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OPINIONS OF THE IRISH PUBLIC ON INTELLIGENCE*

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In a survey of a representative sample of the Irish adult population (n 994) respondents were asked in interview their views on a number of issues related to intelligence and its measurement Almost half (49%) the respondents judged that the results of intelligence tests depend equally on innate and learned factors the remaining half were nearly evenly divided between a belief in primarily innate causes and a belief in primarily learned causes Opinion was divided about how much the kind of intelligence measured by tests matters in life 38% said a great deal 26% said not as much as other things and 21% said 'very little Majorities agreed (71%) that education cannot make up for a lack of natural ability and disagreed (61%) that it is fair to give more opportunities to those with more intelligence Just over half (52%) the respondents thought that most teachers are good judges of a child s intelligence

Intelligence and intelligence testing have been the subjects of a great many investigations since Sir Francis Galton entertained the idea of assessing the abilities of individuals by means of quantitative devices Today, there exists a vast quantity of technical, and sometimes controversial, literature relating to the nature, origin, and measurement of intelligence, some of which, especially as it relates to the practice of testing and making decisions about individuals on the basis of test results,

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has been translated into popular debate (6, 7, 9, 10) However, relatively little effort has been invested in empirical investigations of popular notions of intelligence Exceptions have been surveys of teachers, students, parents, and the general public which were carried out in the United States in the 1960s and in which opinions on a wide range of issues relating to testing were elicited (3, 4, 5, 8) More recently, the views of teachers on testing have been examined in Ireland (1, 11) and again in the United States (2, 13)

A key issue in the controversy about intelligence relates to the extent to which it is perceived to be determined by genetic or environmental factors About a quarter of adults (5) and a third of elementary school teachers in the United States (5, 8) thought that intelligence, as measured by intelligence tests, was mostly an innate characteristic About a quarter of Irish primary school teachers also adopted this view (11) A majority of respondents in all three groups thought that environmental factors contributed at least as much as innate factors to intelligence test performance However, while almost two thirds of Irish teachers gave equal weight to environmental and innate factors, only a quarter of American respondents did so, in the American studies, nearly half of the adults in general and a third of the teachers leaned more toward environ mental factors In spite of their differences of opinion about the deter minants of intelligence, nearly equal proportions (about 45%) of American adults (5) and of Irish teachers (1) rejected the idea that no amount of education or special training can make up for lack of natural ability

Evidence is also available on how important American adults perceive intelligence, as measured by intelligence tests, to be In Brim *et al's* (5) study, just over half the adults thought that the kind of intelligence measured by tests matters a great deal in life, though no more than other things Approximately equal proportions took the view that it matters more than anything else (11%) or that it matters very little (12%) Asked a similar question about the importance of intelligence for success in school or college, over half of the American elementary school teachers (55 6%) said it is about as important as other qualities, while 17 8% said it is not as important Equal proportions (1 1%) said that it is the most important factor and that it is not important at all

Do people think it is fair that those with the most intelligence should have the most opportunities? Seven out of ten American adults did not think so, only a quarter supported this meritocratic principle (5) Irish

primary school teachers were much more evenly divided in their opinions, nearly half supported the idea, while just over four in ten did not think it would be fair to tie opportunity to intelligence in this way (1)

In this paper, we describe views, obtained in interview, of a sample of the adult population in Ireland about intelligence As in the American study, respondents were asked about the origins and importance of measured intelligence and the relationship between intelligence and educational experience They were also asked about teachers' ability to evaluate intelligence

METHOD

Interview Schedule

A personal interview schedule was developed at the Educational Research Centre and administered by Irish Marketing Surveys Limited The part of the interview for which results are reported in this paper was concerned with opinions about the origins and importance of measured intelligence, the relationship between intelligence and educational experience, and the ability of teachers to evaluate children's intelligence

Origins and importance of measured intelligence Respondents were asked to select a description about the combination of inborn and learned factors on which the results of the intelligence tests sometimes used in schools and in employment depend, the response choices available were 'completely to do with what a person is born with', 'mainly to do with what a person is born with', 'half to do with what a person is born with and half with what a person has learned', 'mainly to do with what a person has learned', and 'completely to do with what a person has learned' Respondents were asked how much the kind of intelligence measured by intelligence tests matters in life, to which they could respond that 'it matters more than anything else', 'it matters a great deal, but no more than other things', 'it doesn't matter as much as other things', or 'it matters very little' (There was also provision for a 'don't know/not sure' response)

Relationship between intelligence and educational experience Respondents were asked to indicate whether they agreed or disagreed with the following two statements 'Education or special training cannot make up for the lack of natural ability,' and 'It is only fair that the people with the most intelligence should have the most opportunities ' Extent of

agreement was registered on a four point scale ('strongly agree', 'agree', 'disagree', and 'strongly disagree') with a 'don't know/not sure' option

Teacher ability to evaluate intelligence Respondents were asked whether they though that 'teachers are good judges of a child's intelligence', they could respond that 'few', 'some', 'many', or 'most' teachers are, or they could select a 'don't know/not sure' option

Sample

A sample of 1,000 adults aged between 16 and 69 years was selected on a quota sampling basis to represent the general public in the Republic of Ireland A description of the procedure adopted in selecting and weighting the sample is provided elsewhere (12)

After coding and cleaning, it was found that six interviews could not be used Thus, analyses were based on 994 people Information was not available on the socio economic status of five urban respondents or on the educational level of one rural and 23 urban respondents The numbers in the analyses by socio educational level are reduced accordingly

Analysis

The responses of each of the following groups are presented in percentages

(i) Total sample (n 994)

(ii) Parental status groups (a) Parents of children attending school beyond first class in primary school (n 200 urban, 72 rural), (b) Non parents respondents who either had no children or whose children were not yet beyond first class in primary school or whose children had already left school (n 497 urban, 225 rural)

(iii) Residence groups (a) Urban respondents living in town or cities with populations of 1,500 or more inhabitants (n 697), (b) Rural respond ents living in areas of population with less than 1,500 inhabitants (n 297)

(iv) Socio economic level determined on the basis of the occupation of the head of household, not that of the respondent (a) Professional/ managerial (n 118 urban, 3 rural), (b) Middle class/white collar (n 149 urban, 10 rural), (c) Skilled worker (n 197 urban, 39 rural), (d) Unskilled worker (n 226 urban, 72 rural), (e) Farmer with 50 or more acres (n 73 rural), (f) Farmer with less than 50 acres (n 2 urban, 100 rural) Categories (a) through (d) are conventionally regarded as constituting an ordinal scale of socio economic level While we feel there are differences between these categories and farmers, who are assigned to two separate categories

(e and f), it is not clear how the farming categories relate to the scale

(v) Level attained at end of formal education (a) Primary school only (n 249 urban, 176 rural), (b) Post primary school but no public examination (n 112 urban, 47 rural), (c) Group Certificate (n 26 urban, 12 rural), (d) Intermediate Certificate (n 69 urban, 25 rural), (e) Leaving Certificate (n 125 urban, 25 rural), (f) Third level education (n 93 urban, 11 rural)

RESULTS

Opinions on whether the results attained on intelligence tests depend on factors which are mostly innate or mostly learned were very evenly balanced Almost half (49%) the respondents selected the half innate/half learned option, while approximately a quarter judged that the factors are completely or mainly innate (27%) and a further quarter that the factors are completely or mainly learned (25%) (Table 1) There were few

TABLE 1

OPINIONS ON WHETHER THE RESULTS OF INTELLIGENCE TESTS DEPEND ON LEARNED OR INNATE FACTORS

	Completely innate %	Mainly innate %	Half innate/ half learned %	Mainly learned %	Completely learned %
National total	14	13	49	19	6
Parental status					
Parents	14	14	53	14	4
Non parents	14	12	47	21	6
Residence					
Urban	9	13	51	22	6
Rural	19	13	47	16	5
Socio economic level					
Professional/Managerial	5	17	58	18	2
White collar	7	11	60	17	5
Skilled	9	12	52	22	5
Unskilled	17	13	42	20	7
Farmer (50 acres +)	19	12	45	16	7
Farmer (50 acres −)	21	13	45	17	5
Level of formal education					
Primary education	18	12	45	18	6
Post primary (no exam)	15	11	49	18	6
Group Certificate	6	6	52	26	10
Intermediate Certificate	11	13	47	23	6
Leaving Certificate	9	14	58	16	2
Third level	1	20	57	18	4

marked variations from this pattern of response among the subgroups, although the percentages of rural respondents, unskilled workers, farmers, and respondents with only primary education who saw the results of intelligence tests as depending more on innate factors were about 10% higher than those of urban respondents, professional/managerial, white collar, skilled workers, and respondents with the Group Certificate or third level education

There was again a wide range of opinion about whether the kind of intelligence measured by intelligence tests matters much in later life Thirty eight percent of respondents thought that it matters 'a great deal' and a plurality of all subgroups, with the exception of the professional/ managerial group and the respondents with the Group Certificate or third level education, concurred (Table 2) In these three dissident groups, a

TABLE 2

OPINIONS ON THE SIGNIFICANCE IN LATER LIFE OF THE KIND OF INTELLIGENCE MEASURED BY INTELLIGENCE TESTS

	It matters more than anything else %	It matters a great deal %	It does not matter as much as other things %	It matters very little %	Don t know/ not sure %
National total	11	38	26	21	4
Parental status					
Parents	10	40	28	20	3
Non parents	11	37	26	22	4
Residence					
Urban	7	35	28	24	5
Rural	14	41	24	18	2
Socio economic level					
Professional/Managerial	5	29	40	23	3
White collar	7	37	25	28	3
Skilled	13	40	27	18	3
Unskilled	12	35	22	26	5
Farmer (50 acres +)	8	45	27	14	6
Farmer (50 acres −)	15	41	25	18	2
Level of formal education					
Primary education	16	39	23	18	5
Post primary (no exam)	9	41	22	22	6
Group Certificate	6	34	38	22	0
Intermediate Certificate	1	44	30	23	3
Leaving Certificate	8	34	29	26	3
Third level	5	28	36	31	0

higher percentage of respondents (40%, 38%, and 36%, respectively) thought it does not matter as much as other things This opinion was held by smaller percentages (20 to 30%) of respondents in other groups Overall, about a fifth (21%) of respondents thought that measured intelligence mattered 'very little', only 11% thought it matters 'more than anything else'

The idea that 'education or special training cannot make up for a lack of natural ability' was accepted by 71% of respondents and rejected by 28% (Table 3) There was considerable uniformity among the subgroups in their opinions on this issue, with only slightly higher percentages of professional/managerial respondents (36%), large farmers (36%), and respondents with third level education (37%) disagreeing

TABLE 3

OPINIONS ON THE VIEW THAT EDUCATION OR SPECIAL TRAINING CANNOT MAKE UP FOR A LACK OF NATURAL ABILITY

	Strongly agree %	Agree somewhat %	Disagree somewhat %	Strongly disagree %	Don t know/ no opinion %
National total	24	47	21	7	1
Parental status					
Parents	22	46	24	6	1
Non parents	24	48	20	7	1
Residence					
Urban	25	44	21	7	2
Rural	23	50	21	6	0
Socio-economic level					
Professional/Managerial	27	38	30	6	0
White collar	27	42	22	8	1
Skilled	19	54	18	8	1
Unskilled	26	48	17	6	3
Farmer (50 acres +)	19	44	30	6	1
Farmer (50 acres –)	25	51	18	6	0
Level of formal education					
Primary education	22	50	19	6	2
Post primary (no exam)	24	48	20	8	0
Group Certificate	28	40	28	4	0
Intermediate Certificate	21	58	15	7	0
Leaving Certificate	27	40	22	11	0
Third level	25	39	34	3	0

That 'the people with the most intelligence should have the most opportunities' was, on the other hand, accepted by only 38% of respondents (Table 4) and wide divergences of opinion occurred across the subgroups Rural respondents (46%) were more likely to agree with this notion than were urban respondents (30%) Respondents in the professional/managerial level of employment and those with third level education were particularly opposed to the idea of tying opportunity to intelligence, 75% and 80%, respectively, disagreed with the statement presented

TABLE 4

OPINIONS ON THE VIEW THAT IT IS FAIR THAT PEOPLE WITH THE MOST INTELLIGENCE SHOULD HAVE THE MOST OPPORTUNITIES

	Strongly agree %	Agree somewhat %	Disagree somewhat %	Strongly disagree %	Don't know/ no opinion %
National total	15	23	26	35	0
Parental status					
Parents	13	20	31	36	0
Non parents	16	24	25	35	0
Residence					
Urban	12	18	26	43	1
Rural	18	28	27	27	0
Socio economic level					
Professional/Managerial	5	19	31	44	1
White collar	16	17	28	39	0
Skilled	12	17	27	44	0
Unskilled	17	25	24	34	1
Farmer (50 acres +)	15	25	31	29	0
Farmer (50 acres –)	21	33	21	25	0
Level of formal education					
Primary education	17	25	26	31	0
Post primary (no exam)	16	29	21	34	0
Group Certificate	15	18	33	32	0
Intermediate Certificate	16	15	29	39	0
Leaving Certificate	11	24	21	44	0
Third level	6	13	39	41	1

The final question asked was, 'How many teachers are good judges of a child's intelligence?' Over half (52%) the respondents said that most teachers are and nearly a fifth (19%) said that many teachers are (Table 5) Rural respondents thought that more teachers are good judges of intelligence than did urban respondents, 78% of the former said 'many' or 'most' compared to 63% of the latter Among the respondents who thought that relatively few teachers are good judges of intelligence were those in the professional/managerial (45%) and white collar (39%) groups and those with Leaving Certificate (38%) or third-level education (49%)

TABLE 5

OPINIONS ON HOW MANY TEACHERS ARE GOOD JUDGES OF A CHILD S INTELLIGENCE

	Few %	Some %	Many %	Most %	Don't know/ not sure %
National total	8	21	19	52	1
Parental status					
Parents	7	21	14	56	2
Non parents	8	21	21	50	1
Residence					
Urban	11	24	17	46	1
Rural	4	17	21	57	1
Socio economic level					
Professional/Managerial	13	32	15	38	2
White collar	11	28	21	38	2
Skilled	9	21	18	52	1
Unskilled	7	18	19	55	0
Farmer (50 acres +)	4	19	19	56	1
Farmer (50 acres –)	3	15	21	60	1
Level of formal education					
Primary education	5	17	20	57	1
Post primary (no exam)	8	18	14	59	1
Group Certificate	15	15	26	43	0
Intermediate Certificate	4	21	25	49	1
Leaving Certificate	10	28	16	45	1
Third level	14	35	20	31	0

DISCUSSION

Irish opinion about the determinants of intelligence was distributed symmetrically, about half of the respondents crediting innate and learned factors equally and about a quarter favouring either innate or learned determinants The finding that about seven out of ten respondents believed that education cannot make up for lack of natural ability is consistent with this pattern of belief Nearly twice as many respondents (almost four of every ten) thought that the kind of intelligence measured by tests mattered 'a great deal' in later life as thought that it mattered 'very little'

Just over half the respondents thought that 'most' teachers are good judges of a child's intelligence and an additional one in five thought 'many' were Fewer than four persons in ten thought that more opportunities should be given to the more intelligent

Our data point not only to cross national differences in views about intelligence but also to differences between the groups that made up our sample of Irish adults Compared to urban respondents, those in rural areas were more likely to assign intelligence to innate factors, to agree to tying opportunity to intelligence, and to think teachers were good judges of intelligence Respondents at the professional/managerial level and those with third level education differed most from others in the sample in the proportion of teachers they credited with being good judges of intelligence (fewer), in a lower degree of willingness to tie opportunity to ability, in a higher degree of optimism about the possible impact of education on ability, and in assigning somewhat less importance in later life to the kind of intelligence measured by tests In the last opinion, they were joined by a nearly equal proportion of Group Certificate holders and in the next last by a nearly equal proportion of farmers of over 50 acres

A comparison of the views of Irish adults with those of Irish primary school teachers and with those of American adults and elementary school teachers (obtained some ten years earlier) on the origins of measured intelligence reveals several marked differences The group with the highest proportion (over a third) favouring largely innate origins is the group of American teachers Almost identical proportions (about a quarter) of the other groups favoured innate origins as well, but at least four out of five of the American adults and of the Irish teachers who did so chose the 'mostly innate' rather than the 'completely innate' response, while Irish

adults were divided evenly between these two responses The proportion of Irish adults (a half) who assigned equal weight to innate and learned factors fell between that of American adults and teachers (a quarter) and that of Irish teachers (two thirds) The proportion of respondents who expressed the belief that intelligence depends mostly on learned factors fell from nearly a half of American adults to nearly a third of American teachers, to a quarter of Irish adults, and, finally, to less than a tenth of Irish teachers It is interesting to note that while Irish respondents were on the whole less likely than American respondents to assign a predominant role to environmental factors, so within each country were teachers less likely to do this than were adults in general

Only about one in ten of American adults or of Irish adults thought that the kind of intelligence measured by intelligence tests matters more than anything in life The proportions who believed it matters a great deal were five in ten of American adults and four in ten of Irish adults, while nearly twice as high a proportion (over one in five) of Irish as of American adults thought it matters very little A smaller proportion of Irish adults (three in ten) than of American adults or Irish teachers (well over four in ten) believed that education and training can make up for a lack of natural ability In this case, in contrast with that of the origins of intelligence, the Irish teachers take a more environmentalist view than do Irish adults in general Only a quarter of American adults agree that the more intelligent deserve more opportunities, while four in ten of Irish adults and nearly half of Irish teachers take this position

On the whole, these views seem to confirm that the position of American adults on intelligence is, compared to that of Irish adults and teachers, more environmentalist, interventionist, and egalitarian On the other hand, American adults ascribed much more importance in real life to the kind of intelligence measured by tests than did Irish adults

Irish respondents at the professional/managerial level and those with third level education had opinions more like those of the American adults than had other Irish sub-groups on the fairness of limiting opportunity in line with intelligence Among Irish respondents there was a strong urban rural split on this issue rural respondents were more likely than urban ones to agree with the notion of apportioning opportunity on the basis of intelligence Those of professional/managerial status and those with third level education, along with farmers of more than 50 acres, were far more likely than other groups to agree that education could make up

for lack of ability but still did not come near the Americans in their degree of optimism Social class and amount of education were related, in Ireland, to beliefs about the origins of intelligence, but this affected the distribution over the 'equal' and 'mainly/completely innate' categories, no group ascribed as much importance to learned factors as the Americans did

In the light of the tendency for the higher socio economic and education groups to fall somewhat closer to American opinion on the issues just considered, it is all the more remarkable that the professional/managerial and third level respondents (as well as those with the Group Certificate) deviated further from American opinion than other groups on the issue of the importance in later life of the kind of ability measured by intelligence tests, a far greater proportion of them saying that it does not matter as much as other things

Differences of opinion about how many teachers were good judges of intelligence confirmed the previously observed urban rural division as well as distinguishing the upper two socio economic and educational levels from the remainder Respondents in the latter group and in urban areas in general credited fewer teachers with being good judges of children's intelligence

Overall, urban respondents, those with the Group Certificate or at least the Leaving Certificate, and those of the upper two socio economic levels are, compared to others in Ireland, somewhat more similar to American respondents, somewhat more egalitarian and inclined to confidence in educational intervention, but not notably more environmentalist in their ideas about the origins of intelligence They differ, however, even more markedly than other Irish respondents from American opinion on the importance of measured intelligence in later life

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