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An overview of the gifted education portfolio for the John Templeton Foundation

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Abstract: The John Templeton Foundation supported a philanthropic portfolio concerning the development of human genius. The work was contoured to some of the big questions of human activity: the nature/nurture question, the question of how cultures value and institutionalize support of exceptional students, and the 'continuum hypothesis' for gifted education. The first strikes at the heart of what makes us human while the second relates questions about high intelligence to the great social issues.

Key words: genius philanthropy exceptional cognitive ability

Note: Since the preparation of this article, the work of the Templeton Foundation has pursued other directions. This article reports on work completed with support from the Foundation.

The John Templeton Foundation is a large private philanthropic institution with an interest in, among other areas, the development of human genius. This report chronicles the start of a portfolio supporting individuals of exceptional cognitive ability.

This portfolio is assuming a shape contoured to some of the big questions of human activity: the nature/nurture question, the question of how cultures value and institutionalize support of exceptional students, and the 'continuum hypothesis' for gifted education. The first strikes at the heart of what makes us human while the second relates questions about high intelligence to the great social issues.

The 'continuum hypothesis' asserts that whatever constitutes genius, however we define it or choose to measure it, these qualities exists in a continuum throughout the human population. So, for example, Mozart was a genius. There have also been composers of lesser genius, but the difference, according this hypothesis, is quantitative, not qualitative. Likewise there are people who perform Mozart's music with genius,

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others who perform it adequately, people who have a deep appreciation of the music although they cannot perform, people who have only a passing appreciation, and so on.

Of course, these questions need further refinement. Such refinements are part of the work of the investigators supported by the Foundation. And the answers to all such questions, of course, will not emerge from a single project, or a single series of projects, or even from a single generation's inquiry. Indeed, the individual investigator, within his or her field, may not see the work as guided by such a question. Often, it is only upon reflection from outside the work that we can put together the investigation of a small area of study with the resolution of a large question about human endeavors.

The following description of the 'genius portfolio' is an attempt to begin this process of reflection.

1. The Institute for Research and Policy on Acceleration (IRPA) at the University of Iowa

This institute continues the work started by the report "A Nation Deceived" (Colangelo, N., Assouline, S.G., Gross, M.U.M., 2004) about acceleration of gifted students, which Jack Templeton has called the 'signature product' of this portfolio of the JTF.

Housed at the Belin/Blank Center for Gifted Education and Talent Development, the Institute studies the implementation of acceleration for gifted students in the public schools, supports students and administrators in creating such programs, and catalyzes graduate and post-graduate research in the field of education and policy.

See: http://www.education.uiowa.edu/belinblank/acceleration/

http://www.education.uiowa.edu/belinblank/bbc/default.asp

2. Templeton International Fellows at the Wallace Symposium

This two-year grant has catalyzed international engagement in the study of gifted students. Fifty-four fellows, from 40 countries were invited to Iowa to take part in the Wallace Symposium, a biennial gathering of researchers and educators working with gifted students. A special series of seminars was geared towards giving the Templeton

Fellows the tools to pursue research in and support for gifted education in their home countries.

Many countries have the resource of knowledgeable and energetic individuals supporting gifted students yet lack a coherent, institutional support program for their gifted students, informed by a concerted research effort (Gross, 1997). The Templeton Fellows learned about what exists in the US and other nations, and how similar efforts might be implemented in their own countries.

The project has already born fruit. A vibrant e-mail discussion has chronicled the work of Templeton Fellows in 30 of the 50 countries involved in the project.

See: http://itsnt710.iowa.uiowa.edu/fellows/

http://www.education.uiowa.edu/belinblank/events/researchsym/

3. Cogito

This grant to the Center for Talented Youth (CTY), at Johns Hopkins University, supports the development of a website for gifted students. Both a resource and a convener of community, the website serves these students as members, but also a larger population of 'surfers' who may not be included in the community of gifted students, but whose work holds promise (Olszewski-Kubilius, P., & Lee, S.Y., 2004).

See http://www.cogito.org

4. Genetics of high intelligence

A major project on this topic is led by Robert Plomin, a geneticist at Kings College, London, which will involve an international consortium of 12 outstanding geneticists on a series of studies of the genetic component of the phenomenon of high intelligence (Plomin, 1997).

A special issue of the Journal of Behavioral Genetics has been devoted to the work of this group. See http://www.springerlink.com/content/0001-8244.

5. Centers for Mathematical Talent: a developing concept.

In an effort to bring the mathematics research community into the support system for students of high ability, we are working to establish a series of regional centers, each

involving more than one university or research institution, which would coordinate efforts by mathematicians to work in this area.

This project, in its formative stages, may go far to bring coherence to the social institutions supporting intellectually gifted students.

6. Four Policy Studies: Thomas B. Fordham Foundation

The Fordham Foundation, an educational 'think tank', is studying, in four different ways, national and local policies that impact high-ability students:

a) A study of the effects of No Child Left Behind on gifted education;

b) A study of teachers' attitudes towards high-ability students;

c) An investigation into the effects of grouping by ability in the middle school;

d) A study of the Advanced Placement program, and the effects upon it of increased enrolment.

This project, viewed narrowly, is an investigation of government and local policies. But taken in context, it allows insight into how a large and loosely-organized educational structure (the American educational system) has reacted to the presence of students of high ability.

See: http://www.edexcellence.net/template/index.cfm

7. **David Lubinski** is a psychometrician at Vanderbilt University. Together with Camilla Benbow, they have been continuing one aspect of the work of Julian Stanley, a pioneer of gifted education.

This work involves an enormously longitudinal study of cohorts of students identified as being of high mathematical ability, following them through their careers (Lubinski, D., Webb, R.M., Morelock, M.J., & Benbow, C.P., 2001). Identification was through the usual SAT test, but given at ages 10-12. The first cohort is now in their mid-40s, and patterns of achievement are showing up which validate the identification process used in ways that have rarely been duplicated in educational research.

The importance of the work lies both in the validation of this method of identification of talent, and in the information we may glean about patterns of support for

gifted students, throughout their lives. Thus it addresses dead on the relationship between achievement and environment, one aspect of the nature/nurture question.

David Lubinski received the Templeton Award for Positive Psychology in 2000. See: http://www.vanderbilt.edu/Peabody/SMPY/david_lubinski.htm

http://www.exploration.vanderbilt.edu/news/news_wherearetheynow.htm

8**. In October 2007**, the Templeton Foundation sponsored a series of events at Princeton University marking the 100th anniversary of the death of John von Neumann. These included:

a) A panel discussion, *Budapest: the Golden Years- early 20th century mathematics in Budapest and lessons for today*. The panelists included:

Ron Graham:University of California, San Diego. Recipient of the Steele Prize for Lifetime Achievement.

Peter Lax, New York University, Recipient of the Wolf and Abel Prizes.

Laszlo Lovasz, EötvösLoránd University, recipient of the Wolf Prize

Marina von Neumann Whitman, University of Michigan, daughter of John von Neumann

Vera Sos, Alfred Renyi Institute, Hungarian Academy of Sciences

b) A workshop involving mathematicians and educators from the US, Hungary, Africa, and India, exploring ways to harness the power of the Hungarian system to other regions of the world. Some of the ideas generated include:

Making the journal *Komal*, which offers high-level mathematics and physics to high school students, internationally accessible in some form

Expanding the Hungarian summer programs to include international participants (the goal would be to offer the Hungarian programs as models for local programs in Africa and India)

Participation by a team from Senegal (in addition to the team from Benin) at the International Mathematical Olympiad. This project would be co-funded with the government of Senegal or other interested parties.

See: http://www.princeton.edu/piirs/von_neumann_event/

9. Building a presence in Africa

The Foundation is actively seeking new ways to support gifted individuals on the continent of Africa.

a) Dakar workshop on education

This was a workshop co-sponsored with the National Science Foundation, intended to bring together researchers in education from the United States and Africa. The Templeton support was for research on gifted education. The grant was administered by Quality Education for Minorities, in Washington, DC.

This workshop catalyzed several new partnerships, including some of the work described below.

b) The Pan-African Mathematical Olympiad (PAMO)

This program, run by the African Mathematical Union (AMU), is one of

the few serving high-ability students (in any content domain) on the continent. JTF has sponsored visiting scholars to their annual workshop for coaches, and also the attendance of a team from Benin to the International Mathematical Olympiad in 2009.

In addition, JTF sent an international 'committee of visitors' from Quality Education for Minorities to observe the program and suggest strengths and weaknesses. The Committee developed a report on the status of the PAMO and ways its work might be expanded.

c) International Mathematical Union (IMU) report on the status of mathematics in Africa. This project provides the philanthropic and scientific communities with a blueprint for work in this field in Africa
See:
http://www.mathunion.org/fileadmin/IMU/Report/Mathematics_in_Africa_Challenges___Opportunities.pdf

10. International Conference on Culture, Creativity and Mathematics Education in Haifa (Israel).

This conference took place in February 2008, and brought together 30 scholars from Israel, Europe and America, and 10 from predominantly Muslim countries, to discuss the role of culture as both a wellspring and a vehicle for creativity in mathematics.

Aside from the implications for questions about culture and intelligence, we hope this conference will stimulate continued thought and action in the Middle East. This region is now rich in natural resources, which will eventually run out. But human resources, properly developed, will never run out. The Templeton Foundation seeks to support development of the latter, putting the human resources of the region at the service of humanity, as the natural resources are now at its service.

A special issue of the Mediterranean Journal for Research in Mathematics Education is devoted to the proceedings of this conference. A book of essays and a volume of proceedings has also been published. See Leikin (2008) and Leikin (2009).

11. China: With Shing-Tung Yao, a world-famous mathematician, and several Chinese partners, the Templeton Foundation is developing a contest in research mathematics for high school students in China and abroad, on the model of the Westinghouse, Siemans, and Intel programs in the United States.

This nascent program is quickly growing. See http://www.yau-awards.org/introduction.php and http://www.yau-awards.org/overseas/

12. Publication series: To provide materials for gifted students, and to bring research mathematicians into the system, we are working with the American Mathematical Society (AMS) to start a series of publications. This will be a series of translations from foreign sources. Particularly in East Europe, there already exists a rich literature on this level, not available in English. Experience has found that material for this audience, when written well, finds secondary audiences in undergraduates, in teachers, even graduate students of adjacent fields.

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