

Student Derogation of the Scholastic Aptitude Test: Biases in Perceptions and Presentations of College Board Scores

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A consistent finding in laboratory research is that individuals are quite adept at dismissing and disavowing unfavorable feedback. Three studies extend this research to a nonlaboratory setting by examining how students who receive relatively low scores on the Scholastic Aptitude Test (SAT) respond to this "failure" feedback. Studies 1 and 2 revealed biases in both perceptions and presentations of test scores. Students with lower SAT scores regarded their score as invalid and also believed that a higher score would be more accurate. This was true even though actual SAT scores significantly predicted current college grade-point average (GPA), whereas the scores subjects estimated would be accurate did not. In addition, when reporting their SAT scores, students systematically inflated them, reporting scores higher than those they actually received. Study 3 suggests that the misreporting of SAT scores is attributable partly, but not entirely, to impression management.

Over the last several decades, hundreds of studies have examined how individuals respond to unfavorable feedback and how they dismiss the self-implications of such feedback. Most research on responses to unfavorable feedback has been conducted in the psychology laboratory. In the typical study, individuals receive negative feedback on some ego-relevant task, such as an intelligence test, and are then given an opportunity to explain their poor performance. The reliance on the psychology laboratory is not surprising; it offers greater experimental control, permitting greater confidence in inferences regarding cause and effect. Moreover, providing unfavorable feedback, such as a poor test performance, outside the

laboratory (and, hence, without informed consent, the opportunity for subjects to withdraw, and a detailed debriefing) raises serious ethical concerns. Nevertheless, outside the laboratory a test exists that is highly ego-relevant, that is taken by roughly 1 million people each year (Grandy, 1989), and for which many people regard their performance as poor—the Scholastic Aptitude Test (SAT). This article investigates responses to unfavorable feedback outside the psychology laboratory by examining how people perceive and present their SAT scores.

PERCEPTIONS OF THE SAT

Although designed to predict college academic performance (Morgan, 1989), the SAT has acquired the mystique of being an accurate, reliable indicator of an individual's competence, ability, and intellectual potential. Many students, parents, and faculty regard the SAT score as an immutable measure of a student's intelligence. This overinterpretation of the test has created an immense concern with College Board scores and has generated a thriving business for entrepreneurs promising they can raise students' scores. There also are numerous reports of schools "teaching to the test" and of school districts and state education departments inflating reports of their students' performances (Morganthau, 1990). Many college-bound students take the test repeatedly in hopes of raising their scores. For students with high scores, the test becomes an affirmation of their intellectual excellence; for students with low scores, the test becomes a declaration of academic inferiority. Indeed, the SAT seems to be regarded as an indicator of the upper limits of academic ability—a statement of intellectual worth.

But what of students who do not achieve high SAT scores? Do they conclude that they are intellectually deficient? Do they abandon their aspirations of obtaining good grades in the classroom or of entering medical, law, or graduate school? The answer seems to be no. Many students with modest SAT scores maintain high scholastic ambitions. In light of the pervasive perception of the predictive breadth of the SAT, how do students with modest SAT scores continue to hold high intellectual aspirations?

Perhaps students who perform poorly on the test perceive their scores as inaccurate and as unrepresentative of their intellectual acumen. Evidence from laboratory research reveals that individuals tend to characterize unfavorable feedback in ways that are not identity threatening. For example, there is substantial laboratory research demonstrating a pervasive tendency for individuals (particularly those high in self-esteem) to attribute their poor performances externally (i.e., the self-serving bias; Bradley,

1978) as well as to unstable and uncontrollable causes (Weiner, 1985). Other research has shown that individuals make excuse-like attributions for unfavorable outcomes, claiming high consensus, low consistency, and high distinctiveness (Shepperd, Arkin, & Slaughter, 1993; Snyder & Higgins, 1988; Snyder, Higgins, & Stucky, 1983; Whitehead & Smith, 1990). Still other research has shown that individuals disparage the validity of the source of unfavorable feedback (Shepperd et al., 1993) or define the task itself as unimportant to their self-definition (Tesser, 1988; Tesser & Campbell, 1983). The present research investigated whether similar processes occur when students contemplate their SAT scores. Studies 1 and 2 examined factors influencing the perception of SAT scores, whereas Studies 2 and 3 examined biases in the presentation of SAT scores.

STUDY 1: A PILOT STUDY

A pilot study examined perceptions of the SAT. In line with laboratory research examining response to negative feedback, it was predicted that students with low SAT scores would be more likely than students with high SAT scores to perceive their score as inaccurate. It also was predicted that, when asked to estimate a more accurate score, persons receiving low scores would "boost" their score more than would persons receiving high scores. Specifically, among subjects reporting their score as inaccurate, the difference between the reported score and estimated score would be greater for low scorers than for high scorers.

Method

Subjects were 164 introductory psychology students at a small liberal arts college who completed a three-item anonymous questionnaire as part of a class project. Data from 9 subjects were omitted from analyses because they could not remember their SAT score or because they did not supply a response. The first item asked subjects to supply their total (Verbal plus Math) SAT score, the second item asked subjects to indicate (yes or no) whether they believed that their SAT score accurately reflected their aptitude or ability, and the third item, directed only at those students who answered "no" to the second question, asked subjects to estimate the SAT score they believed would accurately reflect their aptitude or ability.

Results and Discussion

Were students with lower SAT scores more likely to perceive their score as inaccurate? The results suggest they were. Subjects ($n = 89$) who believed

their SAT score was inaccurate reported having a lower score ($M = 1169.1$) than did subjects ($n = 66$) who believed their SAT score was accurate ($M = 1254.8$), $t(153) = 5.21, p < .0001$.

Admittedly, examining accuracy reports is potentially misleading; the reports do not reveal whether subjects viewed their scores as inaccurately low or inaccurately high. Consequently, subjects were divided into four groups: (a) those reporting that their SAT score was accurate, (b) those reporting that their SAT score was inaccurate and estimating that a higher score would be more accurate, (c) those reporting that their SAT score was inaccurate and estimating that a lower score would be more accurate, and (d) those reporting that their SAT score was inaccurate yet refusing to estimate a score that would be more accurate. A one-way, unequal- n analysis of variance (ANOVA) comparing the self-reported SAT scores of these four groups revealed a significant difference between groups, $F(3, 151) = 17.67, p < .0001$. As evident in Table 1, subjects who estimated that a lower SAT score would be more accurate reported a score that was markedly higher on average than that of subjects who reported that their SAT score was accurate. Subjects who believed that their SAT score was accurate in turn reported a score that was markedly higher on average than that of subjects who either estimated a higher score to be more accurate or refused to estimate a score that would be more accurate.

Importantly, an alternative way to address the question of whether low scorers were more likely to perceive their score as inaccurate is to examine the proportion of high and low scorers who reported their score was too low. Subjects thus were divided into high and low scorers based on a median split of reported SAT scores. Consistent with predictions, more low scores

TABLE 1
Reported SAT Scores From Studies 1, 2, and 3 as a Function of Perceptions of Score Accuracy

Subject Perception	Study 1			Study 2			Study 3		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Reported that their score was too high	6	1356.7 _a	(70.3)	0	0
Reported that their score was accurate	66	1254.8 _b	(91.5)	52	1243.9 _a	(78.3)	58	1055.0 _a	(100.1)
Reported that their score was too low	74	1154.1 _c	(99.6)	39	1104.9 _c	(103.6)	27	941.1 _b	(113.5)
Reported that their score was inaccurate yet refused to say how	9	1167.8 _c	(136.7)	10	1243.9 _b	(111.7)	7	1042.9 _a	(157.6)

Note. Means within columns with different subscripts differ at $p < .05$.

(73%) than high scores (30%) estimated that a higher score would be more accurate, $\chi^2(1, N = 140) = 25.5, p < .0001$.

A second prediction of the pilot study was directed at the 80 subjects who believed their SAT score was inaccurate (including those subjects who regarded their score as too high) and who supplied an estimate of the score they believed would be more accurate. Among these subjects, it was predicted that the lower a subject's SAT score, the greater increase he or she would believe was necessary before the score was accurate. This prediction was supported by a significant negative correlation between reported SAT score and the amount of change subjects estimated was necessary before their score was accurate, $r = -.67, p < .0001$. Of interest, the mean estimated SAT score of the 80 subjects who regarded their score as inaccurate was 1273.4, 104.2 points higher than their mean reported SAT score, $t(78) = 8.08, p < .0001$. Apparently, these subjects not only viewed their SAT score as inaccurate, but also perceived that it was off by over 100 points.

Of course, given the 1600 ceiling on SAT scores, the significant negative correlation between reporting SAT score and estimated accurate score may be attributable to students with lower SAT scores having more room to boost their scores. To examine this possibility, the proportional change in SAT scores was calculated by dividing the magnitude of change estimated (estimated accurate SAT score minus reported SAT score) by the magnitude of change possible (1600 minus the estimated SAT score). The correlation between this quotient and subjects' reported SAT score was significant, $r(80) = -.50, p < .0001$, indicating that low scorers boosted their SAT scores proportionately more than did high scorers.

In summary, the pilot study was designed to examine the extent to which subjects perceived their SAT scores as accurate. Consistent with predictions, students with low SAT scores were more likely than students with high SAT scores to perceive their scores as inaccurate. In addition, when asked to estimate a more accurate SAT score, subjects with lower SAT scores boosted their scores more than subjects with higher SAT scores.

STUDY 2

Why did students who received a low SAT score perceive the test as inaccurate? Self-enhancement theory would argue that these students were motivated to derogate the SAT because a low score on a highly ego-relevant test is esteem threatening. Accordingly, these students perceived the test as invalid to deflect the personal implications of a poor performance. It is also possible, however, that the perception that the score is inaccurate results from an objective appraisal of relevant academic information and does not

reflect a motivated bias. Specifically, students receiving a low score may have found their score inconsistent with their expectations or with past experience. These students may have expected to receive a high SAT score because they normally perform well in academic settings. When the score was lower than expected, they assumed that the score, rather than their expectation or past experience, was in error. Alternatively, students receiving a low score may have initially perceived their score as accurate. However, they later derogated the SAT because their score was inconsistent with their college grade-point average (GPA). That is, because the SAT was designed to predict college GPA, students with low scores may have judged their score as erroneous because they are performing better in their college classes than their SAT score would predict.

Admittedly, it is exceedingly difficult to provide a crucial test of cognitive versus motivational explanations for self-serving cognitions and behaviors. Short of assessing students' expectations prior to taking the SAT, it would be difficult to determine whether students with low SAT scores derogate the test to protect self-esteem or because the score is inconsistent with their expectations. In addition, without knowing students' perceptions of the SAT immediately after receiving their score, it is difficult to know when (immediately vs. after acquiring a college GPA) students receiving low scores come to perceive their score as erroneous. Nevertheless, by correlating students' SAT score with their current GPA, it is possible to test whether students derogate the SAT, at least in part, because their score is inconsistent with their college GPA. Presumably, if the perception of inaccuracy results from the score being inconsistent with college GPA, then for students who derogate their SAT score, college GPA should correlate more highly with the estimated SAT score than with the actual SAT score.

Study 2 also examined whether individuals receiving low scores perceive the SAT in general to be invalid or whether they merely regard their own score as invalid. Students with low SAT scores may believe in the veracity of the test as a measure of intellectual aptitude yet perceive that their own test score does not accurately portray these qualities in themselves. To examine this possibility, subjects in Study 2 made judgments about hypothetical students with high and low SAT scores. If subjects believe that the SAT in general is invalid, then their judgments regarding hypothetical students should be unaffected by the SAT scores of these students. Conversely, if subjects believe that the test is valid, then they should judge hypothetical high scorers more favorably than hypothetical low scorers.

A third purpose of Study 2 was to examine how people present their SAT scores. Given the importance placed on having a high score, students may be motivated to misreport, claiming a score higher than the one they actually received. By so doing, they can enjoy the praise and admiration

often bestowed on those reporting high SAT scores with little risk, for few people outside of college selection committees seek official verification of self-reported scores. Moreover, there is preliminary evidence that students do exaggerate their SAT scores. Specifically, Pryor, Gibbons, Wicklund, Fazio, and Hood (1977) found misreporting in a sample of male college students, with students scoring below the median exaggerating more than students scoring above the median. In light of this preliminary evidence, it was predicted that students in the present study would misreport their SAT scores, reporting a higher score than they actually received. It also was predicted that students who received a low score would exaggerate their score more than would students receiving a high SAT score.

Method

Subjects. Subjects were 101 undergraduate students enrolled in psychology courses at a small liberal arts college in New England and participating in the study as part of a classroom project.

Procedure. Subjects completed a two-part questionnaire. In the first part, subjects imagined that they were part of an admissions committee at a small, selective liberal arts college. Subjects were presented with a brief description of several hypothetical applicants and rated the likelihood that they would recommend admission of each applicant along a 7-point scale ranging from *very unlikely* (1) to *very likely* (7). Applicants were presented as having an SAT score of 700, 900, 1100, 1300, or 1500. Fully crossed with the manipulation of SAT score was a manipulation of applicants' class rank. Half the applicants were described as being in the top 10% of their graduating class and half the applicants were described as being in the top 40% (but not the top 30%) of their graduating class. Thus, each subject evaluated 10 different applicants presented in random order. To control for sex-of-target effects, half the subjects evaluated only male applicants and half the subjects evaluated only female applicants.

In the second part of the questionnaire, subjects responded to three items designed to assess judgments of the validity of the SAT in general. Specifically, subjects indicated whether they believed that the SAT in general (a) is a valid predictor of academic success, (b) is a good measure of aptitude or ability, and (c) provides a valid measure of intelligence. All responses were made on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Responses to these three items were added to provide a single measure. Next, subjects responded to the three items from Study 1 assessing their perceptions of their own SAT score. Finally, permission was solicited to examine subjects' academic transcripts.

Results and Discussion

Study 2 examined three questions: (a) Do students misreport their SAT scores, reporting scores higher than those they actually received? (b) Is the perception that one's own SAT score is invalid attributable to the score being inconsistent with college GPA? (c) Do students with low scores regard the SAT in general as invalid or merely their own score as erroneous? Before addressing these questions, let us examine whether Study 2 replicates the findings of Study 1.

Self-reported SAT scores. Preliminary analyses revealed that the findings from Study 1 were replicated. Similar to Study 1, subjects ($n = 49$) who believed their SAT score to be inaccurate reported having a lower score ($M = 1119.8$) than did subjects ($n = 52$) who believed their SAT score to be accurate ($M = 1243.9$), $t(99) = 6.54$, $p < .0001$.

As in Study 1, subjects were divided into groups: (a) those reporting their SAT score was accurate, (b) those reporting that a higher SAT score would be more accurate, and (c) those reporting that their SAT score was inaccurate yet refusing to estimate a score that would be more accurate. Unlike Study 1, no subject reported that a lower SAT score would be more accurate. A one-way unequal- n ANOVA comparing the self-reported SAT scores of these three groups revealed a significant difference between groups, $F(2, 98) = 25.60$, $p < .0001$. As is evident in Table 1, subjects who regarded their SAT score as accurate reported a score that was markedly higher on average than that of subjects who either estimated that a higher score would be more accurate or refused to estimate a score that would be more accurate.

Finally, examination of the 39 subjects who believed their SAT score was inaccurate revealed that subjects with low scores boosted their score more than subjects with high scores, $r(39) = -.31$, $p < .06$. Consistent with Study 1, the mean estimated SAT score of the 39 subjects in Study 2 who regarded their score as inaccurate was 1279.5, 175.4 points higher than their mean reported SAT score, $t(38) = 14.50$, $p < .0001$. Once again, these subjects not only viewed their SAT score as inaccurate, they viewed it as substantially inaccurate.

In sum, these findings replicate Study 1. Students with low SAT scores were more likely than students with high SAT scores to perceive their score as inaccurate. In addition, when asked to estimate a more accurate SAT score, students with lower SAT scores boosted their score more than did students with higher SAT scores.

Veracity of self-reports. Do students report their SAT scores accurately? To examine this question, permission was solicited from subjects to

examine their academic files. Eighty-three of 101 subjects granted permission. Because students took the SAT an average of 2 times each (range = 1 to 4), two sets of analyses were conducted: one examining the highest combined (Verbal plus Math) test score subjects received within a single administration of the test, and another examining the average of the combined test scores received across test administrations.

Examining the highest combined SAT score revealed that subjects did misreport their score, with 51% reporting a score higher than the highest score found in their academic file, 36% reporting a score equal to the highest score found in the files, and 13% reporting a score lower than the highest score found in the files. A comparison of the SAT score subjects reported receiving ($M = 1193.6$) and the highest SAT score recorded in subjects' academic files ($M = 1175.8$) revealed that the two were significantly different, $t(82) = 3.81, p < .0003$. When the analyses were repeated on the average combined test score received across test administrations ($M = 1145.3$), the discrepancy was more pronounced: 87% of the sample reported an SAT score higher than the average combined score reported in the academic files. A dependent t test of the 48.3-point difference between self-reported and average recorded test score was highly significant, $t(82) = 9.55, p < .0001$.¹

A final analysis examined whether low scorers were more likely than high scorers to misreport their score. As expected, subjects who misreported their score (i.e., reported a score different from the highest combined test score received within a test period) scored lower on the SAT ($M = 1137.7$) than did subjects who accurately reported their score ($M = 1243.0$), $t(81) = 4.41, p < .0001$.

The significant difference between the self-reported SAT score and the average and highest SAT scores recorded in subjects' academic files suggests that subjects were not merely misremembering their test score. Instead, they were systematically inflating their score, reporting a score higher than the average combined SAT scores received and higher than the highest SAT score actually achieved. Moreover, as expected, low scorers were more likely than high scorers to inflate their SAT scores.

SAT scores and college GPA. The next analysis examined whether the perception that one's SAT score is invalid is attributable to the score being inconsistent with college GPA. That is, students who derogate the SAT may

¹Some institutions, to appear more selective, compute and report SAT scores based on the sum of the highest math and highest verbal score achieved across administrations. A comparison of scores derived using this method with the SAT score subjects reported receiving revealed that the majority of subjects in this sample did not use this method themselves. Consequently, this method is not discussed further.

do so because their college GPA is higher than would be predicted by their SAT score. To examine this possibility, the current GPA of subjects who regarded their SAT score as inaccurate was correlated with (a) the self-reported SAT score, (b) the SAT score that subjects estimated was more accurate, (c) the highest SAT score received within a given test period, and (d) the average of all SAT scores received across test administrations. The results suggest that subjects were not derogating their SAT score because it was inconsistent with their college GPA. As evident in Table 2, the test score that predicted least well was the score that subjects estimated would be most accurate; the test score that predicted best was the average of all SAT scores reported by the Educational Testing Service. Importantly, owing to the small sample size (complete data were available for only 31 subjects), only (a) the correlation between the average recorded SAT score and GPA and (b) the correlation between the estimated SAT score and GPA differed from one another, $t(28) = 2.04, p < .06$. Finally, it is noteworthy in the lower half of Table 2 that the standard deviations corresponding to the various methods for reporting SAT scores are comparable. This suggests that the lower correlation associated with the estimated SAT score is not attributable to a restriction in the range of scores.

Two final analyses examined the accuracy with which estimated SAT scores and average SAT scores predicted college GPA. In the first analysis, college GPA was regressed on the average SAT score to obtain parameter estimates (i.e., a slope and intercept). Predicted GPA was then calculated twice for each subject: once using the average SAT scores and once using the estimated SAT score. A dependent t test revealed that the predicted GPA was consistently and significantly higher (on average, .36 points higher) when the estimated SAT score rather than the average SAT score was used as the predictor, $t(30) = 12.32, p < .0001$. In the second analysis, the discrepancy between predicted GPA and actual GPA was calculated twice: once when the estimated SAT score was used to predict GPA and once when the average SAT score was used to predict GPA. As expected, a

TABLE 2
Correlations Between College GPA and SAT Scores (With Means and Standard Deviation for Each Score Type)

	<i>Average Score Reported by ETS</i>	<i>Highest Score Reported by ETS</i>	<i>Self-Reported SAT Score</i>	<i>Estimated SAT Score</i>
GPA	.40**	.34*	.29	.20
<i>M</i>	1052.2	1077.4	1099.4	1273.2
<i>SD</i>	134.0	135.9	105.6	107.4

Note. ETS = Educational Testing Service.

*Significant at $p < .07$. **Significant at $p < .05$.

dependent t test revealed that the discrepancy between predicted GPA and actual GPA was greater when the estimated SAT score was the predictor, $t(30) = 1.83$, $p < .05$, one-tailed. Taken together these analyses revealed that the average SAT score was a more accurate predictor of college GPA than was the estimated SAT score.²

Perceptions of SAT validity. Finally, do individuals who derogate the SAT regard the test in general to be invalid or merely their own score to be invalid? To address this question, responses to the three items asking subjects whether they regarded the SAT in general to be valid were added. The summed responses ranged from 3 to 20 ($M = 10.0$, $SD = 4.0$) with higher values indicating a stronger belief in the validity of the SAT. A Pearson correlation revealed that subjects who regarded their own score as inaccurate (coded as 0; accurate was coded as 1) were more likely to perceive the test in general to be invalid, $r(101) = .45$.

An alternative, more subtle way to investigate whether subjects regard the test in general as valid is to examine whether subjects will use the test in making decisions about others. To this end, subjects were asked to make admission decisions about hypothetical college applicants. For ease of presentation, a median split of the SAT validity measure was used to separate subjects who were more versus less likely to regard the SAT in general to be valid.

The means presented in Figure 1 indicate that, regardless of whether they believed the SAT in general to be valid, all subjects used the SAT scores of hypothetical applicants in making admission decisions. A 2 (Rating of SAT Validity) \times 2 (Applicant's High-School Rank) \times 5 (Applicant's SAT Score) ANOVA supported this conclusion in that hypothetical applicants were more likely to be recommended for admission the higher their SAT score, $F(4, 396) = 368.30$, $p < .0001$. The main effect of applicant's SAT score was qualified by a relatively modest interaction of SAT score and perceptions of accuracy, $F(4, 396) = 3.21$, $p < .05$. Subsequent analyses revealed that the interaction was attributable solely to a greater likelihood of accepting a student with a score of 900 or below by subjects who viewed the SAT as invalid. In short, subjects who believed the SAT to be invalid used the SAT less than did subjects who believed it to be valid. This difference notwithstanding, the fact that the mean ratings for these applicants fell below the 4.0 midpoint indicates that all subjects were generally opposed to accepting a student with an SAT score of 900 or lower.

Of note, analysis also revealed a significant effect of high-school rank on admission decisions, $F(1, 99) = 495.50$, $p < .0001$; higher ranked applicants ($M = 5.44$) were more likely to be recommended for admission

²I am indebted to an anonymous reviewer for suggesting these analyses.

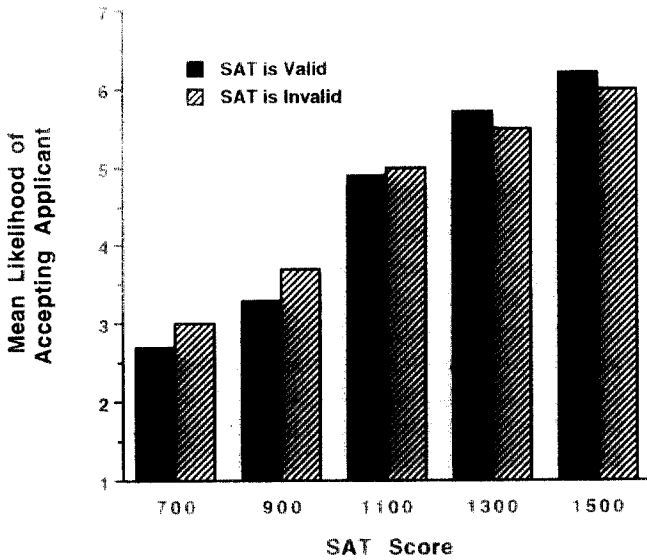


FIGURE 1 Ratings of hypothetical college applicants as a function of applicant's SAT score and rater's perception of SAT validity.

than were lower ranked applicants ($M = 3.86$). This latter finding indicates that subjects were willing to use other criteria besides SAT score in making decisions about others.

Summary. In addition to replicating Study 1, the results from Study 2 confirm the hypotheses regarding perceptions and presentations of SAT scores. First, the perception that one's own SAT score is invalid does not appear to be attributable to the score being inconsistent with college GPA. Subjects' average and highest recorded SAT scores correlated significantly with current GPA, whereas subjects' estimated SAT score did not. In addition, the estimated SAT score was less accurate than the average SAT score in predicting college GPA. Second, the results of the admissions part of the questionnaire suggest that subjects will use scores from the SAT in making decisions that affect others even though they may regard the test itself to be invalid. Third, the difference between self-reported and actual SAT scores suggests that students (low scorers in particular) do not merely misremember their test score but instead systematically inflate their score, reporting a score higher than the one they actually received.

STUDY 3

Why do individuals inflate their reported SAT scores? It was hypothesized initially that individuals inflate their scores to receive the praise and

admiration often bestowed on those reporting high scores. It was also noted that there is little risk in misreporting, for few challenge self-reported SAT scores. According to this explanation, individuals privately know their actual SAT score yet inflate their public reports to manipulate the perceptions of others. As such, misreporting might be thought of as an impression management strategy (Schlenker, 1980).

There are, however, alternative explanations for misreported SAT scores. First, either because of the passage of time or because they took the test multiple times and became confused, subjects may have forgotten their scores. Accordingly, the scores reported may reflect a best guess or estimate. Although this may be true for some subjects, the finding that most misreports were overestimates suggests that something more than guessing was going on.

Second, it is possible that the misreporting reflects nothing more than rounding the score to an "even" number, much as many people do when reporting their height (e.g., 5 ft 7 in. vs. 5 ft 6½ in.). Yet the scores themselves are reported by the Educational Testing Service in multiples of 10, making rounding unnecessary. Of course, subjects may have rounded to a multiple of 50 or even 100. The data, however, suggest otherwise. Less than one sixth of those subjects misreporting their scores rounded up to the nearest multiple of 50 and far fewer rounded up to the nearest multiple of 100. Thus, misreporting is not attributable to rounding.

The most compelling alternative explanation for the inflated SAT reports is that the misreporting in Study 2 was done without awareness and may even represent a form of self-deception (Goleman, 1985; Lockard & Paulhus, 1988; Martin, 1985). Perhaps, subjects initially misreported their SAT scores for impression management reasons, but after repeated misreporting, they eventually came to believe the false reports themselves. Or perhaps the SAT score subjects received was inconsistent with the score expected or desired, creating dissonance (Festinger & Carlsmith, 1959). Subjects subsequently reduced the dissonance by "remembering" a score more in line with their expectations or desires. Finally, it is possible that the score received was inconsistent with subjects' self-schema and that the memory distortion represents a simple error in the direction of greater schema congruity (Greenwald, 1980). Regardless of the cause, according to this alternative explanation, subjects are unaware of their misreporting.

Study 3 examined this possibility. Subjects reported their SAT scores on two occasions separated by 2 months. During the second (but not the first) occasion, subjects were offered an incentive for reporting accurately, one that rewarded subjects for recalling correctly and alerted them that any discrepancy between their reported and actual SAT score would be known. If subjects misreport for impression management reasons and are aware of their misreporting, then they should recall their score correctly when an

incentive is offered for an accurate report. Alternatively, if subjects are truly unaware of their misreporting, then subjects should misreport their scores regardless of whether an incentive is offered for recalling accurately.

Method

Subjects. Subjects were 92 undergraduates enrolled in a personality psychology course at a large Southwestern university. Data from one subject were excluded because the SAT score she reported at Time 2 (2300) exceeded the highest attainable score on the test (1600).

Procedure. At the beginning of the semester (Time 1), subjects completed several questionnaires (most of which were irrelevant to this research) as part of a class project. One of the questionnaires included the three items used in Studies 1 and 2 asking subjects to report their SAT score,³ whether they believed their score was accurate, and, if not, what score they believed would be accurate. Two months later (Time 2) during a class exam, subjects were again asked to report their SAT scores. This time, however, an incentive was offered for reporting accurately. Subjects learned that they would receive extra credit on the exam if they accurately recalled their SAT score. In truth, all subjects received the extra credit regardless of whether they did or did not recall correctly. Finally, SAT score and current GPA were recorded from each subjects' academic files.

Results and Discussion

Self-reported SAT scores. Once again, the findings from Study 1 were replicated. Subjects ($n = 34$) who believed their SAT score was inaccurate reported having a lower score ($M = 962.1$) than did subjects ($n = 58$) who believed their SAT score was accurate ($M = 1055.0$), $t(90) = 3.63$, $p < .001$. In addition, Table 1 reveals that subjects who regarded their SAT score as accurate reported a score that was markedly higher than that of subjects who believed that a higher score would be more accurate. Finally, examination of the 27 subjects who believed that a higher SAT score would be more accurate revealed that subjects with low scores boosted their score more than subjects with high scores, $r = -.49$, $p < .01$. Consistent with Studies 1 and 2, the mean estimated SAT score of the 27 subjects in Study 3 who regarded their score as inaccurate was 1080.6, 139.7

³Prior to analyzing the results of Study 2, I was unaware that many students take the SAT multiple times. Realizing that this might contribute to some of the misreporting, subjects in Study 3 who took the test multiple times were instructed to report the highest combined SAT score received within a single administration of the test.

points higher than their mean reported SAT score, $t(26) = 8.27, p < .0001$. Once again, these subjects not only viewed their SAT score as inaccurate but viewed it as substantially inaccurate.

In sum, these findings replicates Studies 1 and 2. Students with low SAT scores were more likely than students with high SAT scores to perceive their score as inaccurate. In addition, when asked to estimate a more accurate SAT score, students with lower SAT scores boosted their score more than students with higher SAT scores. The replication is noteworthy because the sample in Study 3 (students from a large, Southwestern, public university) was in many ways distinct from the samples in Studies 1 and 2 (students from a small, Eastern, selective private college). In addition, the average reported SAT score in Study 3 ($M = 1020.7$) was markedly lower than the average reported SAT score in Studies 1 ($M = 1205.6$) and 2 ($M = 1183.7$). The replication in Study 3 illustrates the robustness of the earlier findings regarding perceptions of the SAT.

Causes of misreports. The remaining analyses address why students misreport their SAT scores. Examining the highest combined SAT score reported in subjects' academic files revealed that at Time 1, 33% of subjects reported a score higher, 60% reported a score equal to, and 7% reported a score lower than the highest SAT score found in subjects' academic file. A comparison of the SAT score subjects reported receiving ($M = 1020.7$) and the highest SAT score recorded in subjects' academic files ($M = 1003.0$) revealed that the 17.6-point average inflation in SAT scores was significant, $t(91) = 2.92, p < .005$, one-tailed. Of interest, both the proportion of students misreporting their SAT scores and the magnitude of these misreports were lower in Study 3 than in Study 2. This difference may be attributable to a change in the way SAT scores were requested in Study 3 (see Footnote 3). Alternatively, it may indicate that other factors, such as investment in intellectual identity, may influence the magnitude to which subjects inflate their SAT reports.

Two months later when offered an incentive in the form of extra credit on an exam for reporting accurately, 36% of the subjects continued to misreport their SAT scores ($M = 1011.7$). However, the magnitude of inflation was significantly less than when no incentive was offered for reporting accurately, $t(91) = 3.04, p < .001$, one-tailed. Indeed, the magnitude of inflation dropped to an average of 9.0 points, resulting in a reported SAT score only marginally higher than the highest combined SAT score reported in subjects' academic files, $t(91) = 1.59, p < .07$, one-tailed. Also of interest, the proportion of students inflating their SAT scores dropped. At Time 2, 21% of subjects reported a score higher, 64% reported a score equal to, and 15% reported a score lower than the highest SAT score found in subjects' academic file.

The finding that subjects inflated their SAT scores less when offered an incentive for reporting accurately suggests that subjects were more or less conscious of their misreporting at Time 1. This finding is consistent with an impression management explanation for misreporting. Importantly, impression management was not the only factor influencing subjects' misreporting. At Time 2, the mean reported SAT score was still higher than the highest SAT score recorded in subjects' files, albeit only marginally significantly so. Moreover, providing an incentive for reporting accurately did not increase the tendency to report SAT scores accurately. That is, roughly the same number of students misreported their scores at Time 1 and Time 2. When viewed collectively, these findings suggest that subjects were more modest in their reporting at Time 2. It also suggests that the tendency to inflate SAT scores is attributable partly to impression management (subjects inflated their scores less at Time 2) and partly to self-deception (subjects nevertheless continued to inflate their scores at Time 2).

GENERAL DISCUSSION

Are students biased in the perception and presentation of their SAT scores? The findings from this research suggest that they are and provide some evidence why this is so. Regarding perceptions, a majority of students (particularly those with lower scores) perceived their test scores to be inaccurate, with most estimating that a higher score would be more accurate. In addition, low scorers were more likely to report that the test in general was invalid. Yet these students did not appear to regard the SAT scores of others to be inaccurate and seemed willing to use others' scores to make important decisions about them. Specifically, Study 2 revealed that regardless of their beliefs about the SAT, students were more likely to recommend for admission to a selective college applicants with higher SAT scores. This paradoxical finding is intriguing and suggests that some individuals may hold contradictory beliefs about the SAT.

Why do subjects perceive their test scores as inaccurate? Study 2 revealed that this perception is not attributable to the score being inconsistent with college GPA, the criterion the test was designed to predict. Subjects' average and highest recorded SAT score correlated significantly with current GPA, whereas subjects' estimated SAT score did not. Moreover, subjects' actual SAT score predicted college GPA more accurately (i.e., with less error) than did subjects' estimated SAT score.

The perception of inaccuracy may reflect a motivated bias designed to protect self-esteem. Accordingly, subjects receiving low scores perceive their scores as inaccurate to sustain an important self-image of competency and intelligence. Alternatively, the perception of inaccuracy may be

cognitively based. Subjects may have used high-school GPA rather than college GPA as the standard in evaluating the veracity of their SAT score. Most subjects in Studies 1 and 2 graduated in the top 20% of their high-school class and had impressive high-school GPAs. In addition, Study 2 revealed that subjects used high-school rank, a correlate of high-school GPA, in making admission decisions about others. If high-school GPA was used as the standard, then students receiving a low test score may reasonably have concluded that their SAT score, based on a single 3-hr exam, was inaccurate, whereas their high-school GPA, forged over 3½ to 4 years, was not.

Regardless of whether one favors a motivational or cognitive explanation for subjects' perceptions, it is intriguing that subjects continued to regard their scores as inaccurate even though the scores were consistent with college GPA. This finding illustrates how persistent beliefs can be even in the face of disconfirming evidence. Indeed, although we have no data bearing on the question, we suspect that subjects who viewed their test score as inaccurate, if asked, would report that their college GPA was inaccurate as well.

Regarding student presentations, Studies 2 and 3 revealed that many students misreported their SAT score, claiming a higher score than they actually received. In addition, consistent with previous research (Pryor et al., 1977), low scorers were more likely than high scorers to inflate their SAT score. The results of Study 3 suggest that the inflated scores partly reflect self-presentation. Specifically, subjects inflated their SAT scores less at Time 2 when their misreporting would be evident, than at Time 1, when their misreporting would presumably go unnoticed. Nevertheless, not all misreporting can be explained in terms of self-presentation. SAT reports at Time 2 were still inflated, although only marginally significantly so. Moreover, roughly the same number of subjects misreported their scores at Time 2 as did at Time 1. These findings indicate that subjects who inflate their scores are aware that they are misreporting but are unaware of the magnitude of their misreporting.

In sum, the purpose of this article was to investigate responses to unfavorable feedback outside the psychology laboratory by examining how students who receive relatively low SAT scores perceive and present this "failure" feedback. The findings were consistent with laboratory research, revealing biases in both perceptions and presentations of test scores among students with lower scores. Students with lower scores characterized their test scores as inaccurate and, when asked to report their scores, claimed scores higher than those they actually received. These findings indicate that even outside the confines of the psychology laboratory, individuals will go to great lengths to dismiss and distort unfavorable and inconsistent feedback.

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