



How to explain high Jewish achievement: The role of intelligence and values

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Abstract

Throughout the 20th century, Jews have been greatly over-represented in western nations among intellectual elites, in the universities, and among the higher socio-economic classes. The two principal theories that have been advanced to explain this are that Jews have high intelligence and, alternatively, that they have cultural values that promote success. We review the evidence and present new data suggesting that high intelligence is the more important of these two factors.

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1. Introduction

Following emancipation in the 19th century, the Jews have done remarkably well in western nations. Two main theories have been advanced to explain this. These are that Jews have high intelligence and that they have cultural values that promote achievement. Our purpose in this paper is to review these theories and present new data bearing on them.

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Jews have been greatly over-represented among intellectual elites, in the professions, the universities, among business leaders and the very rich in 20th century. Weyl and Possony (1963, p. 142) calculated that in the period 1901–1962 16% of Nobel prize-winners for science were Jewish. They estimated the world population of Jews in 1938 at 18 million and the world population of European gentiles at 718 million, and calculated that Jews were over-represented by a factor of approximately 6.6. Jews have been about half of the world's top rated chess grandmasters between 1851 and 2000 (Rubinstein, 2004) and of the champion American bridge players and theoreticians (Storfer, 1990).

In the 20th century, Jews have been greatly over-represented in a number of countries among intellectual elites and in the higher socio-economic status occupations. In Austria in the years between the two World Wars Jews were approximately 3.5% of the population but were 27.3% of university professors (Fraenkel, 1967). In Germany between 1918 and 1933 Jews were 0.78% of the population but were 16% of the doctors, 15% of the dentists, 25% of the lawyers, 50% of the theatre directors and occupied 80% of the leading positions in the Berlin stock exchange (Gordon, 1984; Slezkine, 2004). In Poland in 1931 Jews were 10.2% of the population but were 56% of the doctors in private practice, 33% of the lawyers, and 24% of the pharmacists (Slezkine, 2004). In Russia during the period 1917–1939 Jews were approximately 1.8% of the population, while Jews were 9% of the officers in military academies, 15% of the university graduates, 11% of the doctors and 14% of the university professors (Slezkine, 2004).

In Britain, the numbers of Jews and gentiles possessing large wealth in the period from 1809–1939 have been examined from probate returns on death by Rubinstein (2000). He has found 199 such individuals of whom 28 were Jews (14.1%). The average number of Jews in the population during this period was approximately 0.4%, so Jews were 28.4 times over-represented among the very wealthy. Prais and Schmool (1975) calculated that 10% of Jews and 4% of gentiles were in the higher professions in 1961, and hence Jews were over-represented by a factor of 2.5. In a later study, Tropp (1991) examined the numbers and proportions of Jews in eleven of the major professions around 1985. He found that the percentage of Jews ranged from 1.3% among chartered surveyors to 7.8 among ophthalmic opticians. At this time there were approximately 322,000 Jews in the United Kingdom in the total population of 56,379,000 (the figure in the 1981 census). Thus, in 1985 Jews were approximately 0.6% of the population. Even among chartered surveyors Jews were over-represented by a factor of 2.2, while among ophthalmic opticians Jews were over-represented by a factor of 13.0.

Finally, the largest population of Jews outside Israel in the 20th century has been in the United States and here also Jews have done well. As early as 1908 Jews began to outperform gentiles in the entrance tests for universities that were first constructed by the College Entrance Examination Board in 1899. Increasing numbers were gaining admission to the Ivy League colleges. In 1908 the percentages of Jews in all colleges and at Harvard were 7% and 6%, respectively, and by 1919 this had increased to 20% of the students at Harvard and about the same figure at Yale, Brown and Pennsylvania, while at Columbia 40% of the students were Jewish (Slezkine, 2004).

From 1957 through 1990 the average annual earnings of Jewish men were about 130% of those of white gentiles (in 1990 \$36,700 for Jews and \$28,080 for white gentiles) (Chiswick, 1985; Kosmin & Lachman, 1993, p. 260). By the 1990s Jews were hugely over-represented among the very wealthy, when they comprised more than a quarter of the people on the Forbes Magazine list of the richest four hundred Americans, 45% of the top 40 richest Americans, and one-third of all American multimillionaires (Silbiger, 2000).

It has been found that Jews are considerably over-represented among the eminent in the United States. Weyl (1966) calculated that Jews were over-represented by a factor of 4.48 in seven reference books of the eminent (e.g. *Who's Who in America*, *American Men and Women of Science*, *Who's Who in Finance and Industry*, etc.). In an updated analysis of *Who's Who in America* for the years 1994–5, McDermott (2002) has calculated that Jews were over-represented by a factor of 16.62.

Two principal theories have been advanced to explain the high achievements of Jews. These are (1) that Jews have high intelligence and (2) that they have cultural values that promote success. The high intelligence theory was proposed early in the 20th century by Jacobs (1919, p. 55) who wrote that “German Jews are at the present moment at the head of European intellect”. In the same year Veblen (1919) also asserted that Jewish success is attributable to their high intelligence, writing of the “intellectual pre-eminence of Jews in modern Europe” (p. 35). With the development of intelligence tests in the first decade of the 20th century, evidence on the intelligence of the Jews began to accumulate that substantiated the theory that Jews have high IQs. These studies have been summarized for the United States and Britain in Lynn (2004) and Lynn and Longley (2006) in which the average IQ of American and of Britain Jews is estimated at 110. Numerous studies have shown that intelligence is a determinant of economic and intellectual achievement (e.g. Jencks, 1972; Lynn & Vanhanen, 2006). Hence we believe that the high Jewish IQ can be regarded as a major factor responsible for Jewish success.

What can be described as the “cultural values” theory of Jewish achievement has been presented in different terminologies for something like a century. The German historian Sombart (1919) attributed the Jewish success to their religion fostering a strong work ethic that gave them exceptional will-power. The “cultural values” theory of Jewish achievement received some confirmation from a study carried out in the United States by Lenski (1963) from which he concluded that Jews resemble Protestants in possessing “individualistic, competitive patterns of thought and action linked with the middle class and historically associated with the Protestant ethic or its secular counterpart, the spirit of capitalism”.

Another variant of the “cultural values” theory is that Jews attach a high valuation to success. It has been suggested that this has become a cultural norm in Jewish families in which parents bring up their children to achieve and socialize them to value success. Thus, “success is so vitally important to the Jewish family ethos that we can hardly overemphasize it. . . we cannot hope to understand the Jewish family without understanding the place that success for men (and recently for women) plays in the system” (Herz & Rozen, 1982, p. 306). The historian Stephan Thernstrom and his wife assert that the achievements of the Jews are “the product of cultural values that they have brought with them and transmitted from generation to generation over a very long time” (Thernstrom & Thernstrom, 2003, p. 98). It is contended that Jews attach a lot of importance to study and education and this socializes the children for educational and academic success: “Jewish youth used to spend long years bent over their books in an attempt to break out of the narrow circle of restrictions” (Slezkine, 2004, p. 252). Jews “were highly motivated to create a new and more secure life for themselves” which gave them “the willingness to work hard” (Rutland, 1988, p. 259). In support of this theory, Majoribanks (1972) has reported a study in Canada of the child rearing styles of Jewish and gentile mothers in which he found that Jewish mothers scored higher on “Press for Achievement” (the extent to which mothers exert pressure on their sons to achieve success) than gentile mothers and proposed that this fosters a strong motivation

to achieve success. In the United States, Fejgin (1995, p. 19) has written that “following the cultural approach, it is plausible to posit that Jewish families will highly support intellectual pursuits and encourage their children to invest in schoolwork” and produced evidence showing that Jewish children have higher educational aspirations, do more homework and watch less TV than gentiles.

Although there may be some plausibility in the theory that Jews have stronger cultural values that promote achievement than gentiles, and that this is a major factor responsible for their success, these assertions do not have a strong empirical base. We have therefore examined some data that should provide evidence for this theory.

2. Method

The American National Opinion Research Center (NORC) in Chicago carries out annual or biennial surveys on approximately 1500 (for annual surveys) or 3000 (for biennial surveys) individuals in the continental United States (i.e. excluding Hawaii and Alaska). These are known as the General Social Surveys (GSS). The surveys were first carried out in 1972. The samples are representative of the adult population of those aged 18 years and over, except that they exclude those who cannot speak English and those resident in institutions such as prisons and hospitals. Full details of the sampling procedures are given by Davis and Smith (1996).

The GSS surveys collect a vast amount of information about the respondents' opinions on a variety of topics and also on their demographic characteristics such as their income, education, age, ethnic group, religion, etc. However, information has not been collected for all items every year. The items of particular interest for the present study are (1) the respondents' religion (categorized as Jewish, Protestant, Catholic, None, and Other); (2) their intelligence; and (3) their values.

A measure of intelligence is available in the form of the respondents' score on a 10 word vocabulary test. This is a synonyms test in which a word is presented and the task is to identify the synonym from five alternatives. One point is awarded for each correctly identified synonym, and as there are 10 words, the total score varies from 0 to 10. Vocabulary is a good measure of general intelligence. For instance, in the standardisation sample of the Wechsler Adult Intelligence Scale (WAIS) the vocabulary subtest correlates .75 with the Full Scale IQ, more highly than any other subtest (Wechsler, 1958) and the Full Scale IQ is widely regarded as a good measure of general intelligence or Spearman's *g* (Jensen, 1998). We are therefore able to use the vocabulary scores as a measure of the general intelligence of the sample and in particular of the Jews in comparison with the non-Jews. In this study the GSS samples have been analysed for the years 1972–2004. This gives 433 who identified themselves as Jews and 17,335 who identified themselves as non-Jewish whites.

The cultural values of the respondents are measured by their responses to a question on the values parents would most like in their children. The survey gives 13 values and asks respondents to identify the one that they would most like their children to have, and also the three they would most like their children to have. These values are as follows: (1) Success: “that he tries hard to succeed”; (2) Studiousness: “that he is a good student”; (3) Amicability: “that he gets along well with other children”; (4) Cleanliness: “that he is neat and clean”; (5) Considerateness: “that he is considerate of others”; (6) Control: “that he has self-control”; (7) Honesty: “that he is honest”; (8)

Interest: “that he is interested in how and why things happen”; (9) Judgment: “that he has good sense and sound judgment”; (10) Manners: “that he has good manners”; (11) Obedience: “that he obeys his parents well”; (12) Responsibility: “that he is responsible” (13) Sex role: “that he acts like a boy (she acts like a girl)”. In the analyses of these values the GSS samples have again been analysed for the years 1972–2004. This gives a total sample of 10,700, of whom there are 228 who identified themselves as Jews. These are 2.1% of the sample and this is about the percentage of Jews in the American population.

3. Results

On the vocabulary test, Jews obtained a mean of 7.48 ($N = 433$, $sd = 2.07$), while non-Jewish whites obtained a mean of 6.21 ($N = 17,335$, $sd = 2.09$). This difference is statistically significant ($t = 12.441$, $p < .001$). The difference in standard deviation units is 0.604d and is equivalent to 9.06 IQ points.

The differences between Jews and non-Jews in the values they would most like their children to have are shown in Tables 1 and 2. Table 1 gives the percentages of the respondents endorsing each of the 13 values they would most like their children to have, for the five religious categories. The right hand column gives the values of t for the statistical significance of the different percentages of Jews compared with the remainder of the sample selecting each value as the most desired in their children (minus signs indicate that Jews attach less importance to these values). There are only two values in which Jews are significantly different from others. These are honesty, which Jews desire in their children less than others, and judgment, which Jews desire in their children more than others.

Table 2 gives similar results for values being one of the three most important that the respondents would most like their children to have. The right hand column gives the values of t for the

Table 1
Most important values: percentages

	Jews	Prots	Caths	None	Other	t
Numbers	228	6774	2736	781	181	–
Success	1.8	2.7	3.7	2.9	5.0	–1.14
Studiousness	0.0	0.8	1.2	0.9	2.2	–1.49
Amicability	1.8	1.7	2.3	2.3	0.6	0.11
Cleanliness	0.1	0.7	0.8	0.9	0.6	–0.51
Considerateness	9.2	5.8	9.0	13.1	9.9	1.14
Control	0.9	2.7	3.0	2.6	5.5	–1.77
Honesty	26.3	37.8	33.8	27.5	29.3	–2.96*
Interest	3.5	2.7	3.0	8.8	6.6	0.21
Judgment	32.0	16.9	17.3	20.4	12.7	5.82***
Manners	1.3	3.3	2.9	2.4	6.1	–1.57
Obedience	11.8	16.8	13.2	8.5	12.2	–1.39
Responsibility	10.1	7.1	9.0	9.0	9.4	1.28
Sex role	0.0	0.8	0.7	0.8	0.0	–1.31

* and *** denote statistically significant differences at $p < .05$ and $p < .001$, respectively.

Table 2
One of three most important values: percentages

	Jews	Prots	Caths	None	Other	<i>t</i>
Numbers	228	6774	2736	781	181	–
Success	10.5	14.4	15.6	15.0	17.7	–1.81
Studiousness	5.3	6.2	8.1	5.9	11.0	–0.90
Amicability	14.9	12.2	14.7	12.7	13.8	0.91
Cleanliness	3.9	8.3	6.2	5.5	3.3	–1.99*
Considerateness	41.2	27.1	30.7	36.0	34.3	4.07***
Control	13.2	17.3	15.5	12.9	21.0	–1.36
Honesty	58.8	67.6	63.6	58.8	55.8	–2.16*
Interest	27.6	15.0	16.3	34.4	23.8	4.26***
Judgment	52.2	36.9	37.1	43.1	35.4	4.55***
Manners	10.5	24.4	23.3	16.9	22.7	–4.60***
Obedience	19.7	35.0	29.2	17.8	24.3	–3.94***
Responsibility	39.0	30.7	35.5	36.1	34.8	2.11*
Sex role	1.8	4.0	3.4	3.7	1.1	–1.59

* and *** denote statistically significant differences at $p < .05$ and $p < .001$, respectively.

statistical significance of the different percentages of Jews compared with the remainder of the sample selecting each value as the one of the three most desired in their children. There are eight values in which Jews are significantly different from others. Jews attach less importance to cleanliness, honesty, manners and obedience, but they attach more importance to considerateness, interest in how and why things happen, judgment and responsibility.

4. Discussion

The results contain five principal points of interest. First, on the vocabulary test adopted as a measure of intelligence, Jews obtained an average score equivalent to 9.25 IQ points higher than non-Jewish whites. This is closely similar to the Jewish IQ advantage of approximately 10 IQ points found in a number of other studies noted in the introduction. An IQ advantage of this magnitude is sufficient to explain most and perhaps all of the high Jewish achievement. A population of gentiles with an average IQ of 100 has approximately 2% of individuals with an IQ of 130 and above. Jews with an average of IQ 110 should have about 9% of individuals with IQs at this level. At IQs above 145, Jews should have approximately seven times the proportion of gentiles (approximately 0.14% of the population of gentiles and approximately 0.98% of Jews). These differences go a considerable way to explaining the high achievements of Jews.

Second, the results do not provide any evidence for the theory that Jews attach more importance to success or to studiousness than non-Jews. In fact Jews attach less importance to success and to studiousness than non-Jews in the results set out in both [Tables 1 and 2](#), although the differences between Jews and non-Jewish are not statistically significant.

Third, Jews do attach more importance to four values than non-Jews. These are considerateness, interest in how and why things happen, judgment, and responsibility, but it is not easy to see how these would contribute to the success of Jews in virtually all walks of life. The results that

Jewish parents are more likely to foster interest in how and why things happen suggest that this might contribute to the high Jewish achievement in science, but Jews have been equally successful in law, the humanities and business, for which an interest in how and why things happen would not seem to confer any obvious advantage.

Fourth, Jews do not differ much from others in the values they would most like their children to have. Jews and non-Jews attach most importance to their children having good judgement, being considerate, honest and responsible, and Jews and non-Jews attach least importance to their children valuing cleanliness and appropriate sex role behaviour.

Fifth, the results clearly support the high intelligence theory of Jewish achievement while at the same time provide no support for the cultural values theory as an explanation for Jewish success. Although the high Jewish IQ has been known for many decades, it has typically been ignored by historians, sociologists, and economists who have written on the high achievements of the Jews. For instance, the sociologists Lieberson and Carter (1979) who documented the remarkable over-representation of Jews in *Who's Who in America* make no mention of the high Jewish IQ as a likely explanation. There is no mention of the high IQ of the Jews in discussions of Jewish achievements by the historians Thernstrom and Thernstrom (2003), or by the economist Chiswick (1985, 1999), or by the British sociologist Tropp (1991), whose book documents the over-representation of Jews in the professions in Britain. Nor is there any mention of the high IQ of the Jews in textbooks of sociology (e.g. Giddens, 1997) or of psychology (too numerous to cite), or even in textbooks on intelligence, such as Brody's (1992) *Intelligence* and Sternberg's (2000) *Handbook of Intelligence*. Yet it would appear that high intelligence is the most promising explanation of Jewish achievement.

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