

Gifted Child Quarterly

<http://gcq.sagepub.com/>

The Case for a Schism : A Commentary on Subotnik, Olszewski-Kubilius, and Worrell (2011)

Matthew T. McBee, D. Betsy McCoach, Scott J. Peters and Michael S. Matthews

Gifted Child Quarterly 2012 56: 210

DOI: 10.1177/0016986212456075

The online version of this article can be found at:

<http://gcq.sagepub.com/content/56/4/210>

Published by:



<http://www.sagepublications.com>

On behalf of:



[National Association for Gifted Children](http://www.nagc.org)

Additional services and information for *Gifted Child Quarterly* can be found at:

Email Alerts: <http://gcq.sagepub.com/cgi/alerts>

Subscriptions: <http://gcq.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>


Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://gcq.sagepub.com/content/56/4/210.refs.html>

>> [Version of Record](#) - Sep 4, 2012

[What is This?](#)

The Case for a Schism: A Commentary on Subotnik, Olszewski-Kubilius, and Worrell (2011)

Gifted Child Quarterly
56(4) 210–214
© 2012 National Association for
Gifted Children
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0016986212456075
http://gcq.sagepub.com


Matthew T. McBee¹, D. Betsy McCoach², Scott J. Peters³,
and Michael S. Matthews⁴

Abstract

Lack of theoretical coherence in the field of gifted education has given rise to multiple attempts at a grand unification, including most recently the work of Subotnik, Olszewski-Kubilius, and Worrell (2011). The authors argue that the incoherence is an inevitable consequence of the fundamental incompatibility of theoretical and definitional features desired by psychologists and educators. Our field could best progress by splitting into the two related but distinct disciplines of high-ability psychology and advanced academics. Furthermore, the prospective adoption of Subotnik et al.'s eminence framework as an organizational principle for either advanced academics or high-ability psychology is criticized.

Keywords

philosophical/theoretical, identification, definition and/or conception of giftedness/talent, assessment

Subotnik, Olszewski-Kubilius, and Worrell (2011) have contributed a unified and comprehensive organizational scheme that integrates the often ambiguous and troublesome concepts of giftedness, talent, expertise, and eminence; and conceptualizes them as a sequence of stages that under ideal circumstances lead to eminence. Although the overall thesis of that argument is not new (cf. Feldhusen, 1998; Gagné, 1995), many of its specifics are novel. The article serves, in our opinion, as the best articulation to date of the talent-development perspective.

To place the work within the larger educational and societal context, it is useful to consider the state of the field at the time of its writing. The field of giftedness studies, following the widespread rejection of the simple “giftedness as high IQ” paradigm, largely has failed to replace that paradigm with a new one. The field is characterized by theoretical fragmentation and inconsistent definitions of core concepts, a quality often decried by the field's scholars (e.g., Ambrose, VanTassel-Baska, Coleman, & Cross, 2010; Coleman, 2006). One needs to look no further than the special issues of *Gifted Child Quarterly* devoted to this topic to see evidence of this unrest (Treffinger, 1982, 2009). The National Association for Gifted Children's (2010) recent task force attempted to create a consensus view definition of giftedness to provide more theoretical structure in support of the field's scientific endeavors; however, their adopted definition does not appear to be gaining much traction in the literature. The present conceptual inconsistency is particularly troubling to researchers because of the difficulty of building a cumulative body of

scientific knowledge on such ever-shifting ground. Our observation is that this situation has contributed to a degree of demoralization among some of the field's scholars, who sometimes despair of our field making any progress toward the deeper illumination of core issues that would become possible under a paradigmatic theory (Coleman, 2006; Kuhn, 1962; Treffinger, 2009).

What causes this lack of theoretical consensus? The field of gifted education had its genesis in psychology with the work of Galton and Terman. These two scholars produced the pioneering work in defining a conceptual foundation for future work and laid out a research agenda that provided a direction for the field for decades to come. Leta Stetter Hollingworth should be recognized as the field's third founder, but she was neither a psychologist like Terman nor a scientist like Galton. She was an educator, and her work provided the earliest framework for gifted education within the realm of K-12 education. As demonstrated by these three individuals, gifted education has been multidisciplinary almost from its inception, and today it could be described as involving several

¹East Tennessee State University, Johnson City, TN, USA

²University of Connecticut, Storrs, CT, USA

³University of Wisconsin–Whitewater, Whitewater, WI, USA

⁴University of North Carolina–Charlotte, Charlotte, NC, USA

Corresponding Author:

Matthew T. McBee, Department of Psychology, East Tennessee State University, 413 Rogers Stout, Johnson City, TN 37614, USA
Email: mcbeem@etsu.edu

subdisciplines of psychology and education, including educational, developmental, and cognitive psychology; early childhood, special, and secondary education; and encompassing some aspects of curriculum and instruction, educational leadership, and creativity studies. The multidisciplinary nature of the field as it exists today has contributed a great deal of richness and has led to nuanced understandings arising out of this diversity of background. However, these diverse perspectives also have led to the current situation of theoretical incoherence.

We believe that it may be impossible to reconcile the widely separated concerns, needs, and perspectives of psychologists and educators when it comes to the field of gifted education. Psychologists, being social scientists studying natural phenomena, desire consistent, a contextual definitions of key terms and theoretical constructs (i.e., universal principles). Psychologists define giftedness in much the same way that they have defined such concepts as “major depression” or “narcissism”—as a useful dichotomous variable representing the possession of a level of a trait that exceeds a specific threshold compared against some norm group. Whether the cutoff is set at the 99th, 97th, or 90th percentile, specific threshold scores matter much less than whether, once selected, a consistent cutoff is used across individuals. A common definition lays the groundwork for a cumulative science, which is difficult enough to achieve because of methodological and statistical issues (Maxwell, 2004) even in the presence of widely adopted definitions of key constructs.

The educator’s point of departure is necessarily distinct from that of the psychologist. The overriding concern for an educator is educational *need*, and educational need arises from a mismatch between the child’s readiness to learn and the pacing and depth of the instruction that the child will receive. (The notion that giftedness itself creates need is, in our view, absurd.) The educator’s question is some variant of, essentially, “who in my class needs more math today?” Who is in need of more challenge, more rigor, or faster pacing than is deliverable in the regular classroom given the constraints of the required curriculum and the academic preparedness of the class? There is no expectation of consistency of need across subjects, topics, years, schools, or classrooms, nor should there be. If you place a motivated and intelligent child in an environment characterized by slow pacing and a lack of instructional rigor, that child will have significant unmet educational needs. If you placed that same child in a different classroom with higher instructional standards, that child’s needs may well be met without additional educational services (or without the label of gifted). Though here we use mathematics as an example, this question also could be applied to any other organized discipline of study.

In short, the locus of concern for educators is intensely local and intensely contextualized (domain and time specific); it is the here and now that matters. From a teacher’s point of view, knowledge that a particular child occupies the top 5% or 1% nationally on some measure of academic

ability or achievement is not particularly diagnostic. National percentile ranks tell the teacher very little regarding what to teach the student or how what the student needs compares with what is currently offered by the child’s school. What would be diagnostic, in contrast, would be knowledge that a child already demonstrates mastery of the content and/or skills that are about to be presented in today’s planned mathematics lesson, or that this child, in spite of high ability, is struggling just as much as the rest of the class to understand the distributive property. This information may come from criterion-referenced tests, from comparisons against (very) local norms, or from classroom-level preassessments designed to address specific curricular content areas.

The current lack of clarity in our field is a direct result of a long-running and ultimately misguided effort to simultaneously adopt the dueling perspectives of the psychologist and the educator. We are not the first to describe this issue; Coleman (2006) categorized research into the broad areas of “psychologically oriented research and intervention-oriented research, which are not mutually exclusive” (p. 346). However, we believe that it is impossible to satisfy the needs of both camps with a single conceptual framework. The way forward for our field lies in amicable schism in theory if not in organization. The field needs to recognize a distinction between *high-ability psychology* and *advanced academics*. Psychologists do the former; educators should do the latter. High-ability psychology should be organized around a theoretically oriented research agenda; advanced academics should be organized around an interventionist and developmental research agenda. The conflation of these two perspectives has led researchers to think of students with unmet academic needs and students with high levels of cognitive abilities as being essentially the same population. However, we propose that these are two separate, but not completely unrelated groups: those that have advanced academic needs as children and those who become creative productive or eminent adults. Although some precocious students do become eminent adults and some eminent adults were precocious children, the two groups do not completely overlap. Thus, precocity does not necessarily lead to exceptional creative productivity. But both groups of children—those with unmet need for advanced academics and those that are potentially eminent—are worth the field’s attention. Although there can and should be fruitful exchange of ideas between these two related but distinct subdisciplines, we should be cautious about assuming that findings from research with one population will generalize to the other. Continuing discussion of the theoretical landscape in our field should recognize this crucial distinction. We hope that the theoretical schism we propose might enable the emergence and development of cumulative sciences of both advanced academics and high-ability psychology.

Having examined the contextual background that has given rise to several previous attempts at theoretical unification, including Subotnik et al.’s (2011), and made an argument for cleaving the field of gifted education into high-ability

psychology and advanced academics, we now turn our attention to the specifics of Subotnik et al.'s contribution. Subotnik et al. define the potentially gifted as those individuals who *could* achieve eminence given the correct conditions. We note immediately that this view of giftedness is far more relevant to high-ability psychology than to advanced academics as we have defined those terms. After all, the knowledge that a particular child could potentially become an eminent adult given the right developmental experiences provides little information about immediate educational need. Despite Subotnik et al.'s (2011) argument that the goal of gifted education programs should be to "develop the talents of children and youth at the upper ends of the distribution in all fields of endeavor to maximize those individuals' lifetime contributions to society" (p. 23), they fail to provide a convincing case that this is possible or even that it is the proper role of K-12 education to do so. Whether a given child may or may not have the potential to achieve eminence in some domain is almost completely irrelevant to a given day in the life of the student and the classroom teacher. The search for long-term prediction of eminence does not help K-12 schools in the development of advanced academic skills. We therefore view their theoretical synthesis as being much more appropriately understood as a potential orientation for the study of high-ability psychology. So a more relevant question is whether the framework that they have described should be adopted as a theoretical orientation for that now-nascent field.

We find the framework compelling in some ways, but we are not enthusiastic regarding the potential for the successful development of a psychological science that would eventually enable accurate predictions of adult eminence on the basis of childhood variables. Rather, we believe that such a project is doomed to failure. Organizing high-ability psychology around an impossible task does not seem to us to be a favorable approach.

Our first argument regarding this point is a statistical one. It will be immensely difficult on statistical grounds to identify predictors of eminence. This is because eminence is extremely rare. Subotnik et al. (2011) cite a previous article by Subotnik (2003) wherein she described the

surprise she had felt a decade before at realizing that graduates of an elite program for high-IQ children had not made unique contributions to society beyond what might be expected from their family SES and the high quality education they received. (p. 23)

Terman must have felt similarly when he reached the same conclusion decades earlier. However, if one considers the relative frequencies of high ability and eminence, one would be less surprised. According to the 2010 U.S. census, there were 234,564,071 adults older than 18 years in the United States (U.S. Census Bureau, 2012). Of those, 2,345,641 would be expected to fall within the top 1% of cognitive ability. (We choose the top 1% of cognitive ability

to "narrow the field," recognizing that eminence is not limited to this group, under the assumption that cognitive ability is at least correlated with the probability of developing it.) Though estimates may vary, we think it is reasonable to assume that there are likely no more than 1,000 eminent people in the United States today in the areas of art, music, politics, science, and literature. That implies a probability of approximately $1/2,346$, or 0.04%, that a person in the top 1% of cognitive ability will go on to achieve eminence. Eminence is an exceptionally low base-rate phenomenon. As a thought experiment, we envision a situation in which a researcher is conducting a longitudinal study of eminence. The study is a large one, involving 10,000 potentially eminent subjects. Through an incredible stroke of luck, the researcher has measured the set of key variables that best predict the development of eminence and has included them in a logistic regression model predicting it. But this is where the researcher's luck ends. Statistical power in all models predicting categorical outcomes is a function of sample size, the alpha criterion, the effect size, and the base rate of the phenomenon (Demidenko, 2007). Because eminence is so rare, only a tiny fraction of the sample goes on to develop it. Therefore, statistical power for the hypothesis tests is very low; the researcher is unable to reject the null hypothesis that *any* of the key variables predict eminence. In reality, the researcher has made a series of Type II errors driven by the extremely low power of the hypothesis tests. Even if effect sizes are large, it is unlikely that our field would ever be able to discover the importance of those key variables. Maxwell (2004) commented extensively on how low-powered studies lead to inconsistent findings and difficulties in building a consistent cumulative body of knowledge; a field in which only low-powered studies can be performed has little hope of making progress.

Our second argument is that, for many disciplines in which eminence is achievable and socially significant, there is a serious measurement issue. Although work to date has focused largely on measuring general skills and abilities, Subotnik et al. (2011) describe the importance of domain specific aptitudes whose early development may enable eventual high levels of performance in socially significant disciplines. Although measures of domain specific aptitude can be very informative for planning educational interventions, they are unlikely to be accurate predictors of future eminence—partially because of the statistical issues described above, and partially because it is unclear how one would even go about validating a measure of "eminence potential." First, aptitude tests could be misused in a troubling manner when individuals see their scores as indicating some kind of long-term future potential for achieving eminence in a given area of endeavor. This is not what the vast majority of individual or group-specific aptitude tests are designed to do, nor are tests such as the SAT particularly adept at this goal, as Lubinski and Benbow (2006) and Wai, Lubinski, and Benbow (2005) have pointed out. Yes, the Study of Mathematically Precocious Youth (or SMPY) studies have demonstrated that individuals

who score highly on such measures as the SAT (i.e., the top 1% to 0.01%) are far more likely to receive doctorates, obtain patents, achieve tenure at top universities, and publish scholarly articles; yet according to Subotnik et al., this is an insufficiently high level of achievement to qualify as eminence. We suggest that connecting learners with appropriate educational experiences, whose overarching goal is the production of highly trained and ethical individuals who function competently in varied and complex fields of human endeavor, is the proper goal for advanced academics. Nearly all the individuals in the longitudinal studies conducted by SMPY and by Subotnik were well served within the arena of advanced academics, despite any who may have failed to achieve a degree of eminence.

Our third argument is, as noted by Subotnik et al. (2011), that the development of eminence is *highly* dependent on chance—what Abe Tannenbaum called the “smile of good fortune at critical periods of life” (as cited in Pfeiffer, 2002, p. 35). Others ranging from Dean Keith Simonton to Jane Piirto also have discussed the important role of chance in the achievement of eminence. Chance by definition is idiosyncratic and fundamentally unpredictable. If chance plays a large role in the development of eminence, then eminence too will be idiosyncratic and unpredictable, and therefore poor fodder for scientific inquiry. In his book *Outliers*, Malcolm Gladwell (2008) discusses several contemporary eminent individuals, such as Bill Gates. While in high school, Gates was able to obtain access to one of the earliest computers. A nearby university just happened to have this computer (extremely rare at the time) and Gates just happened to be a bored high school student living nearby. Moreover, Gates was able to gain additional, special access to this computer where he was able to hone his skills. Although we will never know for sure, it's very likely that if Gates had not lived near this particular university, had that university not had one of the first computers, and had Gates not been able to get special access to this computer, the name Bill Gates would likely be completely foreign to most of us—Gates's skills, drive, passion, and interest are what made him special (similar to the individuals in the SMPY studies); but serendipity and chance made him eminent.

Sir Ken Robinson (2010) in a famous speech asked the audience, how can we as educators predict what skills and dispositions students in 30 years will need, given that we do not know what is even going to happen tomorrow? In the 1950s, no teacher or educator had any idea that computers would lead to the development of eminence as illustrated in Bill Gates. Thirty years from now, what will be the new domains in which today's students may become eminent? Some disciplines, such as art, music, science, and politics, are stable features of Western cultures, and it is reasonable to expect that opportunities for eminence will continue to exist there. But other disciplines, industries, and fields of study that will be very relevant to human experience in 50 years have not yet been invented. We cannot predict the future cultural and value context in which individual talents exist.

Despite our ability to partially predict short-term future academic success using measures of aptitude, the attainment of eminence in adulthood involves a much larger number of chance factors and other as-yet-unknown influences that are simply beyond our skills as educators or researchers to predict (Simonton, 2001). By definition, most of these chance factors are completely outside the control of the person, the teacher, or the researcher, leaving those of us interested in the development of eminence to work on the development of cognitive skills and affective variables such as attitude toward learning, motivation, and perseverance.

To summarize, we have argued that one of the major reasons that the field of gifted studies has failed to rally around a common set of theoretical constructs is that no single construct can simultaneously satisfy the competing desires of the psychologists and educators who comprise it. After decades of failed attempts, we believe that the time has arrived for the field to divide itself into the subdisciplines of high-ability psychology and advanced academics. Such a division will allow both disciplines to flourish by freeing each from the constraints of the other. Furthermore, we presented some practical counterarguments against the adoption of Subotnik et al.'s (2011) framework as an organizing schema for our proposed subfield of high-ability psychology.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Ambrose, D., VanTassel-Baska, J., Coleman, L. J., & Cross, T. L. (2010). Unified, insular, firmly policed, or fractured, porous, contested, gifted education? *Journal for the Education of the Gifted*, 33, 453-478.
- Coleman, L. J. (2006). A report card on the state of research on the talented and gifted. *Gifted Child Quarterly*, 50, 346-350. doi:10.1177/001698620605000408
- Demidenko, E. (2007). Sample size determination for logistic regression revisited. *Statistics in Medicine*, 26, 3385-3397.
- Feldhusen, J. F. (1998). Programs for the gifted few or talent development for the many? *Phi Delta Kappan*, 79, 735-738.
- Gagné, F. (1995). From giftedness to talent: A developmental model and its impact on the language of the field. *Roeper Review*, 18, 103-111.
- Gladwell, M. (2008). *Outliers: The story of success*. New York, NY: Little Brown.
- Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Lubinski, D., & Benbow, C. P. (2006). Study of mathematically precocious youth after 35 years: Uncovering antecedents for the development of math-science expertise. *Perspectives on Psychological Science*, 1, 316-345.

- Maxwell, S. E. (2004). The persistence of underpowered studies in psychological research: Causes, consequences, and remedies. *Psychological Methods*, 9, 147-163.
- National Association for Gifted Children, Gifted Terminology Task Force. (2010). *Redefining giftedness for a new century: Shifting the paradigm* [Position paper]. Retrieved from <http://nagc.org/index2.aspx?id=6404>
- Pfeiffer, S. (2002). Identifying gifted and talented students: Recurring issues and promising solutions. *Journal of Applied School Psychology*, 19, 31-50.
- Robinson, K. (2010). *Changing education paradigms* [Video]. Retrieved from <http://www.youtube.com/watch?v=zDZFcdGpL4U>
- Simonton, D. K. (2001). Talent development as a multidimensional, multiplicative, and dynamic process. *Current Directions in Psychological Science*, 10, 39-43.
- Subotnik, R. F. (2003). A developmental view of giftedness: From being to doing. *Roeper Review*, 26, 14-15.
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, 12, 3-54. doi:10.1177/1529100611418056
- Treffinger, D. J. (Ed.). (1982). Demythologizing gifted education [Special issue]. *Gifted Child Quarterly*, 26(1).
- Treffinger, D. J. (Ed.). (2009). Demythologizing gifted education [Special issue]. *Gifted Child Quarterly*, 53(4).
- U.S. Census Bureau. (2012). *USA Quickfacts*. Retrieved from <http://quickfacts.census.gov>
- Wai, J., Lubinski, D., & Benbow, C. P. (2005). Creativity and occupational accomplishments among intellectually precocious youth: An age 13 to age 33 longitudinal study. *Journal of Educational Psychology*, 97, 484-492.

Bios

Matthew T. McBee is assistant professor of psychology at East Tennessee State University where he teaches courses on quantitative methods, psychometrics, and research design. He co-edits the *Journal of Advanced Academics* with Michael S. Matthews. His interests include gifted identification, cognition, and program evaluation.

D. Betsy McCoach is an associate professor in the Educational Psychology Department at the University of Connecticut. Betsy

has published over 70 journal articles and book chapters, and she co-edited the volume *Multilevel Modeling of Educational Data* with Ann O'Connell. Betsy served as the founding co-editor for the *Journal of Advanced Academics*, and she is the incoming co-editor of *Gifted Child Quarterly*. Betsy serves as a Co-Principal Investigator and research methodologist on several federally funded research grants, and she has served as the Research Methodologist for the National Research Center on the Gifted and Talented for the last 6 years.

Scott J. Peters is an assistant professor of educational foundations at the University of Wisconsin-Whitewater where he teaches courses related to educational measurement, research methods, and gifted and talented education. His research interests include educational research methodology in addition to gifted and talented student identification, nontraditional giftedness, and secondary student programming outcomes. He has presented at the state, national, and international levels on topics dealing with gifted education and research methodology and currently serves on committees and as an officer of the National Association for Gifted Children and the American Educational Research Association. His scholarly work has appeared in *Teaching for High Potential*, *Gifted Child Quarterly*, the *Journal of Advanced Academics*, *Gifted and Talented International*, the *Journal of Career and Technical Education Research*, *Ed Leadership*, and *Pedagogies*.

Michael S. Matthews is associate professor of gifted education and graduate coordinator for the Academically & Intellectually Gifted program at the University of North Carolina at Charlotte. He is the 2010 recipient of the Early Scholar Award from the National Association for Gifted Children; co-editor of the *Journal of Advanced Academics*; treasurer of the SIG-Research on Giftedness, Creativity, & Talent of the American Educational Research Association; and vice president of the North Carolina Association for the Gifted & Talented. He has published three books and authored or coauthored more than fifteen peer reviewed articles in gifted education. His research interests include policy and research methods in gifted education; science and mathematics learning; the assessment and identification of learners from diverse backgrounds, especially those who are English language learners; underachievement among high-ability learners; and the role of parents and families in the education of gifted and high-ability learners.