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A Descriptive Analysis of Referral Sources for Gifted Identification Screening by Race and Socioeconomic Status

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A dataset containing demographic information, gifted nomination status, and gifted identification status for all elementary school students in the state of Georgia (N = 705,074) was examined. The results indicated that automatic and teacher referrals were much more valuable than other referral sources. Asian and White students were much more likely to be nominated than Black or Hispanic students. Students receiving free or reduced-price lunches were much less likely to be nominated than students paying for their own lunches. The results suggest that inequalities in nomination, rather than assessment, may be the primary source of the underrepresentation of minority and low-SES students in gifted programs.

Despite the vital role of the referral as the "gatekeeper" process through which students become eligible for official evaluation for entry into gifted programs, it remains poorly understood. An examination of the gifted education literature reveals a paucity of research in this area. This is especially troubling and indeed surprising given the field's well-documented struggle to identify and serve students from minority or low socioeconomic status (SES) families (e.g., Ford, 1998; Frasier, Garcia, & Passow, 1995). A relatively large amount of work has examined possible methods of fairly assessing students who are traditionally underrepresented in programs for the gifted, including assessment schemes based on dynamic assessment (Kirschenbaum, 2004), nonverbal ability tests (Naglieri & Ford, 2003), Gardner's (1983) theory of multiple intelligences (Sarouphim, 1999), compensatory policies such as lowering IQ cutoff requirements for students from underrepresented groups (Hunsaker, 1994), and performance-based assessments (VanTassel-Baska, Johnson, & Avery, 2002). These procedures may hold great promise for identifying and serving students from these groups. However, most school districts require that a student be referred or nominated before being formally assessed for gifted program placement. Students that do not receive a referral will be unable to enter the program no matter which formal assessment procedure is used. The referral process is an obvious potential source of unfairness in the entrance process. It is essential that reliable information be made available so that current practices can be evaluated and perhaps modified.

For the remainder of this article, the terms *referral* and *nomination* will be used interchangeably to describe the process of designating a student as potentially gifted. Once a student has received a nomination or referral, he or she is legally required to undergo official testing for gifted program placement, assuming that the student's parents consent. The testing process will be referred to as *evaluation* or *screening* throughout the remainder of the paper.

Teacher Nominations

The classic study on teacher nominations was conducted by Pegnato and Birch in 1959. In this study, a variety of screening methods were compared on the basis of *effectiveness*, the percentage of gifted children nominated by the screening method, and *efficiency*, the percentage of nominated students that would later be confirmed as gifted through individual testing. *Giftedness* was operationalized as an IQ score of 136 or greater on the Stanford-Binet. Therefore, effectiveness was sensitive to false negatives while efficiency was sensitive to false positives. Pegnato and Birch concluded that teacher judgment was a poor method of screening students for individual testing. Teacher judgment was just 45% effective, meaning that teachers only nominated 45% of students that actually had IQs greater than 136, and was only 27% efficient. Their study, widely acclaimed in the gifted education community, formed the basis of a widespread belief that teachers are poor judges of student potential. Their method of assessing screening techniques via effectiveness and efficiency ratings were utilized in much of the later research on teacher nominations (i.e., Gear, 1976; Waters & Clausen, 1983).

Gagné (1994) reexamined Pegnato and Birch's (1959) study. He severely criticized the use of effectiveness and efficiency measures in assessing the quality of a nomination scheme, pointing out the two are nonindependent because they both depend upon the number of students nominated. In fact, the two indices are negatively correlated. A screening method that nominates more students will, all things being equal, be more effective because it will necessarily catch more gifted students while simultaneously becoming less efficient. Gagné argued for the use of the phi coefficient in judging the effectiveness of a nomination scheme. The phi coefficient is a correlation coefficient used with categorical data whose interpretation is equivalent to that of Pearson's *r* (Agresti, 1996). To use the phi coefficient, a 2 x 2 cross-classification table is created with nomination status (yes/no) on one dimension and gifted status (yes/no) on the other. Counts from each set of four conditions are placed on the table. The number of counts on the diagonal, or correctly classified cases, is compared to the total number of counts. Using this type of procedure to assess the quality of teacher nominations as a screening strategy does not suffer from the drawbacks of Pegnato and Birch's system. Gagné's analysis of the original data found that teacher judgment had a phi coefficient of .29, which compared quite favorably with the other methods analyzed in the study. Thus, the belief that teachers are generally poor at detecting academically gifted students is based partly on a classic study with flawed methodology.

Another concern with respect to research on the efficacy of teacher nominations is the criterion variable. Just what should the criterion be? Previous definitions of giftedness that relied on an IQ score higher than a specific threshold were quite simple to test via the cross-classification approach outlined above, as they simply asked the teacher to predict which students would exceed the target IQ. Indeed, Renzulli and Delcourt (1986) criticized this teacher-predicts-IQ approach, arguing that their imperfect ability to do this should suggest that they are valuable sources of information on student ability that differs from that which is measured by psychometric testing. Current multidimensional definitions of giftedness (see Feldman, 2003) that define it as some combination of academic ability, creativity, motivation, achievement, leadership, or artistic talent make the selection of an appropriate criterion variable quite difficult. Renzulli and Delcourt suggested that the ultimate criterion for evaluating the usefulness of teacher recommendations should be performance in the enriched academic program or even later life accomplishment.

Ultimately, insufficient research has been conducted on teacher nominations to make possible a sound judgment regarding their value. But, even if teachers are effective at nominating students from middle-class majority-culture backgrounds, as some more contemporary research suggests, a significant question remains regarding their ability to detect students with high academic potential who come from other backgrounds, especially those backgrounds that are underrepresented in programs for gifted students. A reading of the research literature on this topic reveals that it has been a frequent source of concern. Nonetheless, only a small number of studies have empirically examined this issue.

Hunsaker, Finley, and Frank's (1997) study is one of the few that has addressed Renzulli and Delcourt's (1986) criticism. Teachers were trained to recognize the characteristics of giftedness as they manifest in students from traditionally underrepresented backgrounds. The researchers examined canonical correlations between teacher ratings on the TABs Summary Form (Frasier et al., 1995) and the Scales for Rating the Behavioral Characteristics of Superior Students (SRBCSS; Renzulli, Smith, White, Callahan, & Hartman, 1976) for students from low-income and minority backgrounds and subsequent student performance in the gifted program, as assessed by the Scale for Rating Students' Participation in the Local Gifted Education Program (Renzulli & Westberg, 1991). The results indicated that the teacher ratings of the students' characteristics were moderately correlated with specific aspects of the students' subse-

quent performances in gifted education classes. However, the correlations between the overall success scale of the student performance scale with the two canonical variables representing teacher evaluations of gifted characteristics were quite low (.178 and .220).

There is some evidence suggesting that teachers evaluate Hispanic students less favorably than White students. Masten, Plata, Wenglar, and Thedford's (1999) study found that fifth-grade teachers rated Hispanic students less favorably on the SRBCSS and that their ratings of students were associated with the students' level of acculturation and ethnic identification. A similar study, conducted by Plata and Masten (1998), concluded that nominated Hispanic and Caucasian students had similar scores on the SRBCSS, but Hispanic students who were not nominated did have lower scores than their Caucasian counterparts. However, since these studies did not control for socioeconomic status or any other potential lurking variables, they must be interpreted with caution. It is impossible to conclude that race itself caused the difference in SRBCSS scores when other related variables, such as mastery of English, socioeconomic status, or class participation were not controlled.

Method

Data Sources

A population dataset was obtained from the Georgia Department of Education via special request. This dataset included records from all public school students enrolled during the 2004 year. The relevant variables from this dataset that were used in this analysis included the student's race, whether or not the student received free or reduced-price lunch, whether the student had been nominated for participation in the gifted program, the source of the nomination, and whether or not the student had been identified. The overall *N* for the dataset was 1,820,635. Of these, all students in grades 1 through 5 were selected. This yielded an *N* of 705,074, the population of Georgia elementary school students during the 2004 academic year.

The nomination sources reported in the data were as follows: *automatic* referrals that occur automatically when a student scores in the 90th percentile or higher on a standardized test, *teacher* referrals, *parent* referrals, *self*-referrals, *peer* referrals, and *other* referral sources, which are referrals communicated to the school by anyone other than the student's teacher, parent, self, or peer. Examples of other referrals would include referrals by a community member, minister, or relative without custody of the child.

Georgia follows a multiple-criteria assessment procedure. Once students have been nominated, they are evaluated or screened for gifted program placement. Data must be collected in four areas: mental ability, achievement, motivation, and creativity. Mental ability is generally determined via psychometric assessment, achievement is generally determined by standardized test scores, creativity is generally determined by the Torrance Tests of Creative Thinking—Figural, and motivation is generally determined by grades. However, a variety of other forms of evidence are admissible, including projects or performances that are evaluated by a panel of judges. To be identified as gifted, students must either provide evidence of superior ability in any three of these four domains or must provide evidence of superior ability and achievement. Evidence for superiority in at least one of the four areas must be provided by a standardized test.

Research Questions

This study addresses the following research questions:

1. How do the referral sources compare in terms of overall quality, as indicated by the phi coefficient, as well as by the number of students referred, the proportion of referred students who are successfully identified, and the proportion of identified students located via the referral method?
2. How do the referral sources compare in terms of equity across racial and socioeconomic groups? 3. Does the underrepresentation problem occur primarily at the nomination stage or the testing stage of the gifted identification process?

Prior to conducting the analysis, the data were screened and prepared. The data were originally collected from each school by individual teachers who were responsible for reporting the referral sources. Some teachers apparently misreported students with automatic referrals as not having been referred at all. This resulted in some students being reported as having been identified as gifted without being referred, which should obviously be impossible. After conversing with personnel at the Georgia Department of Education, gifted students coded as not being referred were recoded to automatic referral. Furthermore, there were a small number of students with missing data on whether or not they received free or reduced-price lunch. Those cases were excluded from the relevant analyses.

Results

The overall composition of Georgia elementary schools by race, SES, and gifted status is described in Table 1. From this table, it is quite obvious that students from different racial backgrounds are not equally represented in gifted programs. Furthermore, student SES as indexed by whether or not the student received free or reduced-price lunch (FRL) is strongly related to the proportion of students that participate in gifted programs.

In the initial analysis, referral sources for the overall student population were examined. The results of this analysis are presented in Table 2. Almost 10% of students had been referred, and 80.3% of those students were subsequently identified. Automatic referrals had the highest validity as indicated by the phi coefficient. Automatic referrals were also the most common referral source and had the highest accuracy. Teacher referrals made up the majority of the remaining referral sources, which also had an acceptable phi coefficient, as well as a high accuracy. Parent and other referrals had similar occurrence frequencies, accuracies, and phi coefficients. Self- and peer referrals were very rare, had the lowest phi coefficients, and were the least accurate. It is important to note that, in general, the automatic referral process happens first. As each student can only receive one nomination, this advantages automatic referrals over the other referral sources. Many students receiving automatic referrals would no doubt have received referrals from other sources.

For the next analysis, the data file was split by FRL status before being analyzed. Results are presented in Table 3. The relationship between student SES and gifted program nominations is very clear. Students who did not receive financial assistance were more than three times more likely to be referred than students receiving FRL. The accuracy of referrals was also higher for the students who paid for their own lunches.

Paid lunch students received more than four times as many automatic referrals as FRL students and more than three times as many teacher referrals. The accuracy of all referral sources except peer referrals was higher for the paid lunch students. This is also reflected in the phi coefficients for each source. Interestingly, teacher referrals had nearly identical phi coefficients for both groups. The value of the phi coefficient is dependent upon both the accuracy of the referral source, as well as the proportion of identified students that were referred via that source. Though the accuracy of teacher referrals is somewhat lower for low-SES students, more low-SES students are identified via teacher nominations, resulting in the slightly higher phi coefficients for that group.

Table 1

Identified Elementary School Students by Race and SES

Race	SES[a]	Students	Gifted	Percentage gifted
Overall	Overall	705,074	55,856	7.9
	Low	348,529	10,126	2.9
	High	354,364	45,560	12.9
Asian	Overall	17,587	3,215	18.3
	Low	5,611	530	9.4
	High	1,963	2,684	22.4
Black	Overall	275,821	8,695	3.2
	Low	191,193	4,146	2.2
	High	83,376	4,504	5.4
Hispanic	Overall	59,398	1,389	2.3
	Low	45,057	783	1.7
	High	14,309	606	4.2
Native American	Overall	984	101	10.3
	Low	436	23	5.3
	High	546	78	14.3
White	Overall	333,569	41,005	12.3
	Low	97,527	4,267	4.4
	High	235,183	36,615	15.6

[a]Low-SES refers to students who are receiving either free or reduced-price lunch. High-SES refers to students who are not receiving lunch aid.

Table 2

Overall Comparison of Referral Sources (*N* = 705,074)

Source	Percentage referred	Success rate[a]	Percentage identified[b]	Phi
All sources	9.9	80.3	100.0	
Automatic	5.2	86.3	57.1	.682
Teacher	4.0	74.9	37.7	.505
Parent	0.4	59.2	3.0	.120
Self	0.01	44.2	.03	.010
Peer	< 0.01	46.2	.01	.006
Other	0.3	77.4	2.2	.123

[a]The success rate is the percentage of students referred that successfully passed through the assessment process and were formally identified gifted. [b]The percentage identified is the percentage of identified gifted students that were nominated by the referral source.

Though parent and other referrals were rare in both groups, they were more frequent and more accurate in the high-SES group. Proportionally, high-SES students received more than 4 times as many parent referrals and more than 24 as many other referrals.

For analysis three, the data file was split by student race. The results of this analysis can be found in Table 4. Very pronounced differences in nomination frequency are

Table 3

Comparison of Referral Sources by SES

Source	Percentage referred	Success rate[a]	Percentage identified[b]	Phi
Free or reduced lunch (*n* = 348,529)				
All sources	4.15	70.06	100.00	
Automatic	1.93	79.27	52.66	.638
Teacher	1.95	62.84	42.16	.503
Parent	.13	53.60	2.10	.094
Self	< .01	27.27	.03	.008
Peer	< .01	50.00	< .01	.007
Other	.13	67.39	3.06	.139
Paid lunch (*n* = 354,364)				
All sources	15.49	83.00	100.00	
Automatic	8.49	87.82	54.81	.682
Teacher	6.01	78.68	38.80	.497
Parent	.66	61.76	3.17	.119
Self	< .01	50.00	.04	.011
Peer	< .01	45.45	.01	.005
Other	3.21	81.46	2.03	.116

[a]The success rate is the percentage of students referred that successfully passed through the assessment process and were formally identified gifted.
[b]The percentage identified is the percentage of identified gifted students that were nominated by the referral source.

evident across races, with almost 25% of Asian students receiving a nomination while only about 3% of Hispanic students received a nomination. Furthermore, automatic referrals remain the nomination method with the highest phi coefficients and the highest accuracies, except for Native American students, where teacher nominations are the most accurate. Again, this is probably due to automatic referrals coming first in the referral timeline.

Teacher nominations showed evidence of better performance for Asian, White, and Native American students than for Hispanic and Black students. Furthermore, the quality of teacher nominations for Black students was especially poor in terms of the phi coefficient and accuracy. Self- and peer referrals continue to be rare and of poor quality. There were no peer referrals for Asian, Hispanic, and Native American students, so phi could not be calculated for these groups. The proportionality of parent nominations varied across racial groups, as well. Asian, Native American, and White students had much higher rates of parent nomination than Black and Hispanic students.

In the final analysis, the data file was split by race and SES. The results of this analysis may be found in Table 5. A few patterns deserve mentioning. Automatic referrals performed well in all groups. In general, automatic referrals performed better in high-SES students than low-SES students in terms of both phi and accuracy except

Table 4

Comparison of Referral Sources by Race

Race Source	Percentage referred[a]	Success rate	Percentage identified[b]	Phi
Asian (*n* = 17,587)				
All sources	23.02	79.42	100.00	
Automatic	12.00	82.51	45.75	.614
Teacher	9.69	77.65	41.16	.503
Parent	.88	55.19	2.64	.090
Self	.01	0.00	0.00	-.004
Peer	0.00	NA	0.00	NA
Other	.44	84.62	2.05	.115
Black (*n* = 275,821)				
All sources	4.58	68.88	100.00	
Automatic	2.30	82.25	60.05	.695
Teacher	1.96	56.47	35.10	.431
Parent	.17	40.66	2.25	.090
Self	< .01	66.67	< .01	.021
Peer	< .01	25.00	< .01	.005
Other	.14	58.24	2.52	.116
Hispanic (*n* = 59,398)				
All sources	3.34	70.08	100.00	
Automatic	1.81	76.14	59.04	.664
Teacher	1.36	63.99	37.22	.479
Parent	.08	50.00	1.73	.090
Self	< .01	0.00	0.00	-.001
Peer	0.00	NA	0.00	NA
Other	.08	58.33	2.02	.105
Native American (*n* = 984)				
All sources	12.30	83.47	100.00	
Automatic	6.00	83.05	48.51	.606
Teacher	4.78	87.23	40.59	.568
Parent	.71	71.43	4.95	.171
Self	.10	100.00	.01	.094
Peer	0.00	NA	0.00	NA
Other	.71	71.43	4.95	.171
White (*n* = 333,569)				
All sources	14.65	83.90	100.00	
Automatic	7.89	88.06	56.53	.675
Teacher	5.83	80.32	38.10	.516
Parent	.61	64.47	3.19	.124
Self	.01	40.00	< .01	.008
Peer	< .01	55.56	< .01	.007
Other	.31	84.91	2.14	.123

[a]The success rate is the percentage of students referred that successfully passed through the assessment process and were formally identified gifted.
[b]The percentage identified is the percentage of identified gifted students that were nominated by the referral source.

Table 5

Comparison of Referral Sources by Race and SES

Group Source	Percentage referred	Success rate[a]	Percentage identified[b]	Phi [c]	Group Source	Percentage referred	Success rate[a]	Percentage identified[b]	Phi [c]
Asian (low-SES, *n* = 5,611)					Hispanic (high-SES, *n* = 14,309)				
All sources	12.53	75.39	100.00		All sources	5.63	75.28	100.00	
Automatic	6.65	77.75	54.72	.623	Automatic	3.38	80.58	64.36	.709
Teacher	5.01	74.38	39.48	.510	Teacher	1.95	67.74	31.19	.445
Parent	.43	50.00	2.26	.091	Parent	.20	58.62	2.81	.122
Self	0.00	NA	0.00	NA	Self	0.00	NA	0.00	NA
Peer	0.00	NA	0.00	NA	Peer	0.00	NA	0.00	NA
Other	.44	76.00	3.58	.152	Other	.09	76.92	1.65	.109
Asian (high-SES, *n* = 11,963)					Native American (low-SES, *n* = 436)				
All sources	27.95	80.26	100.00		All sources	6.19	85.19	100.00	
Automatic	14.51	83.53	54.02	.603	Automatic	2.06	88.89	34.78	.543
Teacher	11.90	78.23	41.51	.445	Teacher	3.67	81.25	56.52	.663
Parent	1.09	56.15	2.72	.085	Parent	0.00	NA	0.00	NA
Self	< .01	0.00	0.00	-.005	Self	0.00	NA	0.00	NA
Peer	0.00	NA	0.00	NA	Peer	0.00	NA	0.00	NA
Other	.44	88.68	1.75	.106	Other	.46	100.00	8.70	.165
Black (low-SES, *n* = 191,193)					Native American (high-SES, *n* = 546)				
All sources	3.44	63.03	100.00		All sources	17.22	82.98	100.00	
Automatic	1.54	78.97	56.08	.659	Automatic	9.16	82.00	52.56	.614
Teacher	1.69	50.62	38.48	.436	Teacher	5.68	90.32	35.90	.533
Parent	.10	35.71	1.57	.071	Parent	1.28	71.43	6.41	.186
Self	< .01	60.00	.07	.020	Self	.18	100.00	1.28	.105
Peer	< .01	50.00	.02	.011	Peer	0.00	NA	0.00	NA
Other	.11	54.50	2.77	.119	Other	.92	78.38	3.85	.126
Black (high-SES, *n* = 83,376)					White (low-SES, *n* = 97,527)				
All sources	7.19	75.17	100.00		All sources	5.55	78.89	100.00	
Automatic	4.02	85.12	63.39	.722	Automatic	2.57	82.04	48.28	.617
Teacher	2.60	65.11	31.33	.431	Teacher	2.57	77.20	45.39	.579
Parent	.36	43.67	2.91	.102	Parent	.22	58.33	2.95	.124
Self	.07	75.00	.07	.021	Self	< .01	0.00	0.00	-.001
Peer	< .01	0.00	0.00	-.001	Peer	0.00	NA	0.00	NA
Other	.20	63.03	2.31	.114	Other	.17	85.21	3.37	.165
Hispanic (low-SES, *n* = 45,057)					White (high-SES, *n* = 235,183)				
All sources	2.61	66.53	100.00		All sources	18.42	84.50	100.00	
Automatic	1.32	72.51	54.92	.625	Automatic	10.08	88.69	57.42	.675
Teacher	1.17	62.00	41.89	.503	Teacher	7.19	80.76	37.30	.501
Parent	.04	36.84	.89	.055	Parent	.77	65.16	3.22	.120
Self	< .01	0.00	0.00	-.001	Self	.01	46.15	.03	.009
Peer	0.00	NA	0.00	NA	Peer	< .01	55.56	.01	.007
Other	.07	51.43	2.30	.106	Other	.37	84.86	2.00	.116

[a]The success rate is the percentage of students referred that successfully passed through the assessment process and were formally identified gifted.
[b]The percentage identified is the percentage of identified gifted students that were nominated by the referral source.
[c]Phi values may be negative when no students from the referral source successfully passed the assessment process.

for Asian and Native American students, where automatic referrals had higher phi coefficients in low-SES students.

Phi coefficients for teacher nominations were higher in low-SES students than in high-SES students. However, the accuracy of teacher nominations was higher for high-SES students. The larger phi coefficient values in low-SES students result from the fact that a larger proportion of low-SES students were identified via teacher nominations. Though parent nominations were rare, they were much more frequent in high-SES groups.

Discussion

In consideration of the results presented in this paper, a few substantive and methodological conclusions can be made. The first is that automatic referrals and teacher referrals are far superior to the other referral sources. The other referral sources are used far less often and are generally much less accurate. The peer- and self-referral options are so infrequently used that they have almost no impact on gifted program enrollments.

Do these results provide evidence that the referral process is biased against economically disadvantaged, Black, and Hispanic students? This is a complex issue. On the basis of numbers alone, it is obvious that students from these traditionally underrepresented backgrounds are also undernominated. The probability of nomination strongly varies across race and class background. Furthermore, the accuracy of nomination sources also varies across backgrounds. In general, nominations for low-SES students are less accurate than nominations for high-SES students. Furthermore, nominations are less accurate for Black and Hispanic students than for Asian, Native American, and White students.

There are at least two plausible explanations for this pattern, depending on one's beliefs regarding the distribution of ability across race and class lines. If one adopts the position that ability is evenly distributed across these lines, then these results can only indicate severe bias in the nomination and testing procedure. Many readers will undoubtedly adopt this explanation for the results presented in this paper. The low rate of automatic referrals could indicate bias in standardized tests; the low rate of teacher nominations could indicate racism, classism, or cultural ignorance on the part of teachers; and the low rate of parent nominations could indicate that these students' parents are alienated from and distrustful of school culture.

Interpreting these results in this light would lead to the conclusion that the nomination process, rather than the screening process, is the primary cause of differential representation in gifted programs. Although it is certainly true that nominated students from "advantaged" groups have a higher probability of successfully passing the screening process than "disadvantaged" students, the effect of these differing pass rates is far smaller than the effect of the differing nomination rates on the resulting gifted program enrollment. For example, 4.58% of Black students had received a nomination with 68.9% of these successfully passing the screening process, whereas 14.65% of White students received a nomination while 83.9% of these successfully passing the screening. The pass rate for Black students is 82% that of the pass rate for White students, whereas the nomination rate for Black students is only 31% the nomination rate for White students. Equalizing the pass rates for Black and White students would do little to restore proportional representation of these students in gifted programs if the nomination rate remained unchanged.

Alternatively, if one believes that ability is not evenly distributed, then one can interpret these results in a different light. The low rate of automatic referrals for certain groups reflects lesser ability. When students from these groups are nominated, they are able to pass through the screening less frequently. Teachers nominate fewer students from these groups because there are simply fewer students from these groups that evidence advanced potential. Furthermore, the low accuracy of teacher nomination for these students could reflect effort on the part of teachers to address the long-standing inequality of gifted program enrollments by nominating students that show even questionable potential to pass the screening process.

The true nature of ability distribution is currently unknown and is, perhaps, unknowable. To answer this question definitely would require that most or all of the stakeholders agree upon the nature, dimensionality, and meaning of ability, as well as the creation of instruments that would be accepted by all as trustworthy, valid, and unbiased. This does not appear likely in the near term. Therefore, the correct interpretation of these results is currently unknowable. Though the previous discussion presented two possibilities to explain the observed results, it is also quite possible that both are true. Ability may not be precisely evenly distributed across backgrounds, but our currently methods for identifying gifted students may also be overlooking students hailing from traditionally underrepresented backgrounds.

From a policy perspective, the results of this study indicate that more attention needs to be devoted to the issue of student nominations for gifted programs. Georgia is among the four states described by the Davidson Institute as having very strong policies and funding for gifted edu-

cation (Davidson Institute, 2006). Of these four states, Georgia has the highest amount of gifted education funding per identified student (although funding levels were not provided for Iowa and Florida). Georgia's multiple criteria assessment procedure was designed in part to help address the underrepresentation problem. The multitude of considered referral sources speak to the state's commitment to casting a wide net in search of talented students. In spite of this commitment, Georgia continues to struggle with the underrepresentation of minority and low-SES students in its gifted programs. It is unclear how Georgia's already flexible nomination policies could be improved without massively increasing costs. One obvious issue is that the self- and peer referrals are so infrequently used. Students should be reminded that they may nominate themselves or other students for gifted program assessment. Mandatory assessment of all students for gifted program placement would be optimal but very expensive to implement.

From a methodological point of view, this study has important limitations. The most pressing problem is that automatic referrals happen earlier than other referrals. This advantages automatic referrals and inflates the quality indices associated with that referral source. Therefore, the quality of referral sources cannot be directly compared. Indeed, the only real way to compare referral sources would be to allow an individual student to receive multiple nominations, so that a student could be nominated automatically, as well as by her teacher and peer. Recording only one referral course per student creates a "winner take all" system that obscures the true value of each referral technique.

Because teacher nominations have received the brunt of the attention in the literature, they deserve further commentary. Though the quality of teacher nominations did fluctuate across different student backgrounds, the overall quality was quite high. The average phi coefficient of .505 is almost twice as high as the phi value computed by Gagné's (1994) reanalysis of Pegnato and Birch's (1959) classic study.

Gagné's (1994) argument for the use of the phi coefficient was sound, but phi should not completely supplant the other quality indices, especially the accuracy index (referred to as efficiency in Pegnato & Birch, 1959). Although "other" referral sources are comparatively rare and thus receive a low phi coefficient, they exhibit good accuracy.

The biggest strength of this study was the extremely large *N*. Because all of these students came from the same state and fell under uniform policies mandated by the state regarding gifted education, fluctuation due to policy shifts was minimized. However, the applicability of these results to other states with differing gifted education policy is unknown.

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