

A NEW ESTIMATE OF THE IQ IN ESTONIA^{1,2}

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Summary.—The Standard Progressive Matrices was standardized in Estonia in 2001 on a sample of 1,835 7- to 11-yr.-olds. The mean IQ of the Estonian sample was estimated at 98 in relation to a British IQ of 100 and 99 based on the combined results for two studies.

We have recently published data for a standardization of the Standard Progressive Matrices in Estonia for adolescents aged 12 through 18 years and estimated that the mean IQ of this sample is 100.2 in relation to a British mean of 100 (Lynn, Allik, Pullmann, & Laidra, 2002). In this paper we report the results of a study of the Progressive Matrices given to a sample of Estonian 7- through 11-yr.-olds to examine whether the results of these primary school children are consistent with those of the secondary school adolescents. These studies form part of a research program for estimating the mean IQs of different nations published by Lynn and Vanhanen (2002).

Method.—In 2001 the Standard Progressive Matrices was standardized in Estonia on a sample of 1,857 junior school children aged 7 through 11 years. The sample was drawn from 17 socially and geographically representative schools from all of the 15 Estonian countries (*maakond*), including the capital city of Tallinn, smaller cities, e.g., Tartu, small towns, and rural areas. The sample contained approximately equal numbers of boys ($n=965$) and girls ($n=892$). The children tested were in the first four grades of primary school (*põhikool*). Children in Estonia who attain 7 years of age by 1 October of the current year are obliged to start their studies. Normally the duration of study is nine years. The duration of study, however, may be prolonged because students who fail in a grade are obliged to repeat that grade. Thus, an individual curriculum may be shorter or longer than the norm. As a result, the ages of students in one grade may differ by 2 or 3 years. The test was administered without time limits. A description of the test and British norms for children ages 6 to 15 years collected in 1979 are given by Raven (1981).

Results.—The results are given in Table 1. The columns give the ages of

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the children, the numbers at each age, and the mean scores and standard deviations on the test for each group 7 through 11 years. The right hand column gives the IQs of Estonian children estimated from their percentiles on the British standardization norms given by Raven (1981). The mean of the Estonian IQs is 101. This figure needs to be adjusted for an estimated increase in the British IQ from 1979, the year of the British standardization, to 2001, the year of the Estonian standardization. The mean British IQ assessed by the Progressive Matrices increased by approximately 2 IQ points a decade over the period 1938 to 1989 (Lynn & Hampson, 1986). The rate of increase of IQs appears to have declined during the last two decades of the twentieth century. In the United States, the rate of increase of the Wechsler IQ was 3.3 IQ points per decade over the period 1932–1978 (Flynn, 1984), but it fell to 1.71 over the years 1978–1995 (Flynn, 1998). In Denmark the rate of secular increase of a nonverbal reasoning test similar to the Progressive Matrices over the years 1988–98 was 1.35 IQ points (Teasdale & Owen, 2000). We consider that the most reasonable assumption is that the same rate of increase has taken place for the Progressive Matrices in Britain and therefore that the British IQ increased 3.0 IQ points over the period 1979–2001. To adjust the result for Estonia to a British IQ of 100 for 2001, it is therefore necessary to deduct 3.0 IQ points from the Estonian IQ, giving an IQ of 98.

TABLE 1
DATA FOR ESTONIAN STANDARDIZATION OF THE STANDARD PROGRESSIVE MATRICES

Age (yr.)	<i>n</i>	<i>M</i>	<i>SD</i>	Mean IQ
7.0	50	24.82	8.95	114
7.5	134	24.86	9.43	104
8.0	252	26.99	9.50	101
8.5	183	30.34	8.86	99
9.0	223	31.30	9.59	100
9.5	234	34.79	8.33	100
10.0	211	36.95	7.84	98
10.5	226	37.18	8.90	96
11.0	209	39.47	8.87	99
11.5	92	40.29	8.22	99

Discussion.—The mean IQ of 98 for Estonian 7- to 11-yr.-olds, in relation to a British mean of 100, reported here is close to the IQ of 100.2 as in our previous study of Estonian adolescents aged 12 through 18 years (Lynn, *et al.*, 2002). The high IQ obtained by the Estonian 7-yr.-olds and the slightly lower IQ obtained by the primary school children compared with the secondary school children should probably be attributed to sampling errors. Combining the results of the two studies gives an IQ for Estonia of 99. The

interest of the study is that it shows that the result obtained in our first study of secondary school children is replicable and reliable and that, despite some cultural, environmental, and economic differences, the IQ in Estonia is virtually identical to that in Britain and other European peoples.

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