THE APTITUDES OF ATTORNEYS

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ABSTRACT

In this report, the results of two validation studies of attorneys are presented. In the first study, test scores were examined for 1,627 attorneys who were clients of the Foundation's aptitude testing program between 1984 and 2001. The attorneys tended to score high on English Vocabulary, Ideaphoria, Number Series, Silograms, and Foresight. Unexpectedly, they did not score high on Inductive Reasoning. The pattern of scores was mostly the same across sex, age, level of job satisfaction, and specialization in law. In the second study, 37 practicing attorneys were recruited to take an abbreviated battery for purposes of occupational validation. They showed a similar pattern to the attorneys in the first study.

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ACKNOWLEDGMENTS

This study was made possible, in great part, because of the insight, wisdom, commitment, and perseverance of Mr. Robert Destro, Esq. As Interim Dean of the Columbus School of Law at Catholic University in Washington, D.C., Mr. Destro was responsible for recruiting alumni of Columbus School of Law to participate in Study 2, which is described in this report. In addition, he was responsible for disseminating the mission of the project to individuals and institutions he believed would be potential supporters of the simple but powerful notion that the field of law is not unique among other professions. As such, success in the field is, at least in part, a function of a person's aptitudes and other characteristics. Also, Mr. Destro has been a long-time believer in the Foundation's aptitude-testing program, ever since his wife took the standard battery at the Foundation's office in New York City. Of course, we are grateful to the members of Mr. Destro's staff, who provided him with the various forms of support necessary for him to champion this project.

We would also like to acknowledge Mr. Henry Perritt, Jr., Esq., who as Dean of the Chicago-Kent College of Law at the Illinois Institute of Technology in Chicago, Illinois, recognized the importance of identifying key aptitudes that are predictive of success in the legal field. Mr. Perritt introduced us to Ms. Jeanne Kraft, Assistant Dean for Career Services, and Ms. Maureen Stimming, Director of Career Services, both at the Chicago-Kent school. We are appreciative of the support Ms. Kraft lent to this project. Ms. Stimming was unselfish in giving of her time, contacts, and ideas in helping us to recruit alumni of Chicago-Kent to participate in Study 2. Her enthusiasm clearly reflected her belief in the importance of identifying aptitudes and personality characteristics that may predict success in the field of law.

We would like to recognize the leadership of the Foundation for their wisdom in committing to validation research on the legal occupation. Both Mr. Thomas McAveeney and Mr. David Ransom saw the importance of securing a firmer understanding of the aptitude patterns of attorneys, especially at a time when more young people are increasingly incurring large amounts of debt in order to attend law school.

Finally, we would like to thank the testing staffs of the various offices of the Foundation, where examinees have been administered the aptitude test battery. We recognize that the scheduling, test administration, and feedback sessions for the attorneys in this project were often completed with a sense of urgency, which may have caused stress. We do, however, greatly appreciate their participation and contribution to the success of this project.

INTRODUCTION

The Johnson O'Connor Research Foundation has conducted validation studies of numerous occupational groups over the past eight decades. The Foundation has always considered law an important occupation but has not conducted a major study focused on attorneys until now. The purpose of this report is to present the results of two new studies of attorneys.

The Foundation decided it was important to determine the aptitudes that contribute to success and satisfaction in the practice of law. At the present time, the cost of attending law school has become exorbitant. It is not uncommon for newly graduating lawyers to have accumulated $100,000 to $150,000 in debt before they secure even their first position. Many of these attorneys will go on to work in the field and be successful and satisfied. After several years of practicing law, however, a sizeable number of attorneys will decide that they made a mistake, do not enjoy the profession, or no longer want to practice. Others, trapped by the debt, continue to practice even when they would rather work in another field.

In this report, we present two validation studies. The first involved an analysis of the test data of 1,627 examinees who had been tested by the Foundation between 1984 and 2001 and were attorneys. This study is referred to as Study 1, and the sample is called the "in-house" sample. The second study involved the testing and analysis of data from 37 persons who had been recruited by the Foundation specifically to participate in an occupational validation study of attorneys. This study is referred to as Study 2, and the sample is the "outside" sample.

Previously Boyd (1978) examined Inductive Reasoning and Wiggly Block scores for 49 Foundation examinees who later practiced law. On Inductive Reasoning, 67.3% of the attorneys had scored at or above the 70th percentile. On Wiggly Block, only 15.0% of the attorneys scored above the 70th percentile. In their summaries, most of the examinees who scored high on Inductive and low on Structural Visualization were encouraged to consider law, and so these distributions may not be representative of attorneys who have not been tested by the Foundation.

STUDY 1

Method

Sample. All the participants in this study were paying clients of the Foundation's testing program. Foundation clients take our battery most commonly to gain information about their aptitudes that they may use to make educational and occupational decisions. The sample for this study consisted of all 1,627 clients who were tested between January 1984 and December 2001 and indicated on their Information Sheet that they were

attorneys. About half of these attorneys were tested in New York (345), Washington, D.C. (199), Boston (157), and Chicago (134), while the remainder were tested at the Foundation's other sites across the United States. Regarding sex, 645 (40%) of the attorneys were female, and 982 (60%) were male. Regarding age, 562 (34%) were less than 33 years of age when they were tested, 568 (35%) were between the ages of 33 and 40, and 497 (31%) were older than 40 years of age.

Additional variables such as level of satisfaction with current job (law) and area of specialization were recorded on the Information Sheet that was completed by clients at the time of testing. However, Information Sheets were available only for the period from 1989 until the present time. Hence satisfaction was available for 1,170 of the attorneys. Furthermore, not all participants indicated their area of specialization; therefore, area of specialization was available only for 1,115 attorneys.

Of the attorneys for whom degree of satisfaction was available, 314 (27%) reported that they "liked" their work, 342 (29%) were "indifferent" to their work, and 514 (44%) reported that the "disliked" their work. Because some of the attorneys were likely "misfits" for the field, we will present the results broken down by level of satisfaction (see Table 5) as well as for the full sample.

Based on the data recorded on the Information Sheets, the attorneys were classified by the authors according to area of specialization. There were 36 such areas. This report will discuss primarily the aptitude pattern for attorneys as a whole; they appear to have one overall pattern, and it holds across gender, age, level of satisfaction, and area of specialization. There are several individual specialties that are presented, however, given their adequate sample size and subtle differences from the overall aptitude pattern for attorneys. These areas of specialization are: (a) Corporate Law, (b) Estate Planning/Probate/Trust, (c) Intellectual Property/Patent Law, (d) Litigation, (e) Real Estate Law, (f) Research/Legal Research, and (g) Tax Law.

Procedures. The attorneys took the Foundation's standard battery of aptitude tests plus the English Vocabulary test. A description of the aptitudes measured by the battery is given in Table 1. For approximately 1,200 of the attorneys, we obtained the two-page Information Sheet they filled out at the time of their testing, which asks for information pertaining to education (undergraduate and law school) and work experience, including degree of satisfaction with current or last position. In the present report, we address only the attorneys' test scores. For purposes of the analysis, the attorneys' percentile scores were converted to *z*-scores, which represent the deviation of a given score from the general mean expressed in standard-deviation units (see the report on occupational plots [Statistical Bulletin 2004-6, pp. 9-11] or the software engineers report [Technical Report 2003-1, p. 6]). For descriptive purposes we also display the mean scores in their original percentile units. The effect size that we report for each test is the difference between the mean *z*-score for this sample and the mean for the general testing population. Since the general mean is presumed to be zero, this difference is equivalent to the mean *z*-score for the group being studied (again see Statistical Bulletin 2004-6 or Technical Report 2003-1].

Results

In Table 2 we show the attorneys' scores on the Foundation's standard battery. The effect sizes for the tests (see the Procedures section) are also displayed graphically in Figure 1. In Figure 2 we show the full distribution of percentile scores on Inductive Reasoning. This figure complements the other presentations of results by showing that for a given test, there is a wide range of scores even when the mean and effect size are near the middle of the general-population distribution.

The attorneys scored highest on five of the Foundation's tests: English Vocabulary (mean percentile = 71), Ideaphoria (67), Number Series (65), Foresight (63), and Silograms (63). It is interesting that they tended to score a little below average on Structural Visualization, but the effect is small. On Word Association, they were a little more objective than the general Foundation population (that is, the attorneys gave more common responses; mean of 17.0 versus 14.1 responses; *SD*s = 7.7 and 8.1; *p* [for the difference between means] < .001).

English Vocabulary is an indication of a person's knowledge of words. An extensive vocabulary is a characteristic of successful people in many careers, and it is clear that a successful attorney must be adept at communicating in an exact and comprehensible manner.

Ideaphoria reflects one's ability to rapidly generate a spontaneous and abundant flow of ideas; the ability to "think on one's feet" characterizes a successful attorney.

Number Series is a measure of one's ability to solve problems with numbers. It has been found to involve both ability to manipulate numbers (like Number Facility) and reasoning ability (Technical Report 1987-1). In addition to several areas of specialization, i.e., estate planning, real estate law, and tax law, where the ability to reason with numbers characterizes much of the specific job duties, successful attorneys in all areas use broad reasoning talents to solve problems that confront them.

Foresight is an ability to see multiple possibilities. A high-scoring person may be better able than a low scorer to see value in acquiring the advanced training needed for a career in law.

Silograms is a measure of one's associative memory for visually-presented words; this aptitude is certainly important for attorneys, who have to read large amounts of material and accurately remember what they read, as well as to what they observe. They also must learn many new terms.

The Inductive Reasoning test has traditionally been viewed as measuring the ability to see relationships, which one would expect to be important in law. These attorneys averaged only the 52nd percentile on Inductive Reasoning, and as shown in Figure 2, there is no particular tendency for them to score high on this test. The

difference between the results for Inductive Reasoning and Number Series may be due to the roles of speed versus power on the two tests (Technical Report 1982-6).

It is interesting to note that on Inductive Reasoning, the attorneys actually had a greater proportion of scorers at the 5th percentile than the general Foundation population (8.6% versus 6.8%). It may be the case that attorneys with very low aptitude in this area are especially likely to seek career guidance.

There appears to be a tendency for attorneys, as a whole, to score somewhat lower on measures of structural visualization than on most other Foundation tests. It is perhaps not surprising that, relative to fields such as engineering and architecture, law does not appear to attract an outsized number of high-structure persons (but see also Table 8 regarding attorneys specializing in intellectual property and patent law).

Table 3 breaks down the attorneys' results by gender, and Table 4 shows the attorneys' scores by age categories. Table 5 shows the attorneys' scores on the Foundation battery by level of satisfaction. Tables 6-12 show the attorneys' scores on the Foundation battery for, respectively, seven areas of specialization.

As can be seen, the overall pattern appears to be relatively constant across gender, age, satisfaction level, and specialization. Regarding specialization, there are some trends apart from the general pattern that look interesting. In many cases, these effects are not statistically significant because of the small sample sizes for the specializations. This means that we cannot be certain that these findings would hold up with larger samples, but we will note them as at least suggestive if not conclusive results.

The attorneys specializing in *corporate law* scored a little higher than the overall sample on many of the tests, although no individual test score stood out.

The attorneys working on *estate planning, probate, and trusts* were a little better than the overall group on tests that involved numbers, which is consistent with the nature of their work.

For *intellectual property/patent lawyers*, the sample size is particularly small (n = 20), but the group averaged 15 percentile points higher than the overall group on Structural Visualization and about 10 points higher on Memory for Design, Analytical Reasoning, and Graphoria.

The attorneys who specialized in *litigation* and *real estate law*, respectively, were very similar to the overall group. Regarding litigators, this may be because litigation involves a number of roles such that some of this group may argue cases in court while others work primarily "behind the scenes" preparing briefs.

The attorneys who described their work as "*research*" or "*legal research*" scored higher on Silograms and lower on Ideaphoria and scored more subjective on Word Association than the overall group.

Like the corporate lawyers, the *tax lawyers* scored higher than the overall group on many tests, most notably Number Series. It appears that corporate and tax law tend to attract and retain a more-able group than most of the other specializations.

(Text continues on p. 21.)

Table 1

Aptitudes Measured by the Standard Foundation Battery

Aptitude	Test reliability[a]	Trait description
Graphoria	.96	Clerical speed and accuracy; measured by Number Checking, which involves quickly comparing pairs of numbers to see whether they are the same or different.
Ideaphoria	.97	Rate of flow of ideas (ideational fluency).
Foresight[b]	.97	Seeing possibilities.
Inductive Reasoning	.84	Quickness in seeing relationships among separate facts, ideas, or observations.
Analytical Reasoning	.83	Ability to arrange ideas into a logical sequence.
Numerical Reasoning	.87	Ability to reason (solve problems) with numbers. Measured by the Number Series test.
Numerical Facility	.82	Ability to perform arithmetic operations quickly. Measured by the Number Facility test.
Structural Visualization	.86	Ability to visualize three-dimensional forms. Measured by Wiggly Block (reconstructing a three-dimensional block) and Paper Folding (rotating two-dimensional surfaces through three-dimensional space).
Subjective vs. Objective Personality	.89	Distinction between individuals whose instinctive mental associations resemble those of a large percentage of other persons, and individuals whose associations are unlike those of the majority. The former are said to have objective personalities; the latter, subjective personalities. (Describes how well-suited a person is for working in a group [Objective] versus working on one's own as an individual [Subjective].) Measured by the Word Association test.

(*table continues*)

Table 1 (*continued*)

Aptitude	Test reliability[a]	Trait description
Tonal Memory	.92	Ability to remember sequences of tones.
Pitch Discrimination	.80	Ability to perceive fine differences in pitch.
Rhythm Memory	.73	Ability to remember complex rhythmic patterns.
Memory for Design	.80	Memory for straight-line patterns.
Silograms	.92	Associative memory for verbal material.
Number Memory	.82	Memory for numbers.
Observation	.62	The ability to retain a mental image of various objects in the mind and quickly perceive any changes in the nature or position of an object.
Finger Dexterity	.86	Speed and accuracy in manipulating small objects with one's fingers.
Tweezer Dexterity	.93	Speed and accuracy in handling small objects with tweezers.

Note. The attorneys also took English Vocabulary, which has a test reliability of .96 and measures knowledge of the meanings of nontechnical English words.

[a]Source for reliability coefficients: Statistical Bulletin 1988-2.
[b]Formerly thought to measure an "ability to keep one's mind on a long-range goal." Measured by showing the examinee a simple line drawing and asking him/her to "write down as many things as you can that the drawing makes you think of, looks like, reminds you of, or suggests to you."

Table 2

Mean Test Scores for In-House Sample of Attorneys

Foundation test	*N*	Mean %ile	Effect size
English Vocabulary	1615	71	.69
Ideaphoria	1562	67	.58
Number Series	1539	65	.52
Silograms	1615	63	.44
Foresight	950	63	.42
Number Facility	1016	59	.33
Analytical Reasoning	1616	58	.28
Rhythm Memory	1615	58	.28
Number Memory	1611	58	.26
Graphoria	1611	57	.27
Tonal Memory	1616	53	.12
Memory for Design	1611	53	.11
Pitch Discrimination	1619	53	.10
Observation	1583	52	.07
Inductive Reasoning	1600	52	.06
Paper Folding	1616	48	-.05
Tweezer Dexterity	1602	45	-.15
Structural Visualization	1586	43	-.21
Wiggly Block	1594	42	-.26
Finger Dexterity	1505	42	-.28

Note. All the effect sizes are significantly different from zero, $p < .05$.

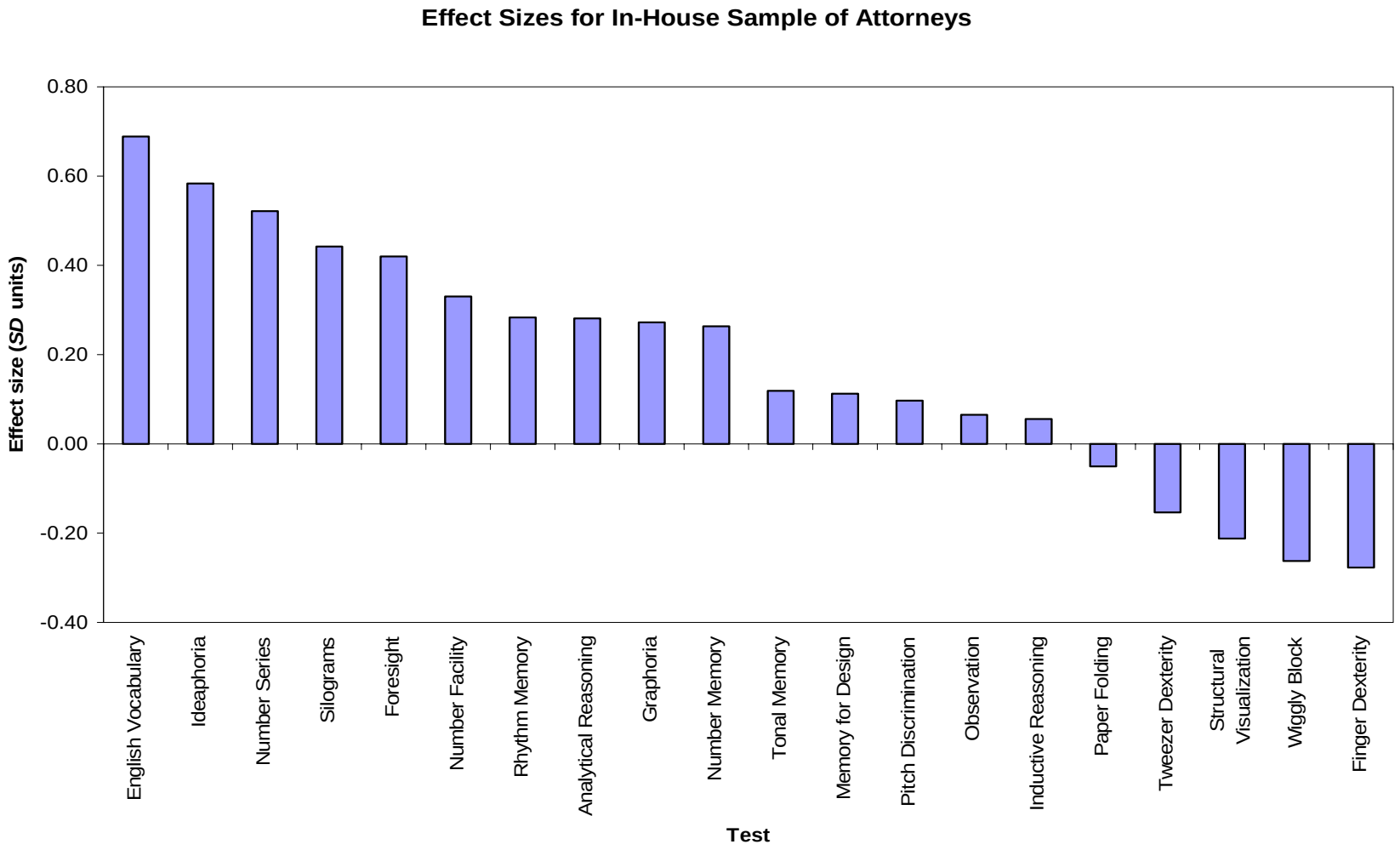

Figure 1. Effect sizes on Foundation tests for in-house sample of attorneys.

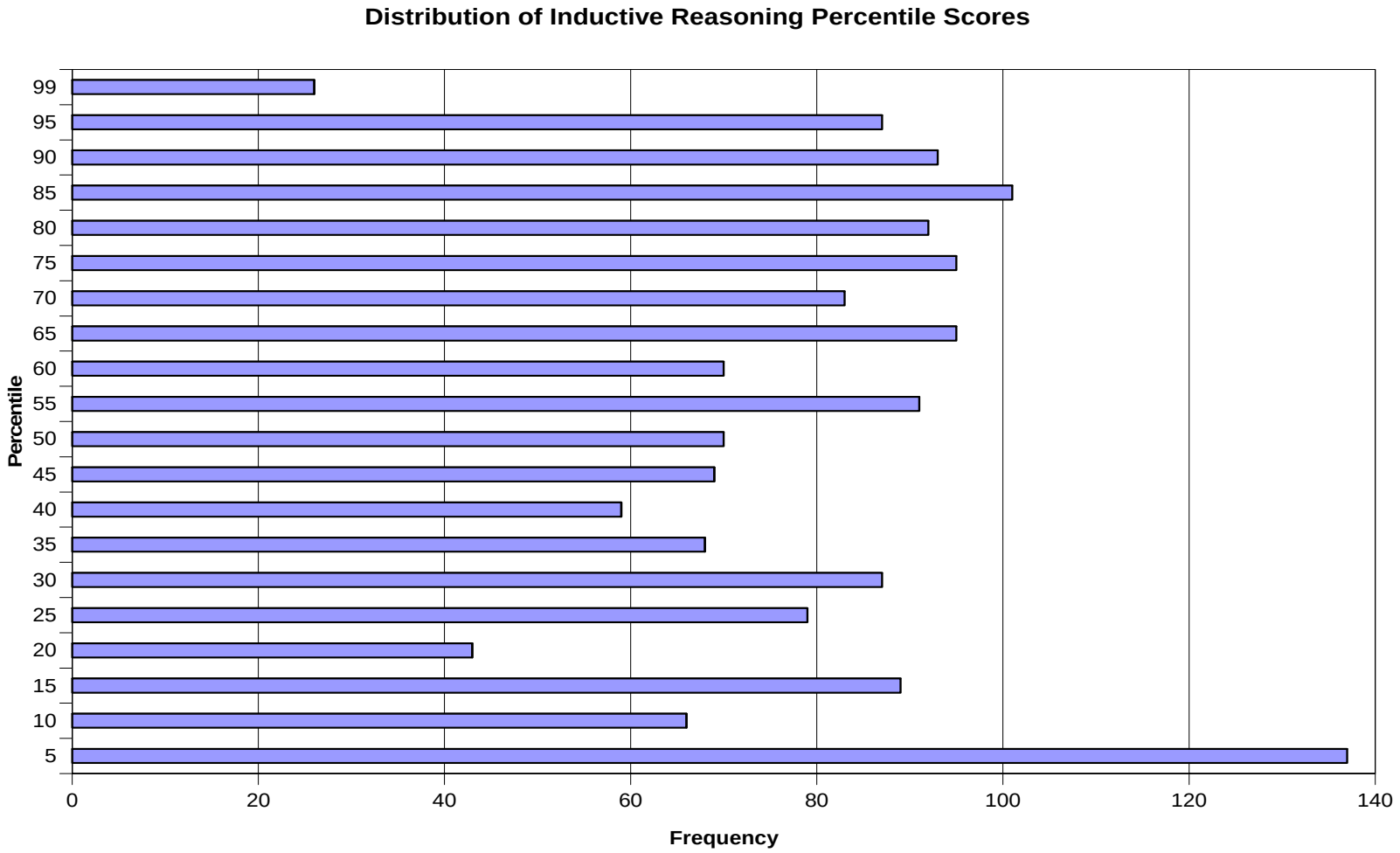

Figure 2. Distribution of percentile scores on Inductive Reasoning for in-house sample of attorneys.

Table 3

Mean Test Scores for Attorneys by Gender

	Gender					
	Female			Male		
Foundation test	*n*	Mean %ile	Effect size	*n*	Mean %ile	Effect size
English Vocabulary	638	72	.73	977	70	.66
Silograms	642	71	.73	973	57	.25
Number Series	612	67	.59	927	63	.48
Ideaphoria	618	66	.57	944	67	.59
Graphoria	636	63	.47	975	53	.14
Analytical Reasoning	640	62	.42	976	55	.19
Rhythm Memory	643	61	.39	972	56	.22
Number Memory	638	61	.37	973	55	.19
Number Facility	429	61	.36	587	59	.31
Foresight	346	61	.36	604	64	.45
Observation	630	58	.28	953	47	-.08
Tonal Memory	641	56	.25	975	50	.03
Finger Dexterity	608	56	.19	897	32	-.59
Inductive Reasoning	633	56	.19	967	49	-.03
Memory for Design	640	54	.13	971	53	.10
Pitch Discrimination	640	52	.07	979	53	.11
Paper Folding	639	46	-.13	977	50	.00
Tweezer Dexterity	633	44	-.19	969	46	-.13
Structural Visualization	625	39	-.35	961	46	-.12
Wiggly Block	629	37	-.43	965	45	-.15

Table 4

Mean Test Scores for Attorneys by Age

	Age								
	< 33			33 - 40			> 40		
Foundation test	*n*	Mean %ile	Effect size	*n*	Mean %ile	Effect size	*n*	Mean %ile	Effect size
English Vocabulary	555	70	.64	565	67	.58	495	75	.87
Number Series	533	69	.66	532	65	.53	474	60	.35
Ideaphoria	545	69	.69	537	66	.55	480	64	.50
Foresight	332	66	.52	343	62	.40	275	60	.34
Silograms	559	63	.44	561	61	.39	495	64	.50
Graphoria	558	61	.42	561	56	.25	492	53	.13
Analytical Reasoning	561	59	.30	565	59	.30	490	57	.24
Number Facility	349	58	.30	345	62	.42	322	58	.27
Number Memory	556	58	.28	563	58	.25	492	57	.26
Rhythm Memory	557	58	.28	565	56	.23	493	60	.35
Memory for Design	555	55	.17	563	53	.11	493	51	.05
Tonal Memory	559	51	.08	565	53	.14	492	54	.14
Inductive Reasoning	552	51	.04	557	50	.00	491	54	.14
Pitch Discrimination	557	51	.04	567	52	.08	495	55	.18
Observation	550	50	.01	551	54	.12	482	51	.06
Paper Folding	558	49	-.03	565	48	-.07	493	48	-.05
Tweezer Dexterity	559	47	-.10	559	44	-.20	484	45	-.16
Structural Visualization	551	45	-.17	550	44	-.18	485	41	-.30
Finger Dexterity	515	45	-.19	524	42	-.27	466	38	-.38
Wiggly Block	554	43	-.22	552	44	-.18	488	38	-.40

Table 5

Mean Test Scores for Attorneys by Level of Job Satisfaction

	Satisfaction level								
	Like			Indifferent			Dislike		
Foundation test	*n*	Mean %ile	Effect size	*n*	Mean %ile	Effect size	*n*	Mean %ile	Effect size
English Vocabulary	313	72	.73	340	68	.59	512	70	.65
Number Series	313	66	.56	339	67	.56	511	67	.59
Ideaphoria	307	63	.46	337	65	.52	508	67	.57
Silograms	314	63	.46	340	62	.43	511	63	.45
Foresight	178	59	.28	158	64	.47	264	61	.37
Number Facility	214	59	.34	267	62	.42	376	59	.34
Analytical Reasoning	313	59	.32	339	58	.27	512	57	.24
Rhythm Memory	314	59	.32	340	58	.29	513	58	.27
Number Memory	312	57	.25	340	59	.31	506	58	.25
Observation	312	56	.18	335	51	.03	507	52	.07
Inductive Reasoning	311	54	.14	341	51	.01	508	53	.11
Memory for Design	313	54	.14	337	53	.10	511	53	.10
Graphoria	311	53	.13	339	56	.25	508	59	.37
Tonal Memory	312	53	.12	340	52	.11	511	53	.12
Pitch Discrimination	313	53	.12	340	53	.10	514	52	.06
Paper Folding	314	48	-.04	339	48	-.08	511	45	-.14
Structural Visualization	310	43	-.22	337	43	-.23	505	40	-.30
Tweezer Dexterity	309	43	-.23	338	47	-.10	511	47	-.10
Finger Dexterity	311	43	-.25	338	41	-.31	509	40	-.33
Wiggly Block	310	42	-.27	339	42	-.27	509	40	-.34

Table 6

Mean Test Scores for Attorneys Specializing in Corporate Law

Foundation test	*n*	Mean %ile	Effect size
Number Series	105	73	.79
Ideaphoria	104	71	.75
English Vocabulary	105	71	.71
Analytical Reasoning	105	66	.50
Foresight	49	65	.49
Silograms	103	64	.50
Rhythm Memory	104	64	.47
Number Facility	90	63	.43
Graphoria	104	61	.49
Number Memory	104	61	.37
Tonal Memory	103	59	.38
Observation	104	59	.29
Inductive Reasoning	105	55	.18
Memory for Design	105	55	.17
Pitch Discrimination	105	53	.09
Paper Folding	105	52	.06
Tweezer Dexterity	105	46	-.13
Finger Dexterity	104	46	-.14
Structural Visualization	105	43	-.21
Wiggly Block	105	38	-.38

Table 7

Mean Test Scores for Attorneys Specializing in Estate Planning, Probate, and Trust

Foundation test	*n*	Mean %ile	Effect size
English Vocabulary	40	70	.67
Silograms	40	69	.73
Number Facility	37	67	.62
Ideaphoria	40	66	.59
Graphoria	40	66	.56
Number Series	40	66	.51
Number Memory	39	61	.43
Rhythm Memory	40	58	.30
Analytical Reasoning	40	57	.27
Observation	40	56	.20
Pitch Discrimination	40	55	.17
Memory for Design	40	55	.17
Tonal Memory	40	53	.13
Paper Folding	39	51	.06
Inductive Reasoning	40	51	.05
Structural Visualization	39	47	-.09
Wiggly Block	40	44	-.22
Tweezer Dexterity	40	42	-.24
Finger Dexterity	40	40	-.32

Note. Foresight is omitted from this table because there were fewer than 20 attorneys with Foresight scores in this specialization.

Table 8

Mean Test Scores for Attorneys Specializing in Intellectual Property and Patent Law

Foundation test	*n*	Mean %ile	Effect size
Ideaphoria	20	69	.67
Silograms	20	68	.61
Analytical Reasoning	20	67	.57
Graphoria	20	66	.70
Number Series	20	66	.54
Paper Folding	20	65	.45
Memory for Design	20	65	.45
Number Facility	18	64	.50
English Vocabulary	20	64	.45
Structural Visualization	20	58	.20
Pitch Discrimination	20	56	.15
Rhythm Memory	20	55	.19
Tonal Memory	20	54	.12
Number Memory	20	52	.06
Inductive Reasoning	20	50	.02
Wiggly Block	20	50	-.03
Tweezer Dexterity	20	49	-.06
Finger Dexterity	20	45	-.13
Observation	20	45	-.18

Note. Foresight is omitted from this table because there were fewer than 20 attorneys with Foresight scores in this specialization.

Table 9

Mean Test Scores for Attorneys Specializing in Litigation

Foundation test	*n*	Mean %ile	Effect size
English Vocabulary	244	68	.57
Ideaphoria	242	66	.54
Foresight	76	66	.51
Number Series	244	65	.51
Silograms	243	62	.43
Number Memory	243	59	.31
Rhythm Memory	243	58	.28
Graphoria	243	57	.29
Number Facility	227	57	.27
Analytical Reasoning	243	57	.22
Inductive Reasoning	242	54	.13
Memory for Design	242	53	.10
Tonal Memory	243	51	.06
Observation	244	51	.03
Pitch Discrimination	244	50	-.02
Paper Folding	244	44	-.17
Tweezer Dexterity	241	43	-.22
Finger Dexterity	241	39	-.35
Structural Visualization	243	39	-.36
Wiggly Block	243	38	-.40

Table 10

Mean Test Scores for Attorneys Specializing in Real Estate Law

Foundation test	*n*	Mean %ile	Effect size
Ideaphoria	64	69	.63
English Vocabulary	65	69	.59
Foresight	30	63	.40
Silograms	65	62	.43
Number Series	65	61	.38
Rhythm Memory	64	59	.26
Number Memory	65	58	.27
Graphoria	64	56	.22
Number Facility	57	56	.22
Analytical Reasoning	65	54	.11
Tonal Memory	65	52	.09
Inductive Reasoning	65	52	.08
Memory for Design	65	51	.01
Observation	65	49	-.06
Pitch Discrimination	65	46	-.07
Tweezer Dexterity	65	45	-.15
Paper Folding	65	43	-.22
Structural Visualization	65	39	-.37
Finger Dexterity	65	38	-.39
Wiggly Block	65	38	-.39

Table 11

Mean Test Scores for Attorneys Specializing in Research and Legal Research

Foundation test	*n*	Mean %ile	Effect size
Silograms	69	72	.73
English Vocabulary	69	70	.65
Number Series	68	65	.51
Foresight	28	63	.43
Number Facility	64	60	.33
Ideaphoria	69	59	.32
Rhythm Memory	69	59	.32
Number Memory	68	59	.29
Graphoria	69	56	.23
Observation	69	56	.20
Memory for Design	68	55	.20
Pitch Discrimination	69	54	.13
Tonal Memory	68	53	.15
Analytical Reasoning	69	53	.11
Inductive Reasoning	69	51	.04
Tweezer Dexterity	69	50	.01
Paper Folding	69	48	-.07
Structural Visualization	68	44	-.21
Wiggly Block	68	42	-.26
Finger Dexterity	69	42	-.27

Table 12

Mean Test Scores for Attorneys Specializing in Tax Law

Foundation test	*n*	Mean %ile	Effect size
Number Series	41	79	1.07
English Vocabulary	41	76	.88
Ideaphoria	41	69	.61
Rhythm Memory	41	65	.52
Number Memory	41	64	.50
Number Facility	38	63	.47
Analytical Reasoning	41	62	.42
Silograms	41	62	.40
Graphoria	40	61	.40
Memory for Design	41	57	.27
Pitch Discrimination	41	56	.22
Tonal Memory	41	55	.21
Paper Folding	41	55	.19
Inductive Reasoning	41	53	.06
Observation	40	51	.03
Structural Visualization	41	46	-.10
Wiggly Block	41	41	-.30
Finger Dexterity	41	40	-.35
Tweezer Dexterity	39	39	-.35

Note. Foresight is omitted from this table because there were fewer than 20 attorneys with Foresight scores in this specialization.

In Table 13 we show the frequencies for attorney profiles based on four Foundation scores: Structural Visualization (SV), Inductive Reasoning (IR), Ideaphoria (ID), and Word Association (WA). In a replication of the procedure that Condon and Schroeder used in Statistical Bulletin 2003-1, a profile was created for each attorney based on the attorney's scores on the four tests. Attorneys were differentiated based on whether they scored High or Not High on SV, IR, and ID, respectively, and whether they scored Subjective, Intermediate, or Objective on WA. A High score was defined as a percentile value greater than or equal to 70. Distinguishing among attorneys based on whether they scored High or Not High on SV, IR, and ID and whether they were Subjective, Intermediate, or Objective on WA produced a total of 24 profiles.

The purpose of this aspect of the study was to obtain a look at how attorneys are jointly distributed on the four tests examined here, which are very influential in examinees' summaries. Additional tests were not included as part of the profiles because this would create too many profiles to consider at one time.

The results in Table 13 have been broken into three sections depending on attorneys' WA categories. Objective attorneys are shown first, followed by intermediate attorneys and then subjective attorneys. The first column of percentages (third column from the right; "O%") shows the percentage frequency of each profile relative to the overall sample. The percentage is simply the result of dividing the *n* for the profile by the overall *N* for the analysis, which is 1,486. The percentages for objective attorneys are generally higher than for the other WA categories simply because more people are usually objective. A chi-square test comparing the proportions of attorneys for the 24 profiles with the corresponding proportions for the general Foundation population showed statistically significant differences between the two groups ($p < .001$).

The second-to-last column on the right in Table 13 shows the percentages for the profiles relative to the WA category of which the profile is part. The percentages were calculated by dividing the *n* for a given profile by the *n* for the WA category. For example, the first percentage, 6.86%, was derived by taking 70 divided by the *n* for the objective category: 1,021. These percentages provide a clearer account of how common each profile is relative to a given WA category. One can see how similar the percentages are for a given profile across the three WA categories. For instance, for each WA category it is most common to score Not High on SV and IR and High on ID. The next most common profile across the WA categories is Not High on SV, IR, and ID.

The last column shows the percentages relative to WA categories for the general Foundation population (Statistical Bulletin 2003-1). This column allows one to compare the percentages for attorneys with the percentages for a heterogeneous group. The attorneys group consistently has higher percentages for the High ID profiles and lower percentages for the Not High ID profiles relative to the general population.

Thus, the profile percentages tend to reinforce the finding that attorneys tend to score high on Ideaphoria, while the proportions for the other three tests tend to be similar to the proportions for the general Foundation population.

Table 13

Frequencies for Profiles Based on Four Foundation Tests

Test profile							
SV	IR	ID	WA	*n*	O%	Attorney WAC%	Fndn. WAC%
H	H	H	O	70	4.71	6.86	6.14
H	H	NH	O	38	2.56	3.72	6.76
H	NH	H	O	57	3.84	5.58	4.60
H	NH	NH	O	47	3.16	4.60	7.76
NH	H	H	O	143	9.62	14.01	12.54
NH	H	NH	O	105	7.07	10.28	14.71
NH	NH	H	O	308	20.73	30.17	17.64
NH	NH	NH	O	253	17.03	24.78	29.83
H	H	H	I	22	1.48	8.12	6.04
H	H	NH	I	10	0.67	3.69	5.53
H	NH	H	I	14	0.94	5.17	5.60
H	NH	NH	I	13	0.87	4.80	7.37
NH	H	H	I	50	3.36	18.45	12.63
NH	H	NH	I	35	2.36	12.92	13.53
NH	NH	H	I	70	4.71	25.83	18.74
NH	NH	NH	I	57	3.84	21.03	30.56
H	H	H	S	9	0.61	4.64	4.96
H	H	NH	S	8	0.54	4.12	6.14
H	NH	H	S	24	1.62	12.37	4.91
H	NH	NH	S	12	0.81	6.19	7.94
NH	H	H	S	32	2.15	16.49	11.95
NH	H	NH	S	19	1.28	9.79	14.13
NH	NH	H	S	52	3.50	26.80	17.04
NH	NH	NH	S	38	2.56	19.59	32.92

Note. SV = Structural Visualization, IR = Inductive Reasoning, ID = Ideaphoria, WA = Word Association, *n* = number within sample for given profile, O% = percentage of sample relative to overall *N* for the analysis (1,486), Attorney WAC% = percentage of sample relative to the *n* for the WA category of which the profile is a part, Fndn. WAC% = WAC% for the general Foundation population (SB 2003-1). H = high score, NH = not-high score, O = Objective, I = Intermediate, S = Subjective.

STUDY 2

Method

Sample. In early 2001 the Johnson O'Connor Research Foundation sent letters to alumni of Catholic University's Columbus School of Law in Washington, D.C., in which the alumni were asked to voluntarily participate in a validation study of attorneys. In 2002 similar letters were sent to alumni of the Chicago-Kent School of Law in Chicago, Illinois. If interested, the alumni were asked to contact the Foundation testing site nearest to them. Thirty-seven attorneys took an abbreviated set of the Foundation's aptitude and knowledge tests. The majority were tested in Washington, D.C. (18), and Chicago (12). Twenty (54%) of the attorneys were female, and 17 (46%) were male.

Of the 37 attorneys, 2 (5.4%) were less than 33 years of age, while 19 (51.4%) were between the ages of 33 and 40 and 16 (43.2%) were older than 40 years of age. Of the 35 attorneys for whom degree of satisfaction for their current or last position was available, 27 (77%) reported that they were "extremely satisfied" or "satisfied;" 7 (20%) reported that they were "dissatisfied" with their work, and 1 (3%) reported that he was "extremely dissatisfied" with his work. Of the 36 attorneys for whom self-reported success data was available, 27 (75%) reported that they were "extremely successful" or "successful;" 6 (17%) reported that they were "moderately successful;" and 3 (8%) reported that they were "less successful" in their work.

Procedures. The attorneys took an abbreviated version of the standard Foundation test battery. They also completed the two-page Information Sheet that is given to all Foundation examinees. This sheet asked for information pertaining to education (college and law school), work experience, and degree of satisfaction with the current or last position. In addition the attorneys completed a validation questionnaire specifically addressing their experience in law, which was designed for this study. Also, they completed a personality test, the Myers-Briggs Type Inventory, and an interest test, the Self-Directed Search. In this report we address only the attorneys' scores on the Foundation standard battery. For purposes of the analysis, the attorneys' percentile test scores were converted to *z*-scores, but here we report them in terms of percentile scores.

Results

Because of the small sample size of Study 2 ($N = 37$), only the aptitude pattern for overall group—and not subgroups divided by sex and age—will be reported here. However, a quick analysis of groups formed on the basis of satisfaction level yielded similar patterns to the overall group. Table 14 shows the attorneys' scores on the shortened Foundation battery. The overall group of attorneys tended to score similarly to the group in Study 1, with relatively high scores on Ideaphoria (mean percentile = 70), English Vocabulary (mean = 66), and Number Series (mean = 63).

Table 14

Mean Test Scores for Outside Sample of Attorneys

Foundation test	*N*	Mean %ile	Effect size
Ideaphoria	36	70	.64
English Vocabulary	37	66	.51
Number Series	36	63	.47
Analytical Reasoning	37	55	.19
Inductive Reasoning	37	55	.08
Graphoria	37	54	.20
Wiggly Block	37	42	-.28
Paper Folding	37	40	-.31
Structural Visualization	37	39	-.38

DISCUSSION

To summarize, the in-house sample of attorneys averaged above the 60th percentile on the following tests, in order: English Vocabulary, Ideaphoria, Number Series, Foresight, and Silograms. They also averaged above the 55th percentile on Number Facility, Graphoria, Analytical Reasoning, Rhythm Memory, and Number Memory. For the outside sample of attorneys, the pattern of scores was similar. Within the in-house sample, the pattern held (with small differences) across sex, age, satisfaction level, and specialization in law.

For Inductive Reasoning, the expected tendency toward high scores did not materialize. This may be due to the role of speed on this test. It is possible that even within given specializations, some lawyers rely on speed much more than others.

It should be borne in mind that the in-house sample consisted of attorneys who sought our testing and guidance services. A substantial proportion, 73%, reported being indifferent or dissatisfied with their current jobs, and some of those who reported being satisfied may actually have been dissatisfied. Nonetheless, to the degree that the reportedly satisfied group was at least somewhat more pleased with their profession than

the dissatisfied group, this made little difference in the observed pattern. We might conjecture that the satisfied group had found ways to utilize their aptitudes, such as Ideaphoria, while the dissatisfied group (many of whom were in the early stages of their careers) had not.

It may be the case that, in addition to aptitudes, other individual-difference variables influence satisfaction and success in law. In a recent book, Daicoff (2004) argued that some personality characteristics common among attorneys may not lead to high levels of satisfaction in the long run. Our main finding on personality, from the in-house study, is that both satisfied and dissatisfied attorneys tend to be objective to a greater extent than in the general population.

It could be profitable to conduct a follow-up study of the in-house sample. Some of them may have left the field, while others have changed the type of work that they perform. We would expect that both of those groups would tend to change to work that better fits their aptitude patterns. In interpreting findings from such a study, we would need to bear in mind that these persons had received feedback and advice about their patterns, and this may have influenced their actions and perceptions.

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