

An Overview of the Gifted Education Portfolio for the John Templeton Foundation¹

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The John Templeton Foundation (JFT) 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 in gifted education, designed to address this aspect of the Foundation's work.

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0. INTRODUCTION

The gifted education portfolio is assuming a shape contoured to some two of the big questions of human activity: the nature/nurture question, the question of how cultures value and institutionalize support of gifted 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 exist 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 to this hypothesis is quantitative, not qualitative. Likewise there are people who perform Mozart's music with genius, others who perform it adequately, people who have a deep appreciation of the music

¹ This article is an extended version of the paper (Saul, 2008) presented at Topic Study Group 6 (Activities and Programs for Gifted Students) of the 11th International Congress on Mathematical Education (ICME-11) held at the Universidad Autonoma de Nuevo Leon (UANL), Monterrey, Mexico, July 6–13, 2008.

although they cannot perform, people who have only a passing appreciation, and so on.

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

The Institute for Research and Policy on Acceleration (IRPA) at the University of Iowa continues the work started by the report "A Nation Deceived" about acceleration of gifted students, which John Templeton, Jr. has called the "signature product" of this portfolio of the John Templeton Foundation (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.

This grant will help us think about what institutions and practices help us discover and nurture talent².

2. TEMPLETON INTERNATIONAL FELLOWS AT THE WALLACE SYMPOSIUM

This two-year grant is meant to initiate international engagement in the study of gifted students. Fifty-four fellows, from 40 countries, will be invited to Iowa to take part in the Wallace Symposium, a biannual gathering of researchers and educators working with gifted students. A special series of seminars will catalyze continued action in the Fellows' countries of origin.

The problem addressed is that 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. The Fellows

² See: Belin-Blank Center: <http://www.education.uiowa.edu/belinblank/acceleration/>
Belin-Blank Center: <http://www.education.uiowa.edu/belinblank/bbc/default.asp>

learned about what exists in the US and other nations, and how similar efforts might be implemented in their own countries.

This project will contribute to our understanding of the ways different cultures view and support gifted individuals³.

3. COGITO

This three-year 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.

This project will create an institution, which may turn out to be of central and international importance, which will help nurture talent through the internet⁴.

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.

The relationship of this project to the nature/nurture question is clear (cf. McClearn & Plomin, 1993).

5. CENTERS FOR MATHEMATICAL TALENT

In an effort to bring the mathematics research community into the support system for students of high ability, we are proposing 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.

³ See: Templeton International Fellowship: <http://itsnt710.iowa.uiowa.edu/fellows/>
Belin-Blank Center: <http://www.education.uiowa.edu/belinblank/events/researchsym/>

⁴ See <http://www.cogito.org>

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 and
- 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 may allow us insight into how a large and loosely-organized educational structure (the American educational system) has reacted to the presence of students of high ability⁵.

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. 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 nature/nurture question.

David Lubinski received the Templeton Award for Positive Psychology in 2000⁶.

⁵ See: <http://www.edexcellence.net/template/index.cfm>

⁶ See: http://www.vanderbilt.edu/Peabody/SMPY/david_lubinski.htm
http://www.exploration.vanderbilt.edu/news/news_wherearetheynow.htm

8. UNFOLDING INITIATIVES IN HUNGARY

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, Eötvös Loránd 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 offers high-level mathematics and physics to high school students which 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).
 - Participate 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 parties⁷.

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

⁷ See: http://www.princeton.edu/piirs/von_neumann_event/

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 is also sponsoring the attendance of a team from Benin to the International Mathematical Olympiad in 2009.

In addition, JTF is sending an international “committee of visitors” from Quality Education for Minorities to observe the program and suggest strengths and weaknesses. The Committee will provide JTF with a report which will guide future funding of this program.

c) International Mathematical Union (IMU) report on the status of mathematics in Africa

This project will provide JTF with a blueprint for work in this field in Africa.

These projects build towards an understanding of questions of culture and social organization, and how they relate to work with talented individuals.

10. INTERNATIONAL CONFERENCE ON CULTURE, CREATIVITY AND MATHEMATICS EDUCATION IN HAIFA (ISRAEL)

This conference took in February 2008, and brought together about 30 scholars from Israel, from Europe and America, and about 10 from 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 thought and action in the Middle East. This region is now rich in natural resources, which will eventually run out. But its human resources will never run out. The Templeton Foundation seeks to support development of the latter, to put the human resources of the region at the service of humanity, as the natural resources are now at its service.

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, Siemens, and Intel programs in the United States.

This nascent program is likely to grow quickly.

12. PUBLICATION SERIES

To provide materials for gifted students, and to bring research mathematicians into the system, we are working with Springer/Birkhauser and with the American Mathematical Society (AMS) to start two series of publications.

The first, with the AMS, will be a translation series from foreign sources. Particularly in East Europe, there already exists a rich literature on this level, not available in English.

The second series, with Springer/Birkhauser, will enlist researchers in mathematics and other fields to give elementary expositions of their work, or of their field, accessible to bright pre-college students. Experience has found that material for this audience, when written well, finds a secondary audience in undergraduates, in teachers, even graduates students of adjacent fields.

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