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## **Elder Scientists Are a Vast Resource: Let's Put Their Skills To Good Use**

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National Science Foundation statistics show that in 1986 there were 835,500 U.S. scientists and engineers who were 55 years of age or older and still employed. Surprisingly, there are no reliable statistics on the number of retired scientists and engineers, according to the American Association of Retired Persons.

Despite this knowledge gap, it is reasonable to assume that many thousands of scientists are nearing or in retirement. This number will increase in line with the well-established demographic trend of an aging workforce in the U.S.

Elder scientists, like elder statesmen, offer many opportunities for society to benefit from their experience and wisdom. Yet we tend to ignore the role they could play in the vitality of our nation's educational, scientific, and economic enterprises. It is time to ask how the varied talents of elder scientists might best be applied.

Retired scientists could, for instance, alleviate the already acute shortage of qualified science and mathematics teachers in the U.S. Their life experience as professional scientists would make them excellent mentors for young students. But

state certification requirements and opposition from teachers' unions may bar retired scientists from the classroom today. An alternative is to set up voluntary programs after school or on weekends that can be based at community and day care centers.

Elder scientists can also benefit industry. Consulting relationships are a traditional way for large corporations to retain the expertise of their scientists and engineers after they retire. The need for consulting scientists is now spreading to smaller companies. These firms are struggling to remain competitive by adopting new technologies, such as statistical process controls and computer-aided design and manufacturing systems. This trend will create more business consulting opportunities for retired scientists, whose expertise can make a direct impact on U.S. economic vitality.

Elder scientists can also make an important economic and social contribution by becoming entrepreneurs in their own right. Science is a creative and inventive profession. Many scientists come up with innovative ideas for marketable products during their careers. What these entrepreneurial scientists may lack

is practical knowledge of how to turn their ideas into reality.

A number of states have recently established economic development programs to provide this knowledge as well as seed financing to help scientists start new companies. These state programs complement existing federal grants for small business innovation projects. In addition, a growing number of research parks and business "incubators" around the nation provide low-cost space to house startup companies. Personal profit may not be enough to motivate all entrepreneurial scientists. But the altruistic reward of creating jobs and strengthening the national economy may be a more compelling incentive for retired scientists to become entrepreneurs.

We are rightly concerned about the current decline in U.S. educational and economic performance,

and the potential weakening of our scientific standing in the future. After comparison to the remarkable gains made in these areas by Japan and other Pacific Rim nations, our concern quickly sharpens to alarm. It is not enough simply to envy Asia for its recent success. We should instead emulate one of its ancient cultural values—the reverence and respect that Asian people hold for the wisdom of their elders.

The U.S. is a youth-oriented society. It is understandable that we should pin our hopes of building a stronger and more competitive nation on the young. Yet we should not overlook the contributions that retired scientists and engineers can make to this effort.

Our elder scientists are a valuable national asset. Their worth should not be allowed to depreciate in retirement. ■