

**PROFESSIONAL ACTIVITY IN RETIREMENT AMONG EMINENT SCIENTISTS**

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## **Professional Activity in Retirement among Eminent Scientists**

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The cohorts of faculty who were involved in the dramatic growth in higher education following World War II are approaching retirement age. Estimates from one study suggest that 20 to 30 percent of all current faculty will retire by the turn of the century (Lozier & Dooris, 1988/89). As a result of the retirement of large numbers of current faculty expected in the next decade, concern in academe is now focusing on faculty replacement (Bowen & Schuster, 1986). Given that current cohorts entering the profession and considering positions in academe may not be large enough to replace current retiring faculty, there is also discussion regarding mechanisms for retaining highly competent older faculty members. However, there has been relatively little research on how to keep competent older faculty in the workforce or active in their profession after retirement (see Willis & Dubin, in press, for general discussion of issues).

This study examined factors that differentiated senior faculty who planned to remain professionally active following retirement from those who planned to disengage from their profession. Since the concern is with retention of highly competent faculty, we focused on individuals who had received recognition from their peers for outstanding scientific achievement. Specifically, the study included elected fellows of the American Association for the Advancement of Science (AAAS).

### Design of the study

The study involved a mail survey in 1988 to all AAAS fellows in Chemistry, whose primary affiliation was with an academic institution. These were professionals who had received considerable recognition for their scientific contributions. A number of the respondents held endowed chairs in Chemistry at their universities.

The survey included a questionnaire on the fellows' current professional activities, their retirement plans, and their views toward retirement. Participants also completed the Edwards Personal Preference Survey, a personality measure providing ipsative ratings of the relative salience of various personality characteristics (needs).

A total of 133 fellows completed the survey; 96 were still employed; 37 had retired. Of the nonretired faculty (N = 96), 35.5% (N = 35) reported that they planned to remain very involved professionally upon retirement; 42.3% (N = 41) anticipated little or no professional activity following retirement; the remaining 20 subjects were uncertain about their level of professional involvement following retirement. The findings discussed below focus on differences in demographic characteristics, personality, retirement plans, and views regarding retirement between those who plan on remaining professionally involved after retirement (involved faculty) versus those who plan on disengaging from professional activities (noninvolved faculty).

### Study findings

Demographic characteristics. There were no differences in the age, terminal degree received, or marital status between the two

groups. Involved faculty had been employed in their current academic positions somewhat longer ( $\bar{X}$  = 24.8 years) than noninvolved faculty ( $\bar{X}$  = 20.9 years).

Current professional activities. Involved faculty reported currently spending proportionately more time in research activities,  $\bar{X}$  = 45.7%, than noninvolved subjects,  $\bar{X}$  = 36.8%. It should be noted that both groups are now active researchers and spend a considerable proportion of their time in research activities. The groups did not differ in the proportion of time spent in other professional activities (i.e., teaching, administrative, consulting, public service).

Personality characteristics. Two personality characteristics distinguished the groups. Involved faculty reported endurance to be a more salient personality characteristic than did noninvolved subjects. Those high on endurance report the need to persist at a problem and to continue to work at a task until it is completed. In contrast, noninvolved faculty perceived themselves to have a higher need for affiliation than did involved faculty. Those high in affiliation value interpersonal relationships and the forming of close social ties.

Views of retirement. The participants were asked to indicate how important a number of factors were in their retirement planning and decision making. Differences were found in the two groups retirement plans. Faculty who planned little professional involvement following retirement viewed the possibility of leisure activities as a more important consideration in deciding when to retire. In addition, they

considered moving to another geographic area as a more important retirement option. In contrast, involved faculty reported concerns about continued professional activities to be more important in the retirement decision. Involved faculty were also more likely to view retirement as involving a "social stigma."

Post-retirement professional activities. Upon retirement, involved faculty planned on participating in approximately twice as many professional activities, compared to noninvolved faculty. Four types of professional activities were of particular concern to those who planned to remain active following retirement. The involved faculty were more likely to plan to maintain a laboratory, to continue to conduct research, to submit research proposals/contracts, and to collaborate with professional colleagues.

#### **Discussion**

The findings of our study indicate that factors in three domains differentiated highly competent faculty who planned to remain active following retirement and those who did not. First, there appear to be differences in personality characteristics. Those who planned to remain professionally active perceived themselves to be particularly persistent with regard to work oriented activities and to feel the need to endure or persist at solving the task or problem at hand. In contrast, those less concerned with professional activities following retirement reported themselves to be higher on affiliative needs.

Second, the two groups can be differentiated on the basis of their current professional activities. Those planning to remain professionally active in retirement currently spend a greater

proportion of time in research. The larger number of hours currently spent in research may suggest a greater commitment to certain research questions, that they plan to continue addressing in retirement.

Third, the groups differ in their retirement plans and their attitudes toward retirement. The involved group were more likely to view retirement as involving a "social stigma." This finding further supports the view of this group as being very work oriented and professionally committed. Perceptions of retirement as disengagement from work or involving a loss of the work role were viewed negatively by this group. For the other group, retirement is viewed as an opportunity to engage in alternative leisure activities and possibly to relocate to a new geographical location. This retirement plans appear congruent with their personality style of high affiliative needs.

The particular professional activities of concern to those planning to remain involved in their profession are of interest. They include maintaining a lab, conducting research, seeking funding opportunities, and collegial collaboration. These activities suggest a continuation of current activities rather than divergence into new types of professional endeavors. It should be noted that these activities, such as maintaining a laboratory, will require continued involvement with the academic enterprise and some university resources and commitment.

In summary, these findings suggest that there are wide individual differences in level of planned professional involvement of eminent scientists following retirement. These differences appear to reflect

personal characteristics of the individual, current professional activities, and attitudes toward retirement. Maintaining professional productivity in eminent scientists will require an understanding of the multidimensional nature of the problem and creative and resourceful relationships between the needs, interests and resources of the individual and the broader academic community

### References

Willis, S. L. & Dubin, S. (Eds). (in press) Contemporary approaches to maintaining professional competence. San Francisco: Jossey-Bass.

Lozier, G. G. & Dooris, M. J. (1988/89). Elimination of mandatory retirement: Anticipating faculty response. Planning for higher education, 17(2), 1-13.



Table 1

**Factors Differentiating Scientists Planning Involvement  
vs Noninvolvement in Professional Activities Following Retirement**

Factors	Groups	
	Involved	Noninvolved
<b>Personal Characteristics</b>		
Endurance	16.41	14.00
Affiliation	9.45	11.25
<b>Professional Activities</b>		
Yrs at Institution	24.8	20.9
% Time in Research	45.7	36.8
<b>Retirement Plans &amp; Attitudes</b>		
Leisure important	2.15	2.67
Plan geographical move	1.39	1.80
"Social stigma"	3.10	2.57
<b>Professional Activities in Retirement</b>		
Maintain Laboratory	.79	.35
Conduct Research	.75	.41
Seek Funding	.68	.24
Collegial Collaboration	.97	.78