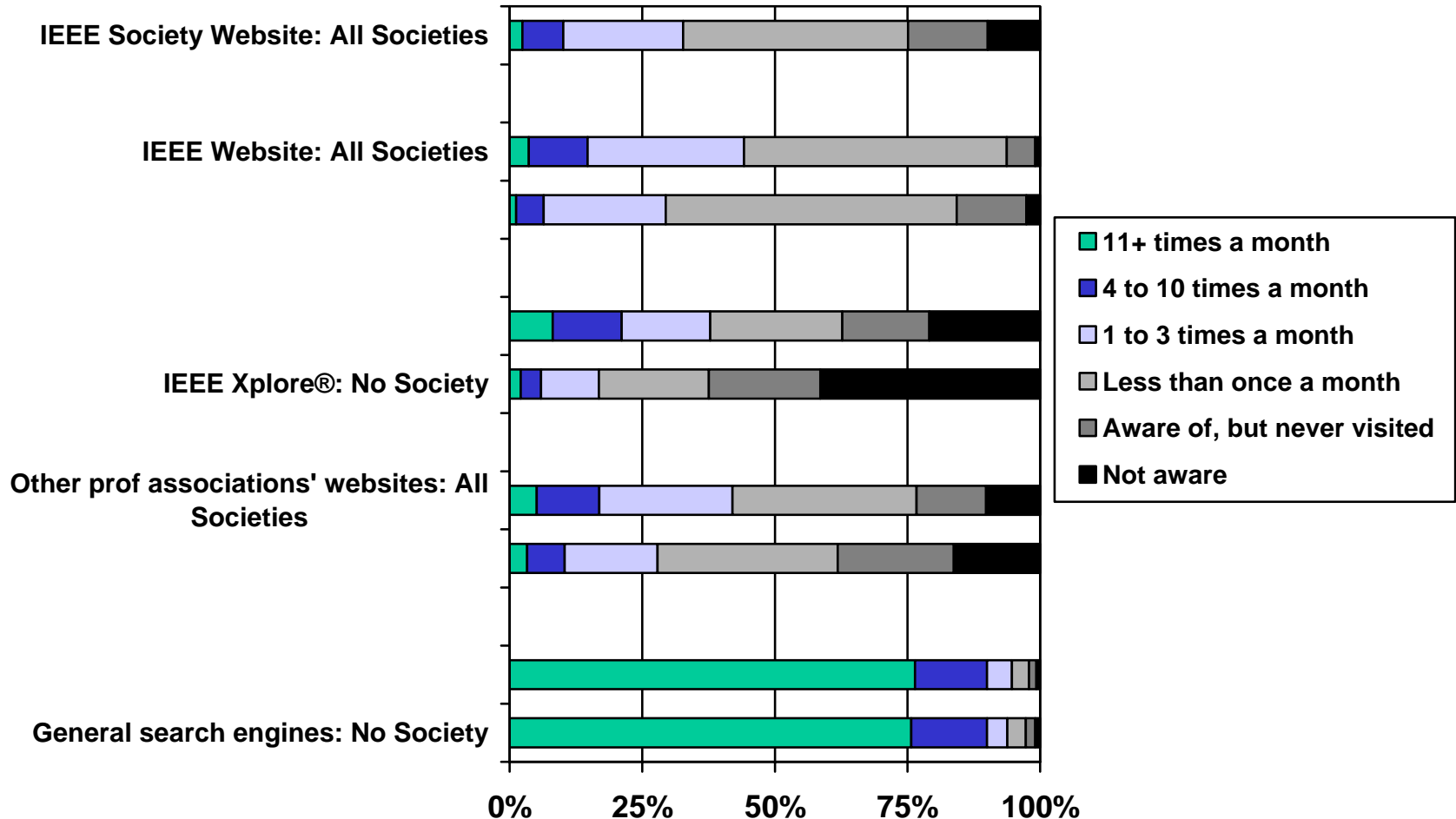
Overall, Non-Society members tend to be either less aware of, or more likely to have never visited the IEEE website, IEEE Xplore®, and the websites of other professional organizations than Society members. For example, 41% of Non-Society members are unaware of IEEE Xplore® versus only 21% of Society members.

Notes: There were no significant differences across Society Size. All differences between Society Members and No Society of at least 5% are significant at the p<.05 level. The No Society sample was not asked to rate IEEE Society websites.

Frequency of Website Visits

- Some members make more use of IEEE websites:
  - More than half of members aged 51 and older are either unaware of IEEE Xplore (31%) or aware of the site but have never visited (22%) compared to one-third of younger members (17% and 14%, respectively).
  - Members with doctorates visit the Xplore website more often (14% visit 11 or more times and 19% visit 4-10 times per month) than do members with baccalaureate (1% and 5%, respectively) or master's (5% and 11%, respectively) degrees.
  - Members who work in educational institutes also visit the Xplore website more often (17% visit 11 or more times and 20% visit 4-10 times per month) than do members in all other employment categories. On the other hand, more retired, self-employed, and unemployed members are unaware of this site (39%, 35%, and 35%, respectively) than are all other members (12 - 26%).

Note: All differences noted above are significant at the p<.05 level.

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Frequency of Website Visits

- Additionally, members who work for educational institutions and unemployed members visit the IEEE website more often (33% and 41% visit 1-3 times per month, respectively) than do members in all other employment categories. For this site, retirees are more likely to be aware of but never visited it (16%) than are all other members (4 - 7%).

- Finally, unemployed members also visit the Society website more often (36% visit 1-3 times per month) than do members in all other employment categories (10 - 28%).

Note: All differences noted above are significant at the p<.05 level.

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Educational Resource Needs

How much do you agree or disagree with the following statements?
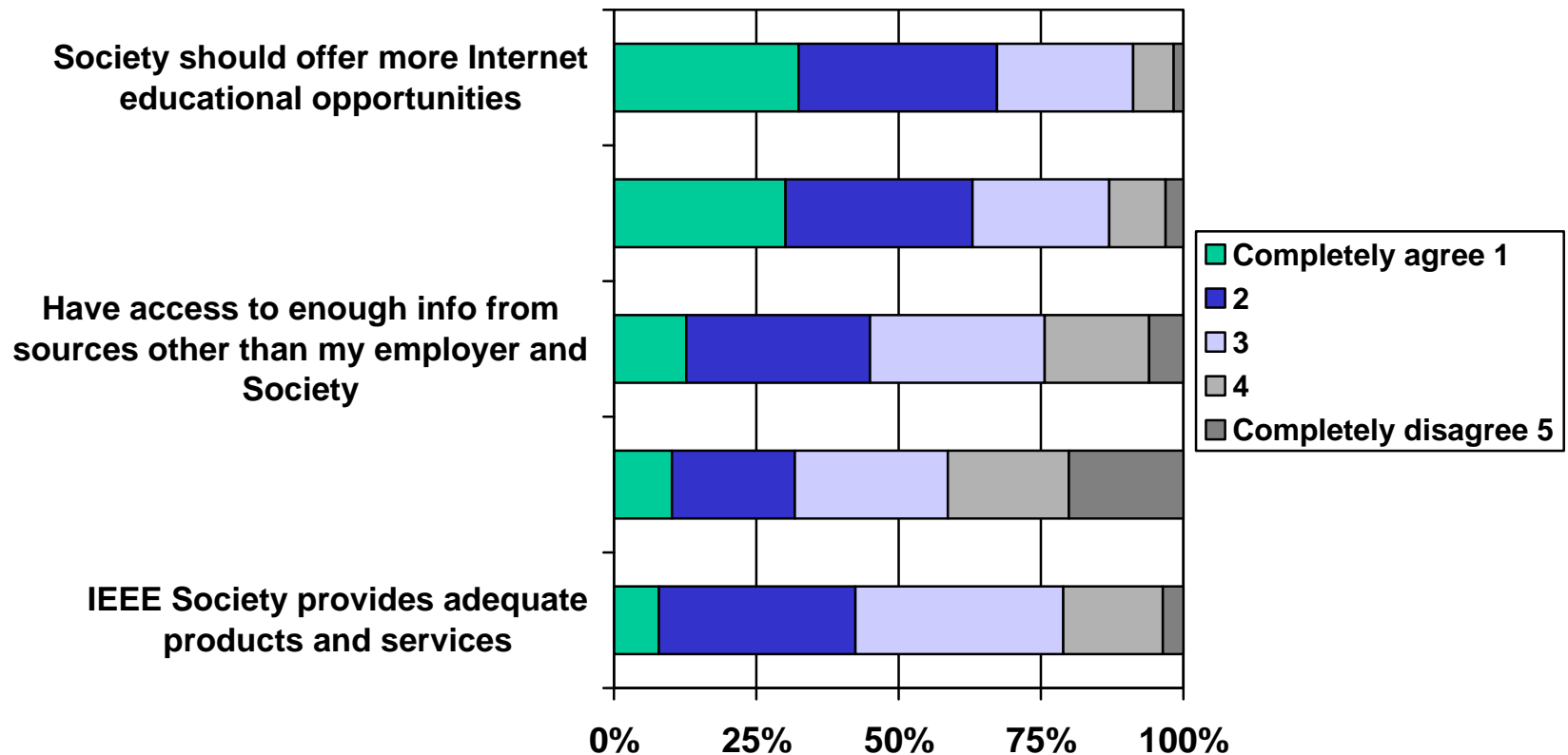
Society should offer more Internet educational opportunities

Have access to enough info from sources other than my employer and Society

IEEE Society provides adequate products and services

Legend:
- ■ Completely agree 1
- ■ 2
- ■ 3
- ■ 4
- ■ Completely disagree 5

X-axis: 0% 25% 50% 75% 100%

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Educational Resource Needs

- The demand for more educational opportunities via the Internet and/or CD-ROM/DVD is particularly strong among the following groups of members:

  - <u>Younger members</u>—75% and 68% of those aged 30 and younger agree that more Internet and CD-ROM/DVD opportunities, respectively, are needed versus 66% and 62% of those aged 41-50, and 54% and 50% of those aged 61 and older in the same categories.

  - <u>Lower-grade members</u>—78% and 70% of Associates agree that more Internet and CD-ROM/DVD opportunities, respectively, are needed versus 68% and 64% of Members, 64% and 58% of Senior Members, and 45% and 47% of Fellows in the same categories.

  - <u>Region 9 members</u>—85% and 81% agree that more Internet and CD-ROM/DVD opportunities, respectively, are needed versus 67% and 62% of members in all other regions.

  - <u>Members with baccalaureate or master's degrees</u>—66% and 68%, respectively, agree that more CD-ROM/DVD opportunities are needed versus 58% of members with doctorates.

  - <u>Unemployed members</u>—83% agree that more Internet opportunities are needed versus 67% of members in all other employment categories.

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Educational Resource Needs
IEEE Society provides adequate products and services

- In addition, Region 9 members are more likely to agree that their Society provides them with adequate products and services (67% agree) than are members in all other regions (48%).

- Members in Regions 1-6 are less likely to agree with the same statement (35% agree).

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Conferences

Note: A comparison of Society-specific conferences is not included in this report.

Conference Attendance

	SOCIETY MEMBERS	NO SOCIETY
Technical conferences, meetings, or workshops attended in a typical two-year period*	Average = 3.6 Conferences Median = 2 Conferences Mode = 2 Conferences (20% of members) Mode = 0 Conferences (19% of members) Range = 0 to 202 Conferences	Average = 2.2 Conferences Median = 1 Conference Mode = 0 Conferences (34% of members) Range = 0 to 24 Conferences
Conferences sponsored or cosponsored by Society	Average = 0.9 Conference Median = 0 Conferences Mode = 0 Conferences (55% of members) Range = 0 to 31 Conferences	Average = 0.8 Conference Median = 0 Conferences Mode = 0 Conferences (55% of members) Range = 0 to 10 Conferences
Conferences sponsored or cosponsored by another IEEE Society/IEEE	Average = 1.0 Conference Median = 0 Conferences Mode = 0 Conferences (53% of members) Range = 0 to 50 Conferences	
Conferences not sponsored or cosponsored by IEEE or an IEEE Society	Average = 2.0 Conferences Median = 1 Conference Mode = 0 Conferences (34% of members) Range = 0 to 150 Conferences	Average = 1.9 Conferences Median = 1 Conference Mode = 0 Conferences (32% of members) Range = 0 to 14 Conferences
Conferences that I am unsure who sponsors	Average = 0.4 Conference Median = 0 Conferences Mode = 0 Conferences (82% of members) Range = 0 to 20 Conferences	Average = 0.5 Conference Median = 0 Conferences Mode = 0 Conferences (78% of members) Range = 0 to 12 Conferences

Note: The difference (*) between the Society Members and No Society average numbers of conferences overall is significant at the $p < .001$ level.

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Conference Attendance

- Society members attend significantly more conferences overall than do members with no Society affiliation (average of 3.6 versus 2.2 conferences, respectively).

- There is a statistically significant difference between the number of conferences attended by members of Small Societies than Large Societies:
  - Small Societies—3.9 Conferences
  - Medium Societies—3.6 Conferences
  - Large Societies—3.4 Conferences

Note: All differences noted above are significant at the p<.001 level.

◆IEEE

Conference Attendance

- Other factors impact conference attendance as well:
  - As their IEEE grade increases, members attend more conferences overall:
    - Associates—2.7 Conferences
    - Members—3.4 Conferences
    - Senior Members—4.9 Conferences
    - Fellows—6.7 Conferences
  - To a certain point, as the number of Societies to which a member belongs increases, so does the number of conferences that member attends overall. Only the difference between 1 Society and 2 Societies is not statistically significant:
    - 1 Society—3.3 Conferences
    - 2 Societies—3.5 Conferences
    - 3 Societies—4.2 Conferences
    - 4 Societies—6.0 Conferences
    - 5 or more Societies—4.4 Conferences

Note: All differences noted above are significant at the $p < .001$ level.
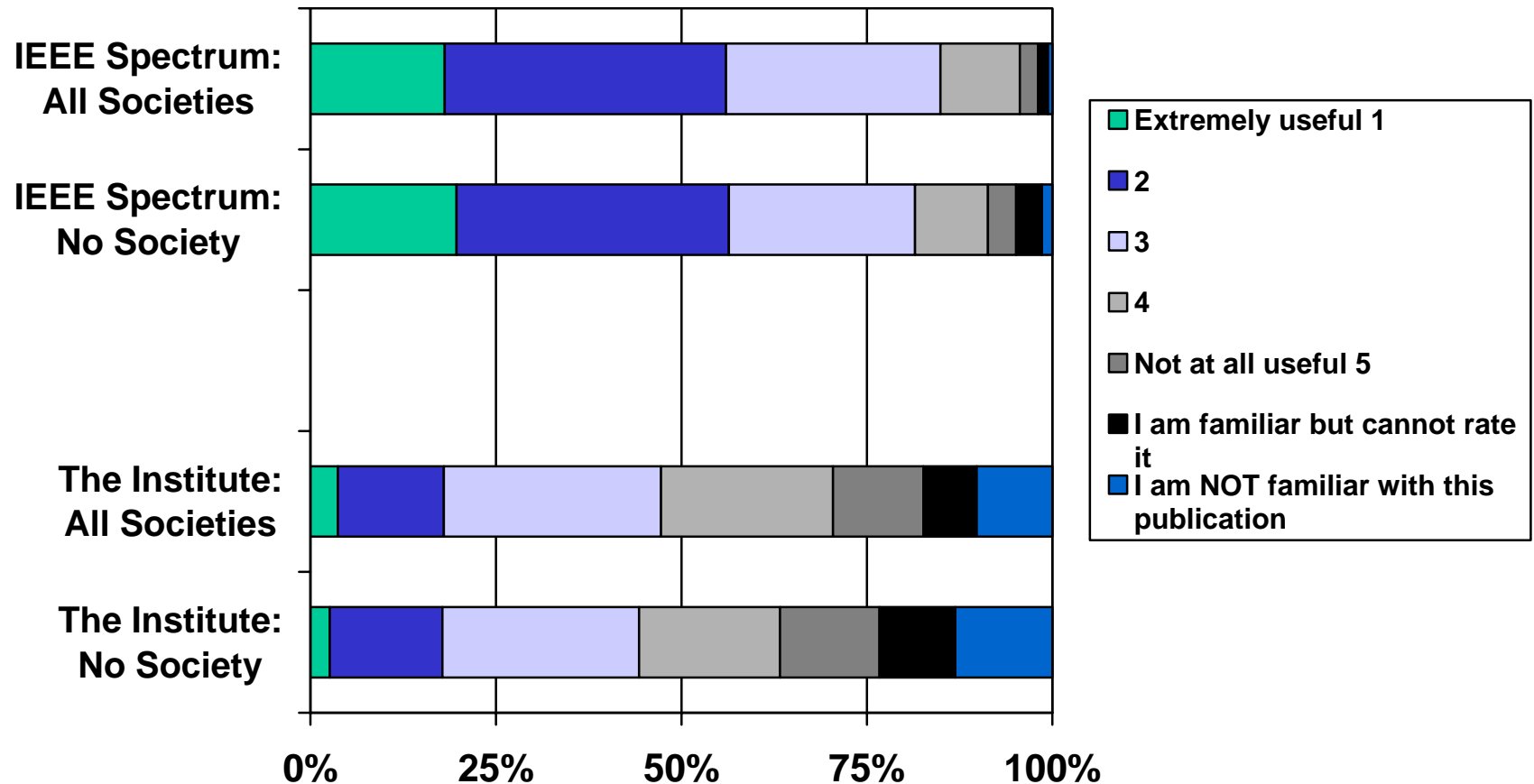
◆IEEE

Conference Attendance

- Furthermore, members who work in educational institutions or for unspecified employers attend more conferences overall (average of 4.7 and 4.9 conferences, respectively) than do members in all other employment categories (means range: 1.6 - 4.0).

- On the other hand, members who work in private industry attend fewer conferences overall (2.8) than do other members (3.4 - 4.9).

- Members who consider the Society queried in the survey to be their primary one attend more conferences sponsored by that Society (1.3) than do members whose primary Society was not surveyed (0.5).

- Supporting this latter finding, the reverse is also true: members who consider the Society queried in the survey to be their primary one attend fewer conferences sponsored by a different Society (1.0) than do members whose primary Society was not surveyed (1.6).

Note: All differences noted above are significant at the $p < .05$ level.

IEEE Publications

Note: A comparison of Society-specific publications is not included in this report.

Usefulness of Major IEEE Publications

Legend:
- Extremely useful 1
- 2
- 3
- 4
- Not at all useful 5
- I am familiar but cannot rate it
- I am NOT familiar with this publication

Categories:
- IEEE Spectrum: All Societies
- IEEE Spectrum: No Society
- The Institute: All Societies
- The Institute: No Society

X-axis: 0%, 25%, 50%, 75%, 100%

Usefulness of *The Institute:*
Regional Differences
(ranked by combined usefulness)

Legend:
- Extremely useful 1
- 2
- 3
- 4
- Not at all useful 5
- I am familiar but cannot rate it
- I am NOT familiar with this publication

Regions (top to bottom): Region 7, Regions 1-6, Region 9, Region 10, Region 8

X-axis: 0%, 25%, 50%, 75%, 100%
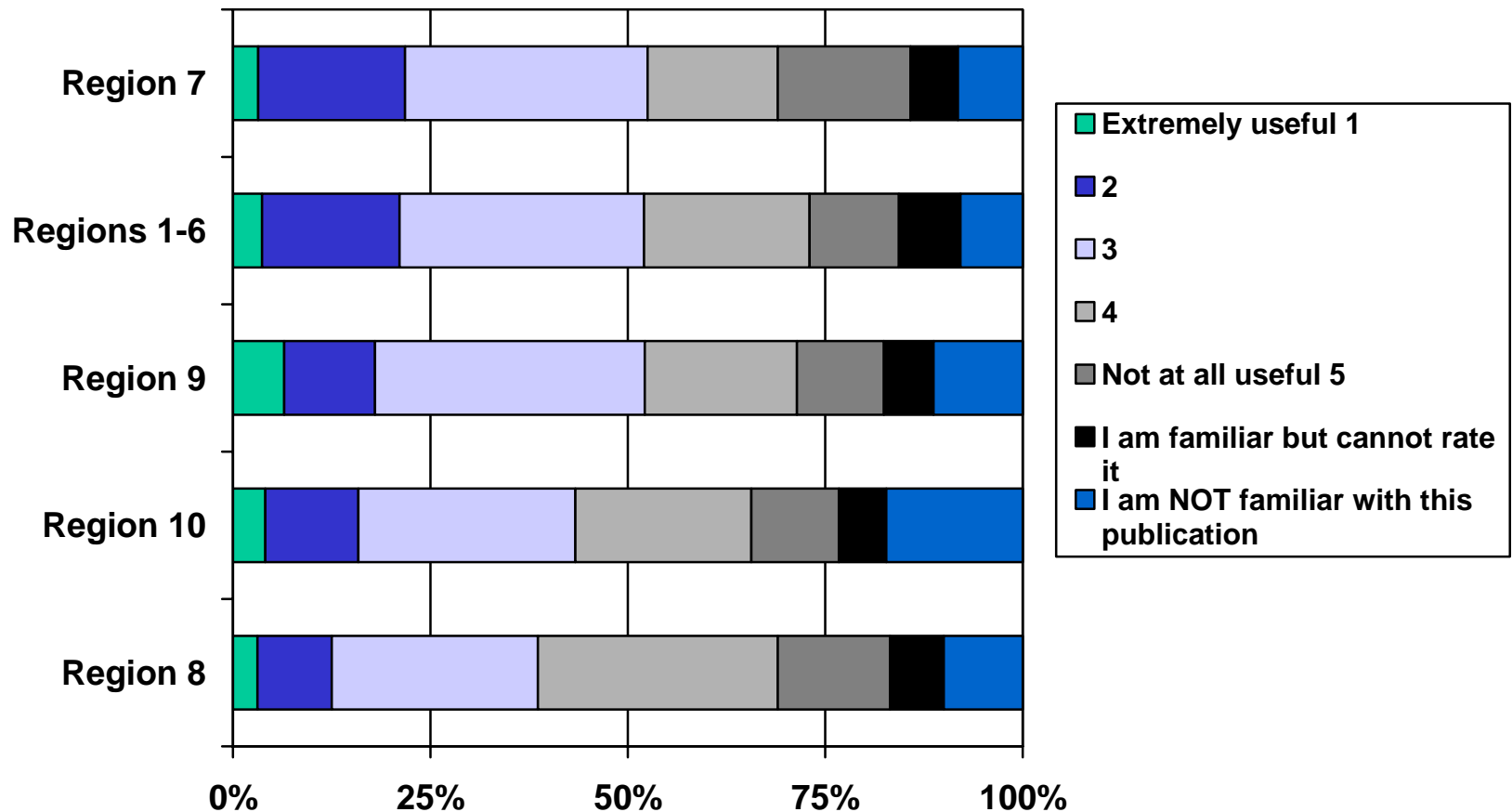
Fewer R8 members find *The Institute* useful (45% rate it Not Useful) than do members in all other regions (33%).

Notes: The noted difference between regions is significant at the $p < .01$ level. For the purposes of the above analysis, the scale above was collapsed as follows: 1-2 = Useful, 3 = Middle, and 4-5 = Not Useful.

IEEE

IEEE Publications Read in the Last Two Years
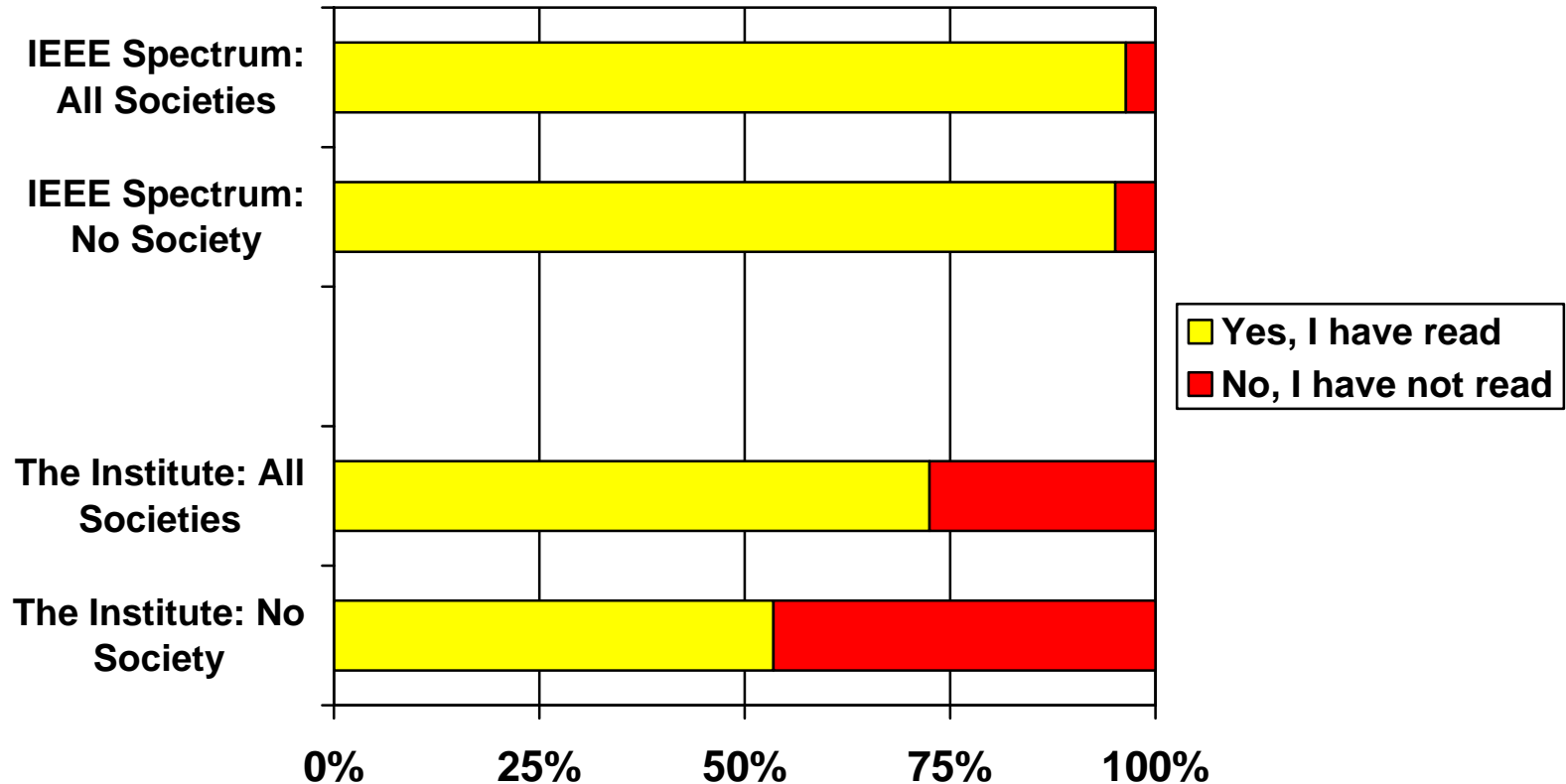
Far more Society members read *The Institute* (73%) than do Non-Society members (54%).

IEEE Publications Read in the Last Two Years: *The Institute*

R1-6 (United States)

R7 (Canada)

R8 (Europe, Middle East, Africa)

R9 (Latin America)

R10 (Asia and Pacific)

Legend:
- ☐ Yes, I have read
- ☐ No, I have not read

0%   25%   50%   75%   100%
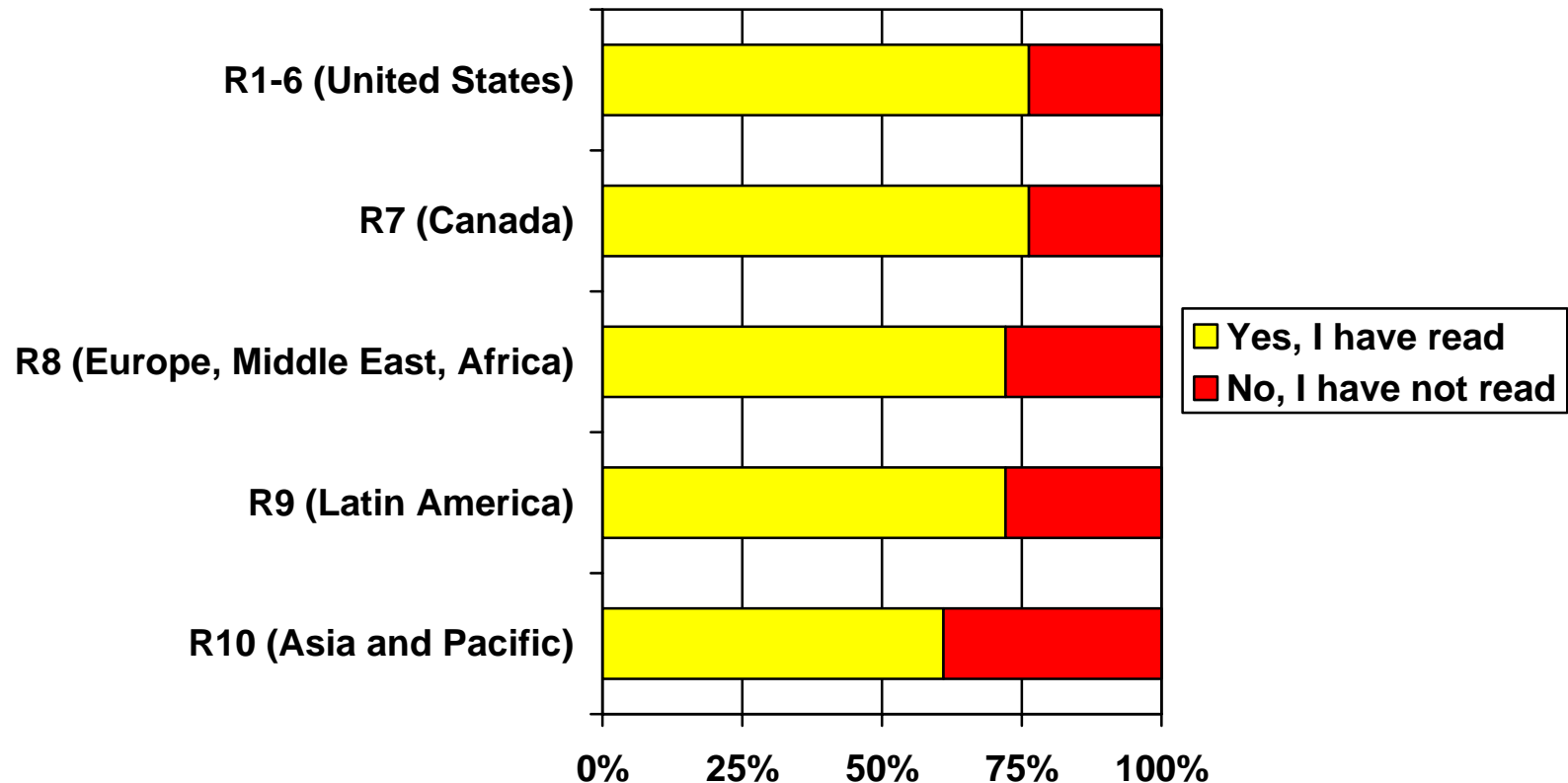
Fewer R10 members read *The Institute* (61% have read it) than do members in all other regions (75%).

Note: The noted difference between regions is significant at the p<.001 level.

◆ IEEE

Society Chapters

Local IEEE Society Chapter Participation in the Past Two Years

Chart categories (vertical axis):
- **Yes**
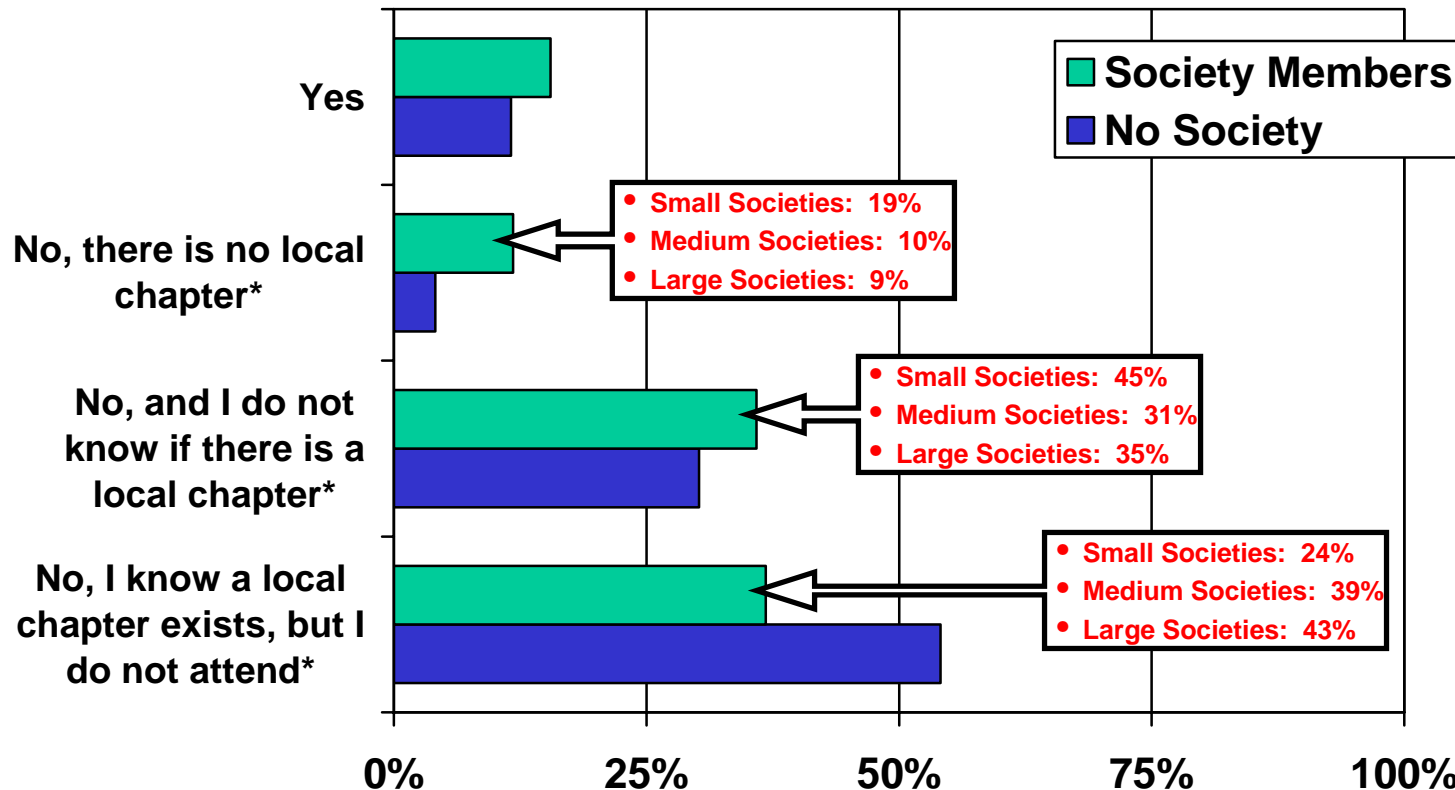- **No, there is no local chapter***
- **No, and I do not know if there is a local chapter***
- **No, I know a local chapter exists, but I do not attend***

Legend:
- **Society Members** (green)
- **No Society** (blue)

Callout for "No, there is no local chapter*":
- **Small Societies: 19%**
- **Medium Societies: 10%**
- **Large Societies: 9%**

Callout for "No, and I do not know if there is a local chapter*":
- **Small Societies: 45%**
- **Medium Societies: 31%**
- **Large Societies: 35%**

Callout for "No, I know a local chapter exists, but I do not attend*":
- **Small Societies: 24%**
- **Medium Societies: 39%**
- **Large Societies: 43%**

Horizontal axis: 0%, 25%, 50%, 75%, 100%

> **Non-Society members are much more likely to know a local chapter exists but not attend (54%) and less likely to not know if a local chapter exists (30%) than are Society members (37% and 36%, respectively).**

IEEE

Local IEEE Society Chapter Participation in the Past Two Years

- Local participation also varies across other factors:
  - Senior Members are most likely to participate in a local chapter (30%), followed by Fellows (22%), Members (14%), and Associates (9%). Conversely, Associates are most likely to <u>not</u> know if a local chapter exists (43%), followed by Members (38%), Fellows (29%), and Senior Members (22%).
  - Members who consider the Society queried in the survey to be their primary one are more likely to participate locally in that Society's Chapter (20%) than are members whose primary Society was not surveyed (9%). Similarly, members rating their primary Society are also more likely to know there is a local chapter (31% report that they don't know) than are members rating a non-primary Society (50%).
  - In addition, members in Region 10 are more likely to know there is a local chapter (28% report that they don't know) than are members in other regions (range: 34 - 42%).
  - Lastly, Region 9 members are less likely to have a local chapter (22% report that none exists) than are members in other regions (10 - 15%).

Note: All differences noted above are significant at the p<.01 level.

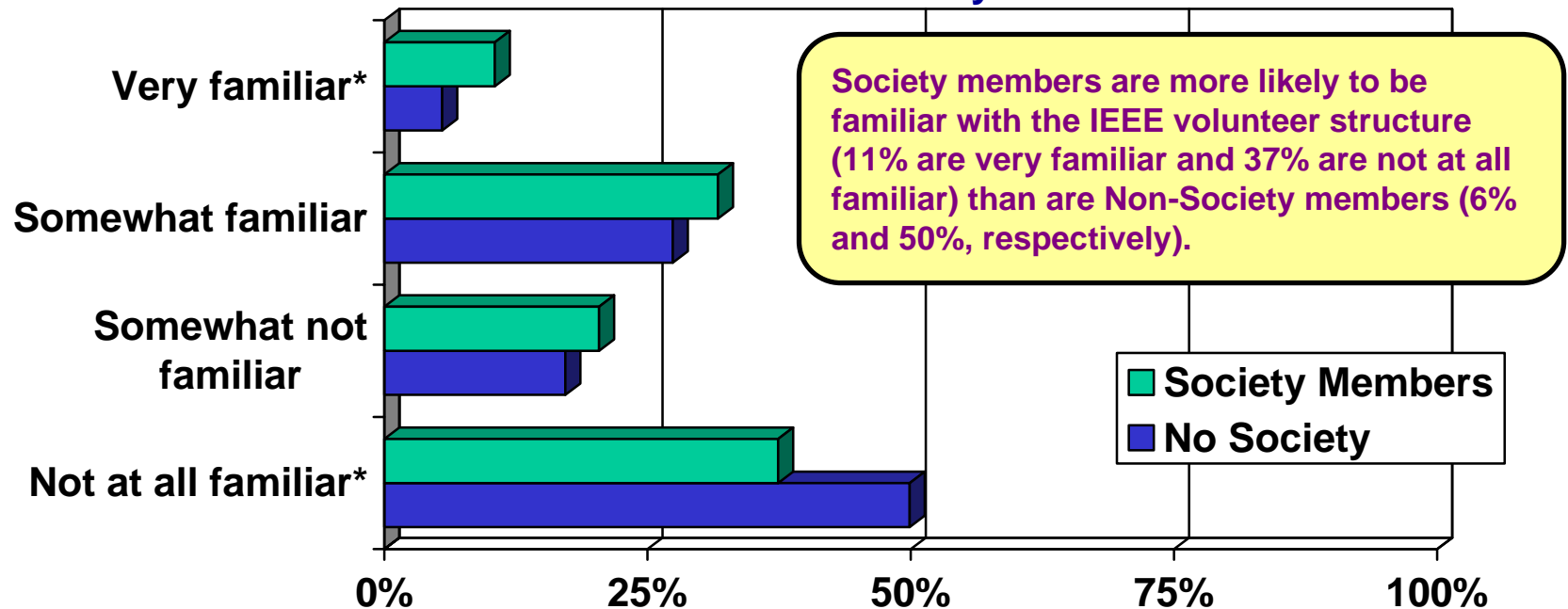# Knowledge of Volunteer/Staff Structure & Volunteerism

Familiarity with IEEE Society Structure

The IEEE [Society] has staff who carry out daily activities in support of the Society's operations.
Volunteers lead the IEEE [Society] at many levels and in many ways - including, among others,

- Top-level leadership on the Executive Committee of the Society
- Serving on local committees (for example, Chapter officers)
- Serving on international committees
- Editing or reviewing articles
- Participating in standards development or balloting
- Organizing conferences

This was customized by each Society.

Before you read the above, how familiar were you with the different ways to volunteer for Society?

Society members are more likely to be familiar with the IEEE volunteer structure (11% are very familiar and 37% are not at all familiar) than are Non-Society members (6% and 50%, respectively).

- Very familiar*
- Somewhat familiar
- Somewhat not familiar
- Not at all familiar*

■ Society Members
■ No Society

0% 25% 50% 75% 100%

IEEE

IEEE Society Volunteerism

Yes, I currently serve as a volunteer*

No, but I have in the past

No, I have not served as a volunteer*

- Society Members
- No Society

- Small Societies: 74%
- Medium Societies: 72%
- Large Societies: 82%

0%   25%   50%   75%   100%
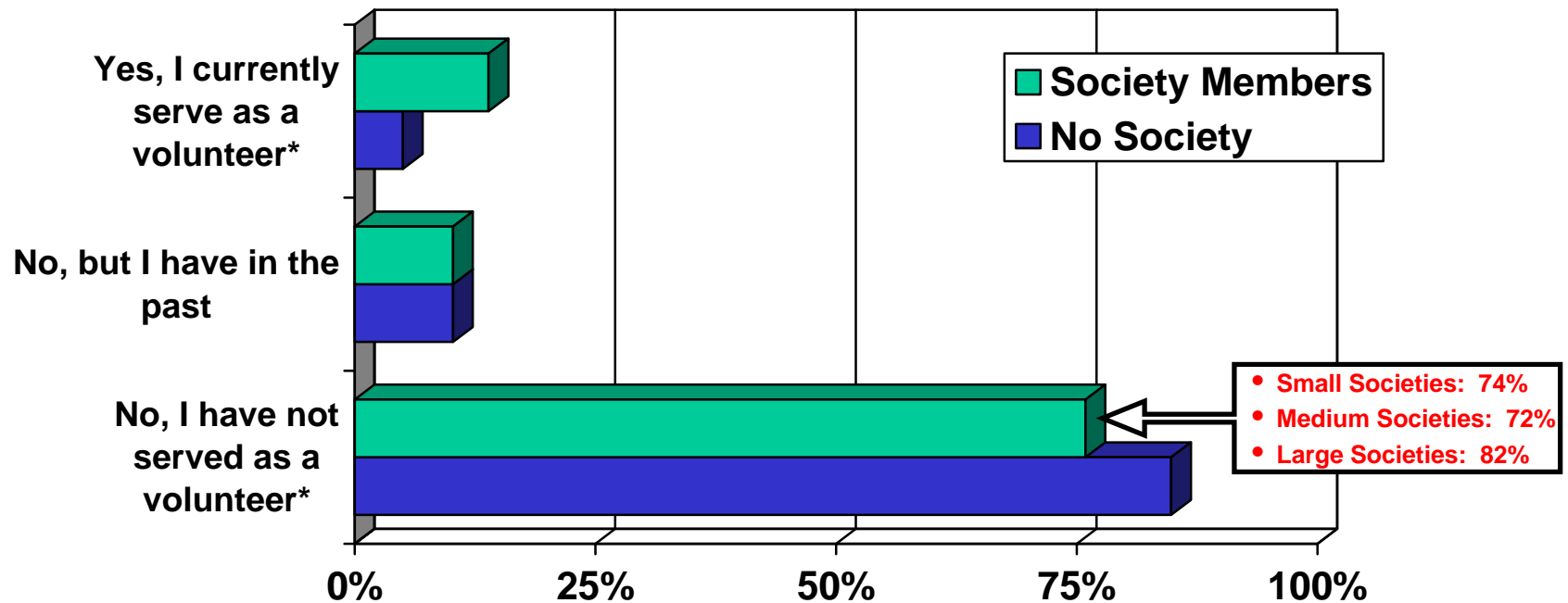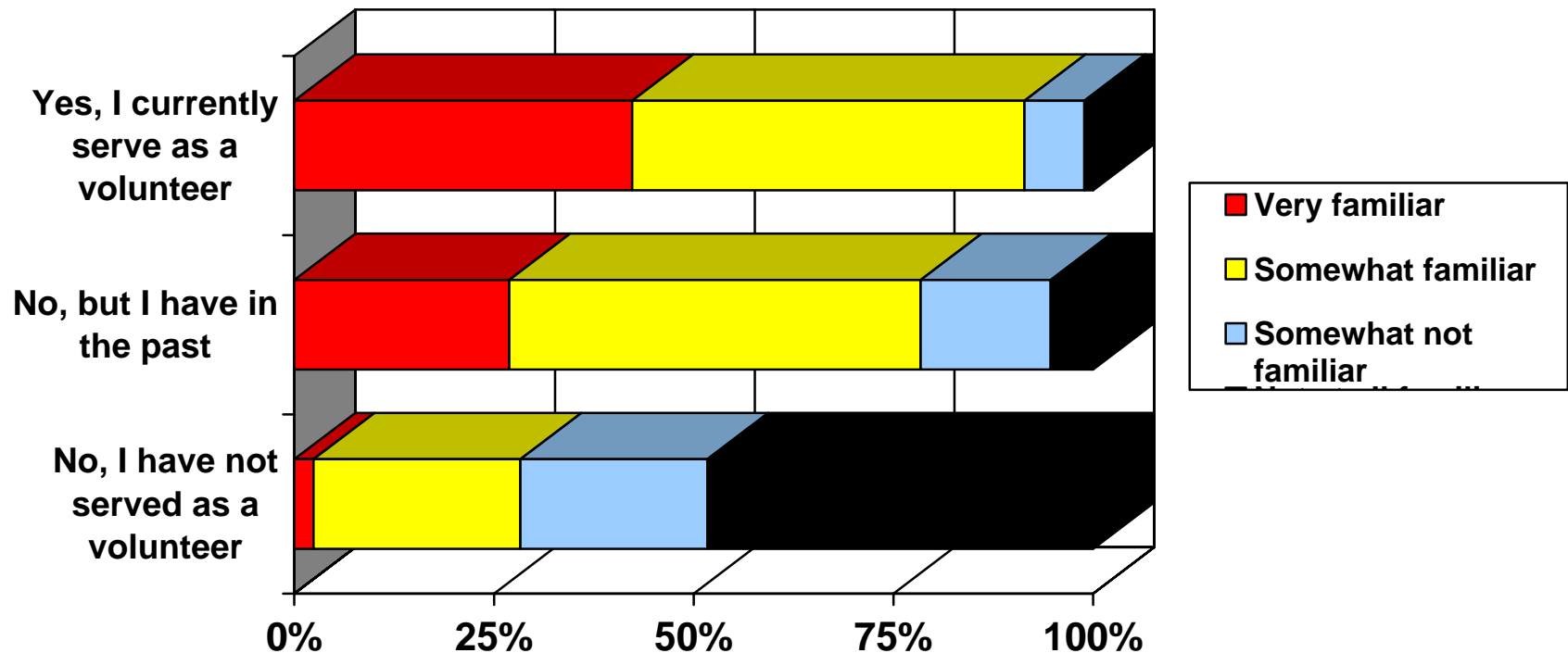
- **Non-Society members are less likely to volunteer (85% have never served and only 5% currently serve) than are Society members (76% and 14%, respectively).**
- **Respondents from Small and Medium Societies are less likely to have never volunteered.**

Notes: The indicated Society Size differences are significant at the p<.01 level. The differences (*) between Society Members and No Society for "Yes, I currently serve as a volunteer" and "No, I have not served as a volunteer" are significant at the p<.01 level.

Familiarity with Volunteer/Staff Structure related to Volunteerism

Legend:
- **Very familiar** (red)
- **Somewhat familiar** (yellow)
- **Somewhat not familiar** (light blue)

Categories:
- Yes, I currently serve as a volunteer
- No, but I have in the past
- No, I have not served as a volunteer

Axis: 0%, 25%, 50%, 75%, 100%

- Members who currently volunteer are more familiar with the volunteer/staff structure (42% are very familiar) than are past volunteers (27%) or non-volunteers (2%).
- Conversely, members who have never volunteered are less familiar with the structure (48% are not at all familiar) than are current (1%) or past (5%) volunteers.
- Yet, approximately half of current (49%) and past (52%) volunteers consider themselves only somewhat familiar with the structure.

Note: The noted differences between volunteer statuses is significant at the p<.001 level.
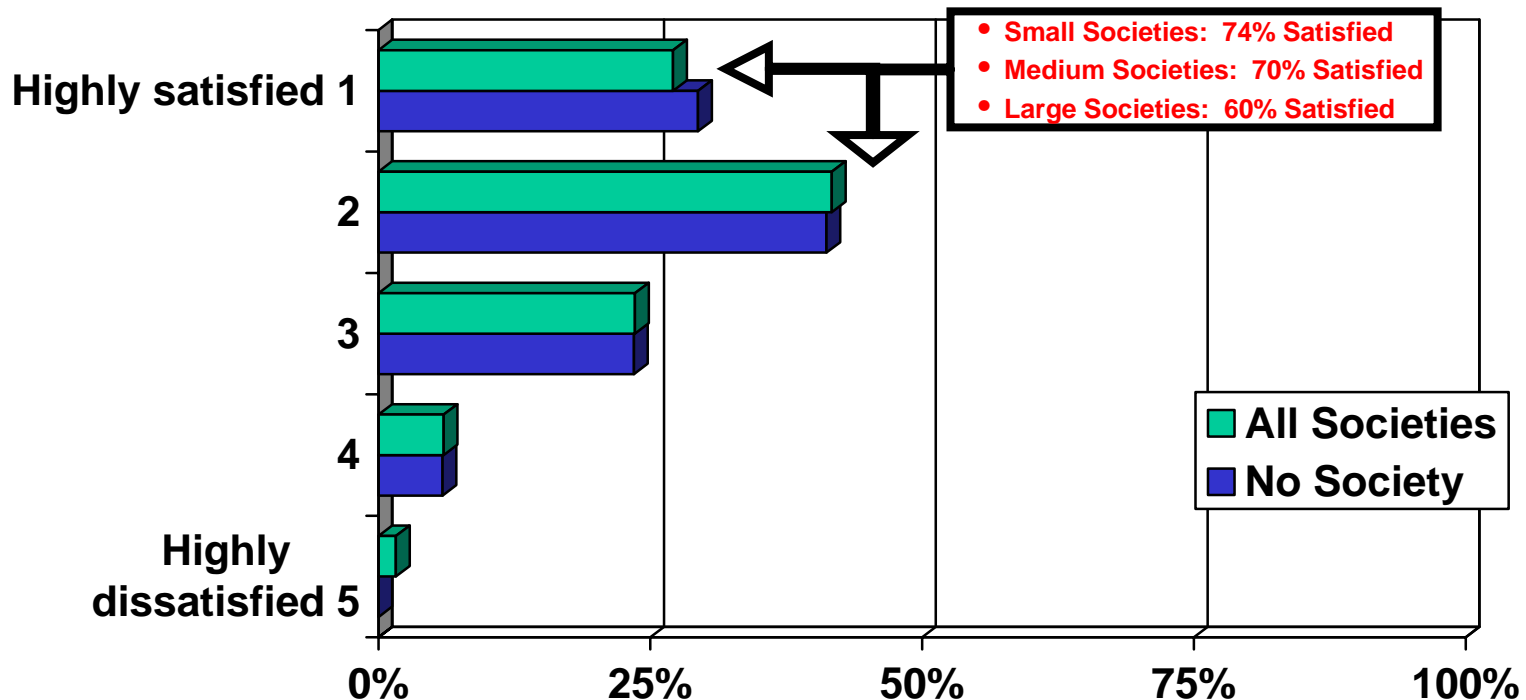
◆IEEE

Familiarity with Volunteer/Staff Structure related to Volunteerism

- Due to the strong correlation between knowledge of the volunteer/staff structure and volunteerism (82% of those who are very familiar with the structure have volunteered at some point during their membership), the following members are more likely to volunteer and/or be familiar with the structure:

  - <u>Older members</u>—38% of those aged 61 and older have volunteered sometime during membership versus 26% of those aged 41-50 and 9% of those aged 30 and younger. Similarly, 30% of those aged 61 and older are not at all familiar with volunteer options versus 34% of those aged 41-50 and 50% of those aged 30 and younger.

  - <u>Higher-grade members</u>—74% of Fellows have volunteered at some point versus 57% of Senior Members, 19% of Members, and 8% of Associates. Likewise, 52% of Fellows are very familiar with volunteer options versus 29% of Senior Members, 7% of Members, and 4% of Associates.

  - <u>Members working in educational institutions</u>—40% have volunteered versus 6 - 27% of members in other employment categories except retired; unemployed members are less likely to volunteer (9%) than any other employment category except full-time student. In addition, 27% of members working in educational institutions are not at all familiar with volunteer options versus 39 - 45% of other employment categories except retired, full-time student, and nonprofit institution.

Note: All differences noted above are significant at the p<.05 level.

◆IEEE

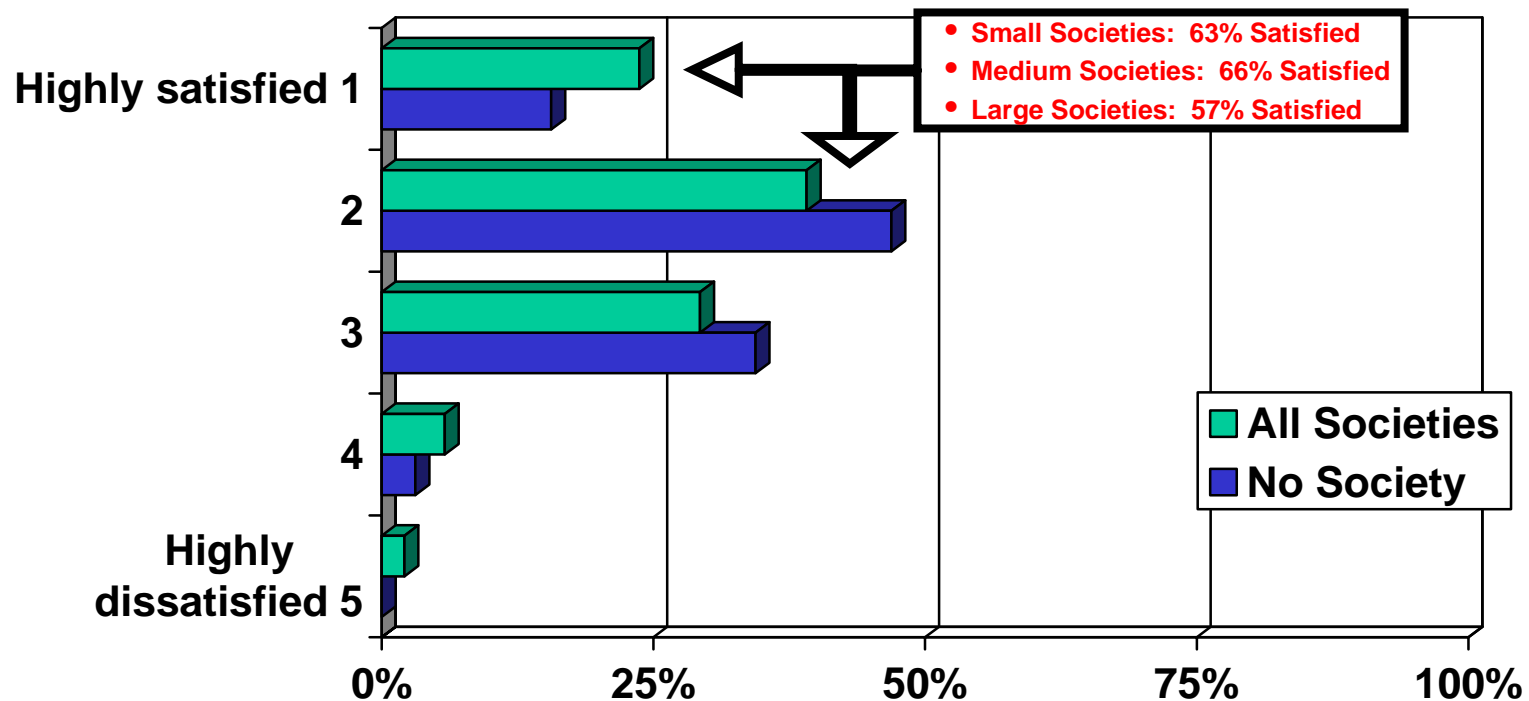# Familiarity with Volunteer Opportunities versus Volunteerism

- <u>Members rating their primary Society</u>—32% have volunteered sometime during membership versus 14% of members rating a non-primary Society. Likewise, 32% of those rating their primary Society are not at all familiar with volunteer options versus 45% of those rating a non-primary Society.

- <u>Members with doctoral or unspecified degrees</u>—37% of members with doctorates and 29% of members with unspecified degrees have volunteered at some point versus 11 - 17% of members with any other education level.

- <u>Members with more professional experience</u>—past volunteers average 23 years of experience and current volunteers average 19 years versus 17 years for non-volunteers.

Note: All differences noted above are significant at the $p < .01$ level.

◆**IEEE**

Overall Satisfaction with Current Volunteer Activities

- Small Societies: 74% Satisfied
- Medium Societies: 70% Satisfied
- Large Societies: 60% Satisfied

Highly satisfied 1

2

3

4

Highly dissatisfied 5
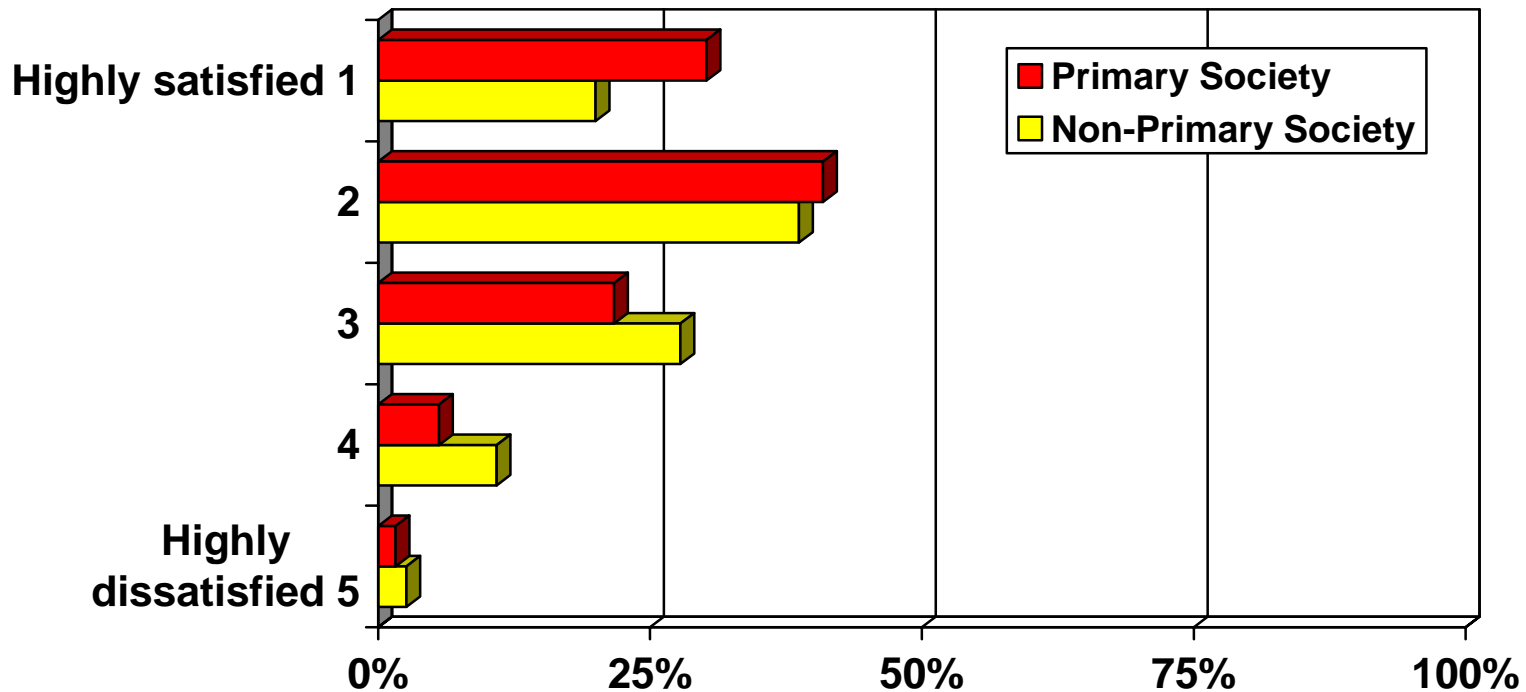
All Societies
No Society

0%   25%   50%   75%   100%

- **Respondents from Small and Medium Societies who currently volunteer indicated higher satisfaction than respondents from Large Societies.**

IEEE

Overall Satisfaction with Past Volunteer Activities

- Small Societies: 63% Satisfied
- Medium Societies: 66% Satisfied
- Large Societies: 57% Satisfied

Highly satisfied 1
2
3
4
Highly dissatisfied 5

0%   25%   50%   75%   100%

All Societies
No Society

IEEE

Overall Satisfaction with Current Volunteer Activities Related to Primary Society

Legend: Primary Society (red), Non-Primary Society (yellow)

Categories: Highly satisfied 1, 2, 3, 4, Highly dissatisfied 5

X-axis: 0%, 25%, 50%, 75%, 100%

Members are more satisfied with volunteer activities for their primary Societies (71% are satisfied) than with volunteering for Societies not considered primary (59%).

IEEE

Summary of Key Findings

Summary

- IEEE Society members maintain their Society memberships primarily to access technical information and IEEE publications and to stay informed of advancements in their fields.

- The majority of members feel that the IEEE is meeting those needs well. They are less content with local Society Chapter activities, continuing education opportunities, and conference discounts.

- Overall, members are mostly satisfied with both their IEEE and Society memberships, which they plan to renew and would recommend to colleagues.

◆IEEE

Summary

- Over three-quarters of Society members have either a Master's or Doctorate degree.

- A little under three-quarters of Society members have a degree in electrical or electronics engineering.

- The majority of members pay their IEEE and Society dues themselves.

- Approximately half of Society members work in Private Industry and a little over one-quarter work for Educational Institutions.

◆IEEE

Summary

- Many members do not feel they have adequate training and educational opportunities through their employers or their membership(s). They feel IEEE and/or their Society should offer more Internet or CD-ROM/DVD educational opportunities. This is especially felt by younger, Associate & Member grade, and "less-educated" members.

- The majority of members attend at least one conference, workshop, or meeting in a two-year period. Approximately half of the conferences attended are IEEE conferences.

- Almost all members report reading *Spectrum* within the last two years. Fewer members read *The Institute*.

- Few Society members attend local IEEE Chapter activities.

- Currently, most members use IEEE websites less often than once a month, if at all. The websites of other professional associations fare no better. Two-thirds of Society members visit their Society webpage less than once a month, never visit or are unaware of the site.

◆IEEE

Summary
4 of 6 – IEEE Structure and Volunteerism

- The majority of members are not familiar with the IEEE structure. In fact, less than half of the current volunteers indicated they were "very familiar."

- Approximately one-quarter of members have experience volunteering for the IEEE. In general, they report being satisfied with volunteering.

- Proportionally, volunteering is predominantly an activity done by members employed in educational institutions. While approximately one-quarter of members work for educational institutions, a little more than half of all current volunteers work for educational institutions. Additionally, members who work for educational institutions are more involved with the association overall – use IEEE websites more and attend more conferences.

- Society affiliation is a key factor in member involvement: members with no Society memberships are less engaged in IEEE overall. Furthermore, members with multiple Society memberships are more involved with their primary Societies overall and happier with those Societies than they are with non-primary Societies.

◆IEEE

Summary
5 of 6 - IEEE Structure and Volunteerism

- Member commitment to IEEE, and particularly Society volunteerism, appears to be most related to career stage.
  - The higher the member's Grade, the more involved she or he is with the IEEE. (That is, Fellows are more involved than Senior Members, who are more involved than Members, who are more involved than Associates.)
  - Members with the highest Grades are more likely to maintain membership in order to network and contribute to the profession. They also attend more conferences and participate in more local activities.
  - Members with the highest Grades, older members and those with more professional experience not only want to volunteer more, they act on that desire. Of course, these three "statuses" are related to one another.
  - Members with doctorates volunteer more than those with Bachelor's or Master's degrees.
  - Senior Members and Fellows are the strongest advocates of the association. They are more likely to recommend both IEEE and Society membership to colleagues.

IEEE

Summary

- Although there were differences found related to size of Society, there were few major findings. One interesting finding is:
  - Overall, members of small Societies are more engaged in IEEE, emphasize networking more, attend more conferences, volunteer more, and are more satisfied with their volunteer activities than are members of larger Societies.

- When comparing Society members to IEEE members with no Society affiliation, few key differences were found, including:
  - In addition to reasons mentioned by Society members, Non-Society members were more likely to mention keeping their access to insurance as a reason for maintaining their membership.
  - Society members are more engaged and active with the IEEE; have more education, are more aware of IEEE websites, volunteer more, more likely to have their employer pay for dues, and more likely to indicate they maintain membership to "keep informed" and "obtain IEEE [Society] publications."

◆ IEEE

Recommendations

Recommendations

- Study your own report
  - Each Society has all their written comments ($\overline{x} \cong$ 25 pages), raw data in Excel, PowerPoint of results, and copy of customized questionnaire
  - Are the members you really have the ones you are designing your products for? For example, did you realize you had so many members working in a particular field or with a particular degree? Now that you know, should you be doing something differently?

- Review the written comments
  - For example, "In the previous question, you indicated you might not renew your [Society] membership. Please tell us why you feel this way" and "In what ways can [Society] improve publications to better serve you?"

- Compare your results to the results in this report

- Talk to your peers in other Societies. Is another Society doing something better? What can you learn from them?

Recommendations

- Evaluate the ratings of your conferences and publications. Are there conferences or publications that may need to be reworked or eliminated? Are there conferences or publications that need more promotion?

- The majority of members have to pay for dues themselves. What could IEEE do to increase the number of employers willing to support association dues? Would this be worth the effort or do we accept this as fact?

- Make your websites relevant so that members need to go there. The IEEE website and Society websites are great communication vehicles. IEEE needs to drive more members to these sites. Websites are good places to highlight products and services -- the more members use IEEE products and services, the happier they are and the more likely they are to retain their membership.

- Members want IEEE to help them with their training and educational needs. Look to the Internet or CD-ROM/DVDs to help fulfill this need. This is potentially a huge opportunity for the IEEE.

- On the renewal or new application form, consider asking members to indicate which of their multiple Society memberships they consider to be their primary Society. This will allow for targeted promotion and better understanding of attrition issues.

Recommendations

- Treat IEEE and Society membership as a packaged deal. Both are significant "glue" that tie members to our association.

- Promote conferences to all members but make sure the members who are most interested in conferences know about all your conferences. Specifically, promote conferences to members who belong to two or more Societies, Senior Members and Fellows, and those who work for educational institutions.

- *The Institute* may need more analysis, particularly among members who live outside of the US and Canada.   (Effects of the recent major changes to The Institute are too new to be reflected in this survey.)

- Examine the role that Chapters play in the success of your Society. Are geographically-defined groups an effective means to engage your members? Or are there alternatives? If Chapters are important, do a better job informing members of whether a local Chapter exists. If one exists, maybe they will attend. If one doesn't exist, maybe they will help form one.

Recommendations

- By and large, the demographics of volunteers do not look like members at large. Review why members stop volunteering and why they don't volunteer. Is there a way to make the volunteer "workforce" look more like members? Would this be a good thing?

- Better inform all members of the IEEE organizational structure. If members better understand the role of volunteers, they will be more loyal, increase satisfaction, and encourage members to volunteer. Do not forget to communicate the structure to current volunteers -- over half of current volunteers were not "very familiar" with the structure.

- The majority of volunteers are satisfied but there is room for improvement.

◈ IEEE

Next Steps

Next Steps

- Understanding membership is not just about understanding your current members.

- Review your membership strategy – Is the number of members a measure of your success? If yes, how do you grow your membership? If no, how does membership fit into your Society's strategy?

- Consider Additional Research
  - Current members – Included in this report.
  - Former members – May be able to be conducted in 2004 or 2005 with a similar all-society project.
  - Non members – Lowest hanging fruit (and least expensive to contact) are individuals who attend Society conferences and meetings who are not Society members. Societies would need to collect email addresses and a similar all-society project could be conducted in 2005 or 2006.

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