Growing pains

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Terman's Kids: The Groundbreaking Study of How the Gifted Grow Up. By Joel N. Shurkin. Little, Brown: 1992. Pp. 317. \$22.95.

DURING the first ten years of this century, Alfred Binet, a distinguished French psychologist, devised the first successful intelligence test, which immediately became one of psychology's most formidable achievements and also one of its greatest headaches. The intelligence test, without doubt, is the most effective and widely used instrument invented by psychologists, but it lacks a theoretical base. We know that it works quite well: it will, for example, predict fairly accurately how well children will do at school, in the immediate future at any rate. But we do not know even now what intelligence tests measure, and we are equally hard put to say with any coherence what intelligence is. The contrast between the test's practical success and its theoretical ambiguity is extremely stark.

A great deal of the test's immediate practical success was due to the work of Lewis Terman, an American psychologist who produced the first transatlantic version of Binet's test — the Stanford Binet — and then went on to devise other tests of his own. He had no doubt about the importance of his work. "There is nothing", he argued "about an individual as important as his IQ except possibly his morals." Naturally, Terman wanted to establish the value of what he was doing, and in 1921 he began a research project whose main aim was to show that people's lives are deeply affected by their intelligence levels as measured by his and by other intelligence tests. He and his colleagues set out to identify all the children in the Californian school system whose IQ scores were in the top one per cent of the population. Having selected 1,470 such children, the researchers then gathered a large amount of detailed information about their families and homes, their history, their health and their performance at school.

But the main feature of the study was that it was longitudinal. Terman wanted to find out what would happen in adulthood to these able children, whom he insisted, rather generously as it turned out, on calling "geniuses". He kept in touch with his group of "Termites", as they were soon called, and continued to gather information about them, both by correspondence and by systematic research until his death nearly 40 years later. By and large, he showed that

these children grew up to be successful adults, or at any rate more successful than the average person, and this result has been taken by many as establishing the validity of intelligence tests.

Since Terman's death, other psychologists have continued to collect data on these remorselessly studied people, who by now are in their 80s and 90s. The sheer amount of information on Terman's children is both daunting and impressive, but it does not compensate for several basic flaws in the design of the project. The most serious of these was the omission of a control group. Most of the Termites came, not surprisingly, from prosperous and well educated families. So it is quite possible that their better than average progress through life was determined by their family backgrounds and not by their IQ. Terman should have compared his geniuses with a group of children who came from much the same backgrounds but did not have as high IQs. Without this comparison we cannot be sure that the study has told us anything about the value of IQ *per se*.

Joel Shurkin's book is partly a popular account of the project and partly a biographical picture of Terman himself. The author was given access to the detailed records on some of the people in the study, and he has obviously wrestled with the voluminous reports that have been written about the project. His book is at its strongest when it deals with the journalistic fringes of the topic. He has some quite interesting things to say, for example, about the wide fame achieved by the project, which has often been featured in newspapers and in popular journals. He also writes entertainingly about the effects of being a Termite. It seems that many of them came to rely heavily on Terman's advice and support (Terman got one of them into Stanford University, for example), to the extent that Terman's influence on the lives of his subjects may have had a considerable effect on his results.

The book is weak, though, on the conceptual and scientific issues. Although Shurkin briefly mentions the lack of a control group, he is never clear about the controls that are needed. Nor does he write well about the purpose of the project, which was to show the power and the value of intelligence tests. The book is particularly weak when he deals with quantitative evidence. In discussing the particular difficulties encoun-

Charles Cagniard de la Tour's siren (1819). This diagram is reproduced from *The Science of Musical Sound* by John R. Pierce, the revised edition of which is now published in paperback by Freeman, price £17.95, \$19.95. (For a review of the first edition see *Nature* 308, 791; 1984.)

tered by the women in the project, Shurkin says, "One would have to factor in sexual discrimination in the working world to understand these figures in their context" — a suggestion that is neither practicable nor even comprehensible. Shurkin is sometimes plainly illogical about the data. Terman, in one of his later reports, had divided the Termites into three subgroups: the A's who had done particularly well in life, the C's who had had the least success, and the B's who were somewhere in between. This division prompts one of Shurkin's oddest statements: "The proportion of Jews in the A group was double the proportion of Jews who were C's despite the fact that only 10 per cent of the Terman kids [that is, the total sample] were Jewish." This howler looks particularly odd in a book about highly intelligent people.

Shurkin is also prone to making rather wild and unsubstantiated claims, such as: "He [Terman] eventually had to confront the connubiality of madness and genius." If Shurkin means by this that Terman or anyone else has shown a connection between superior talents and instability he is wrong, and in fact Terman made the opposite claim.

A great deal has already been written about Terman's fascinating, but sadly flawed, study. This new book is not a valuable addition to the genre. □

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