most environmental ones. Robert Plomin and Sandra Scarr have shown how effects that appear to be environmental may be heritable, as when genes lead parents to provide favorable environments for their children. There are also many strong arguments in the book, but I wish that more space had been devoted to a thoughtful coming to terms with literature, such as the heritability literature and the literature on the general factor of intelligence, that is inconsistent with the book's position. Moreover, one cannot help but wonder whether the accomplishments of people like Einstein, Mozart, and Picasso were not due to a whole lot more than deliberate practice. Many people have worked very hard and never come anywhere close to the achievements of such individuals, no matter how much they have tried.

In sum, this is a fine but slightly flawed book. Howe does a masterful job of integrating a wide array of evidence to support his point of view and to help parents and teachers better nurture the gifts of those children for whom they are responsible. But by failing fully to deal with the opposition, Howe will leave those who start the book disagreeing with him ending the book still disagreeing with him. A kind of ability every author needs to develop through deliberate practice is the ability to convert non-believers. Perhaps it will be the focus of Howe's next book!

Book Reviews Editor's Note

High Ability Studies observes a policy whereby authors of reviewed books are sent reviews prior to publication in order to allow for an open dialogue between the authors and the readership. Especially in cases where a review has been highly critical, or when a response from the author would be of particular interest to *HAS* readership, authors are invited to comment or respond to what is presented in the review. In the particular case of Robert J. Sternberg's review of *The psychology of high abilities*, author Michael J. Howe has commented: "It is a fair review ... However, I do think that his taking me to task for placing little stress on influences other than those stemming from experience is a little off-target. It is true that I decided to emphasize experience rather than biology, but that does not mean that I believe biological influences to be entirely unimportant as causes of variability in people's achievements."

Talent in Context

REVA C. FRIEDMAN & KAREN B. ROGERS (Eds)
Washington, DC: American Psychological Association, 1998

Review by MARY AINLEY

The significance of this volume lies in the fact that it brings together ideas and

Dr Mary Ainley is a member of the academic staff of the Department of Psychology and the Morgan Centre for the Study of High Intellectual Potential at the University of Melbourne, Australia. Her areas of interest are in Developmental and Educational Psychology and include the study of motivational processes such as curiosity, interest and engagement. E-mail: m.ainley@psych.unimelb.edu.au

theories that challenge some conventional views of talent. Originating as seminar presentations for a diverse professional audience makes this collection of papers very readable. Technical language and statistical details have been kept to a minimum and important ideas illustrated with references to interesting and often provocative examples. Friedman and Rogers assert "this volume is poised on the edge of the emerging paradigm", and have focused on aspects of talent essential for an integration of multidisciplinary understandings. They highlight a shift in the "professional lexicon from giftedness to talent, from potential to achievement, from genius to bright" and a "shift from univariate, positivist research paradigms to more complex, constructivistic, systems-oriented research models" (p. xviii). To see the paradigm shift through will require a creative approach to the range of theory, research and practice represented in this volume, the "collaborative synthesis of disparate points of view" that Gruber argues in his chapter ("The social construction of ordinary selves: Collaboration among unique creative people") is the essential uniqueness of the creative person. Ideas and hypotheses stimulated by this collection should further this agenda. The papers have been grouped as Cultural Contexts, Interpersonal and Intrapersonal Contexts, and Conceptualizing and Reconceptualizing Giftedness. In the limited space available I will use the third section (especially Simonton's chapter) to highlight what these papers offer for an emergent synthesis.

The title of Simonton's chapter, "Gifted child, genius adult: Three life-span developmental perspectives", signals the gap between prospective and retrospective, and this remains one of the tensions for understanding developmental trajectories associated with talent. The origins of exceptional ability are explored through perspectives from biology (some are born great), sociology (some have greatness thrust upon them), and psychology (some achieve greatness). Prospective and retrospective are juxtaposed: Galton's documentation of the family pedigrees of eminent people is placed alongside Terman's study of the lives of children identified as intellectually gifted. Biological influences are explored through evidence of the coincidence of pathology and talent, and the co-occurrence of complex clusters of separate traits. Discussion of transmission of behavioral traits connects the reader to Hanson's chapter ("Developing abilities biologically") which emphasizes interdependence between biological and social perspectives.

Simonton identifies several social factors associated with the emergence and recognition of talent. There is the influence of sociocultural circumstances represented in the notion that "times are ripe". Specific cultural configurations (Zeitgeist) set limits on recognition of talents and early recognition is often associated with later success ("Matthew effect"). He also draws attention to *the self* as a product of interactions with significant others (symbolic interactionism). Identification of these factors provides one framework for synthesis of issues highlighted in papers from the first two sections. Callahan and Hiatt ("Assessing and nurturing talent in a diverse culture: What do we do? What should we do? What can we do?") describe something of the Zeitgeist in US public education. They explore how tension between egalitarianism and elitism in US public school systems has affected provision for gifted students and illustrate ways that national curriculum, instruction,

and assessment policies impact on provision. A gulf between rhetoric and practice is highlighted: "despite the use of portfolios and other more authentic assessments, schools typically still rely on one narrow measure to assess and label students as gifted learners" (p. 9). It is a pity that Stevenson's paper ("Cultural interpretations of giftedness: The case of East Asia") did not follow this paper. Its analysis of different cultural interpretations of giftedness reminds the reader that the US pattern is not the only system (for example, in both Japanese and Chinese cultures Confucianism provides core beliefs for educational practice including identification and nurture of talent). This issue is of special interest as results of international studies of achievement indicate overall high performance for students from Asian countries (cf. Lokan, Ford & Greenwood, 1996). The social factors highlighted by Simonton appear in the women's lives examined by Tomlinson-Keasy ("Tracing the lives of gifted women"). She describes how the dominant cultural configuration that sets limits on recognition of talented women has been challenged by a number of writers and argues that accounts of the development of talent must include the self in relationship, what Simonton called social interactionism. Moon, Jurich and Feldhusen ("Families of gifted children: Cradles of development") also focus on the self in interaction with significant others, and advocate a family systems approach to understand how families influence gifted children's development. Their discussion ranges across aspects of family values, relationships, family stress and adaptation, and family interaction with school, peers, neighborhood, and support networks. While some important work has been achieved, the complexity of defining these systems of relationships means this is more a future agenda than a well-developed body of knowledge.

Gagne's chapter ("The prevalence of gifted, talented, and multitalented individuals: Estimates from peer and teacher nominations") represents an important social perspective by considering identification of talent and multiple talents through the eyes of peers and teachers. This paper sits a little uncomfortably in the collection, as it is the only paper which reports the findings from a research study.

The third of Simonton's three perspectives—psychology—attributes talent to accelerated cognitive functioning, co-occurrence of supportive environments, and crystallizing experience. Again, reference to eminent adults rejected from Terman's sample highlights the tension between prospective and retrospective methodologies. The psychological perspective also includes investigation of focused and persistent motivation and the individual's responsiveness to major life events such as early trauma or specific circumstances (e.g. birth order). Sternberg and Howarth's chapter ("Cognitive conceptions of expertise and their relations to giftedness") works from the proposition that expertise is a necessary condition for giftedness, and using this premise they summarize the cognitive attributes identified from studies of expertise. Rapid information processing, a large well-organized knowledge base, automaticity, executive processes, insight, tacit knowledge processes, and finally from a synthetic view of expertise, the social cognitive skills associated with being labeled as expert are identified.

In the final chapter ("A conception of talent and talent development"), Feldhusen

argues that "*giftedness* is a narrow conception of a multi-factor phenomenon better described as *talent*" (p. 193). Part of this case rests on the way tests have been used for identification purposes. The same point was made by Robinson and Clinkenbeard (1998) stating that "although broadened definitions of giftedness have emerged, the most extensive body of research available for review concentrates on intellectual giftedness" (Feldhusen's emphasis on the concept of talent links it with other multifactor approaches (e.g. Bloom, Gagne, Gardner, Feldman, and Csikszentmihalyi), and the implications for instructional programs and school interventions are explored. The model developed by Feldhusen incorporates sets of factors representing the range of biological, social and psychological sources described throughout this volume. But this model does not fulfil the editors' promise from their introduction ("poised on the edge of the emerging paradigm" p. xviii). Pointers to the shape of the new paradigm are toward a model, or models, of talent that might be framed in terms of variable combinations of influences. Sternberg and Howarth's inclusion of the synthetic view, prototypes of expertise (or giftedness) point in this direction. "From this perspective, expertise is judged by the degree of resemblance to the various prototypes (which may differ by field, culture, society, or whatever) and not by the possession of a set of necessary-and-sufficient attributes" (p. 187). What relationship is there between Sternberg and Howarth's expert prototypes, and the set of talents in Gagne's work? At the same time, Gruber's emphasis on the creative person highlights that "each creative person is and must be unique in exactly the way that explains his or her accomplishments" (p. 134). Certainly this is a shift from seeking univariate sources of development to "more complex constructivistic, systems-oriented research models".

I have used Simonton's paper and its links to the other papers in this volume to demonstrate lines of thinking that I feel are encouraging. However, productive synthesis will be difficult to achieve. Simonton's conclusion is also worth quoting: "I would claim that Shakespeare got it wrong when he implied that an individual attains greatness either by the luck of birth, by social happenstance, or by personal struggle. Instead, these three factors operate in conjunction, albeit the precise mix may vary from creator to creator" (p. 171).

The strength of this collection of papers lies in their invitation to reconsider the development of talent in all its variety, and at the same time, stimulate ideas, connections, and hypotheses among readers.

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