

...AND NOW, FOR A WORD FROM OUR AUDIENCE

Presenting the results of our readership survey

BY JANET L. HOPSON

A journalist, from first analysis to last, stays in business by asking questions. And SCIENCE NEWS reporters pile up quite a stack of them by the end of the year. Let's see . . . seven reporters times a dozen or so questions per story times about 22 stories per issue times 50 issues per year . . . that's roughly 92,000, plus or minus a few. But there is one question *our reporters* get asked at least that often—or so it seems—when they venture out of the red brick townhouse on N Street to report the news. "Who," people want to know, "reads SCIENCE NEWS?"

We had a general idea, of course. But,

quite frankly, we didn't really know, at least not with the precision we have come to expect from our sources. So after one false start this spring (a slight mishap in the mail room), we conducted a survey of SCIENCE NEWS subscribers. Going on the assumption that you, at one time or another, have wondered that same thing yourself, we present the results of the readership survey. Demographic and objective data appear on this page, a sample of reader comments in the article on pages 387 and 398.

The survey sample consisted of 4,037 names chosen randomly from our mailing

INDIVIDUAL SUBSCRIBERS		
1. EMPLOYER:		
Business and industry	33.7%	
College and university	12.2%	
High school	4.6%	
Junior high school	2.7%	
Elementary school	1.7%	
Hospital	3.5%	
Government agency	10.6%	
Student	10.9%	
Other	18.3%	
No answer	1.8%	
2. OCCUPATION		
SCIENTISTS AND SCIENCE-RELATED OCCUPATIONS 54.1%		
Scientists and Engineers—34.0%		
Scientists (16.1%)		
Engineers (13.4%)		
Technicians (4.5%)		
Science/Technology Managers and Administrators—5.3%		
Science Teachers—6.4%		
Physicians—5.5%		
Allied Health Professions—1.2%		
Science Communicators—1.7%		
NONSCIENCE-RELATED OCCUPATIONS* 32.9%		
White Collar Workers—24.9%		
Professional (13.3%)		
Managers and Administrators (9.6%)		
Sales Workers (0.3%)		
Clerical Workers (1.7%)		
Blue Collar Workers—5.6%		
Craftsman and kindred workers (2.2%)		
Operatives (3.0%)		
Nonfarm laborers (0.4%)		
Service workers-Private household, other—2.0%		
Farmers/Farm Managers/Farm Laborers—0.4%		
STUDENTS 10.5%		
Graduate—2.5%		
College—3.7%		
High School—3.2%		
Jr. High and below—1.0%		
RETIRED (occupation not stated) 2.5%		
		100.0%
3. BREAKDOWN OF SCIENCE-RELATED OCCUPATIONS		
Of those readers professionally involved in science:		
64%—scientists, engineers or technicians		
10%—science/technology managers and administrators		
12%—science teachers		
10%—physicians		
2%—allied health personnel		
3%—science communicators		
100%		
Of those who are scientists:		
25%—physicists or mathematicians		
20%—life scientists		
17%—chemists		
11%—biomedical scientists		
11%—earth scientists		
10%—behavioral scientists		
7%—no field stated		
100%		
4. EDUCATION (Highest level completed)		
		<i>cumulative</i>
PhD, EdD, MD, etc.	19.6%	19.6%
Law degree	2.0%	21.6%
Masters degree	22.6%	44.2%
Some graduate study	18.1%	62.3%
Bachelor's degree	15.0%	77.3%
Some college	15.3%	92.6%
High school diploma	4.3%	96.9%
Some high school	1.5%	98.4%
Grade school	0.5%	98.9%
No answer	1.1%	100.0%
5. HOUSEHOLD INCOME		
		<i>cumulative</i>
Over \$35,000	18.9%	18.9%
\$30,000-\$34,999	8.8%	27.7%
\$25,000-\$29,999	11.2%	38.9%
\$20,000-\$24,999	15.8%	54.7%
\$15,000-\$19,999	18.0%	72.7%
\$10,000-\$14,999	14.0%	86.7%
\$5,000-\$9,999	7.4%	94.1%
Less than \$5,000	2.7%	96.8%
No answer	3.2%	100.0%
6. AGE		
17 or under	4.0%	
18-24	10.8%	
25-34	25.2%	
35-49	26.0%	
50-64	23.3%	
65 and over	10.0%	
No answer	0.7%	
7. SEX		
Male	83.5%	
Female	16.2%	
No answer	0.3%	
8. MARITAL STATUS		
Married	60.5%	
Single	37.2%	
No answer	2.3%	
9. PASS-ALONG READERSHIP		
2.73 readers per copy		
10. OTHER MAGAZINE SUBSCRIPTIONS		
Scientific American	37.2%	
Smithsonian	22.3%	
Natural History	16.0%	
Psychology Today	14.0%	
Science	14.0%	
Science Teacher	1.7%	
None of the above	34.0%	
No answer	3.5%	
11. IS THE LANGUAGE IN SCIENCE NEWS TOO TECHNICAL?		
Yes	5.5%	
No	87.9%	
Sometimes	2.2%	
No answer	4.4%	
*U.S. Bureau of Labor Statistics categories		

list. That list contains both individual subscribers who receive SCIENCE NEWS at home or at work, and institutional subscribers, such as libraries, businesses, government agencies and research laboratories. About two-thirds of the randomly chosen names were individuals, one-third institutions. We designed two versions of the questionnaire for the two groups and sent 2,784 to individuals and 1,253 to institutions. All questionnaires were anonymous.

Although a 10% return rate is considered good for a mail survey, 1,384 or 50% of the individual and 273 or 22% of the institutional questionnaires were returned. We found this gratifying, but not terribly surprising. We like to think of our readers as more devoted than the average, and these return rates support our admittedly biased view.

The percentage of returns is more than just an egotistic concern, though. It is an important measure of how accurately the survey results reflect the entire population (in this case, the subscribers). With a very small return, one is never sure how accurate that reflection is, and must suspect that the respondents (who have taken the trouble to answer and return the questionnaire) are qualitatively different from the nonrespondents in at least some of the variables being measured. But with a high response rate, one can be surer that the results are representative and the respondents and nonrespondents similar.

There are many additional techniques for comparing respondents and nonrespondents but most of them are expensive and time-consuming. Because our response rate was so high, we did just one additional analysis (for free) of return rates by state to satisfy ourselves that the return sample was fairly representative.

The data, of course, speak for themselves, and you will probably find the specific breakdowns presented on these pages the best answer to the question that started this whole project. But we thought a short summary and analysis of the data might be in order.

Individuals:

Individual SCIENCE NEWS subscribers work for a variety of organizations. About a third work in business or industry, about a third work for or attend an educational institution, and another third work for an assortment of organizations including government agencies and hospitals.

More than half, 54.1%, work in science-related occupations. Two-thirds of this group are scientists, engineers or technicians, 10% are physicians, 10% are science/technology managers and administrators, 12% are science teachers and the remaining 5% are health personnel and science communicators.

The rest of the audience, about 46%, work in nonscience-related occupations,

attend school or have retired. Most of them are professionals, managers and administrators, although there is a sprinkling of blue collar workers, service workers and farmers. Student readers, most of them in college or graduate school, constitute 10% of our individual subscribers, and retirees, 2.5%.

These occupational data confirm a trend that we have noticed informally during the eight years since our last readership survey: Our audience has grown increasingly science-related and professional. Eighty-three percent of individual subscribers are professionals or university students.

SCIENCE NEWS, the survey therefore reflected, has a well-educated audience. More than 90% of the individual subscribers have attended college, three-fourths have graduated, almost half have advanced degrees, and one out of five has a doctorate. Incomes are also high; 54.7% have household incomes of \$20,000 or more per year.

About three-fourths of the individual subscribers fall between the ages of 25 and 64; 83.5% are males and more than half are married. This may not be an accurate reflection of our readers, however, because each individual subscriber's issue, the survey revealed, is shared by 2.73 readers. SCIENCE NEWS subscribers also subscribe to other science magazines, and the great majority, 87.9%, do not find our writing too technical.

Institutions:

Before summarizing the results from the institutional questionnaires, we feel we must issue a few caveats. The response rate for institutions was only half that of the individual subscribers, still better than average for a mail survey, but not nearly as comforting. The questionnaires were mailed in July, the middle of summer vacation for public schools, which constitute 50% of our institutional subscribers. We suspect that this may have contributed to the lower response rate. In addition, any institutional questionnaire has built-in imprecision. The person who receives and distributes the copy (a librarian or secretary, perhaps) answers the questionnaire instead of the readers. Therefore, even though institutional readers make up an important part—one-third to one-half—of the total audience, the error bars on this section of the survey data are wider and our confidence a bit shakier.

All that said, a wide variety of institutions receive SCIENCE NEWS: About 63% are colleges, universities and schools; 17% are public libraries and the remaining 20% are businesses, research laboratories and other institutions. Extrapolating from our current circulation figures, this represents about 25,000 schools, 7,000 public libraries, 2,800 businesses and 1,600 research and development organizations, as well as 3,600 other institutions.

Most (87%) take one subscription, but 8% take two and 5% take three or more. Although 30% declined to estimate the total number of readers per copy, of those who did, three-fourths estimated that between one and 20 persons and one-fourth estimated that between 21 to 100 or more persons read each issue.

In most cases, the issues are kept in a library, sometimes on microfilm. Not surprisingly, many of the institutions also subscribe to other science magazines.

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After seeing the results, it is clear that SCIENCE NEWS has a fairly diverse audience—scientists and engineers, professionals, students, blue-collar workers, retirees. Even though there has been a trend in recent years toward a more scientific, more professional audience, the particular mix of our readers makes the magazine what it is. The scientists keep us honest, the rest keep us lively, and we aim for a finished product that will keep any science buff fascinated. That, in short, is what we tell people now, with a clear conscience toward scientific accuracy, when they ask, "Who reads SCIENCE NEWS?" □

INSTITUTIONAL SUBSCRIBERS

1. TYPE OF ORGANIZATION

Business or industry	7%
College or university	13%
School	50%
Public library	17%
Research and development institution	4%
Other	9%

2. NUMBER OF SCIENCE NEWS SUBSCRIPTIONS TAKEN

One	87%
Two	8%
Three or more	5%

3. AVERAGE NUMBER OF READERS PER COPY

1-5	20%
6-10	13%
11-20	14%
21-30	6%
31-100	16%
over 100	2%
Don't know	29%

4. HOW ARE COPIES OF SCIENCE NEWS DISPLAYED

Kept in library	80%
Microfilm in library	3%
Routed, then kept in library	5%
Other	12%

5. OTHER MAGAZINE SUBSCRIPTIONS

Scientific American	72%
Science Teacher	19%
Natural History	62%
Smithsonian	34%
Psychology Today	45%
Science	56%