

Some Things You Should Know

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An Interesting Experiment

An admissions systems always involve tradeoffs

- Global reasons for and against different predictors
- Considerations in the use of different predictors
- In evaluating reasons and considerations there are two underlying issues:
 - What evidence and data?
 - What effects are big enough to matter?

What Evidence and Data?

- With thousands of studies it is possible to “prove” anything by selective citation.
- Example:
 - The SAT correlates .78 to .84 with grades!
 - Tests are twice as good as High School GPA!
 - Krockov (1987) *Teacher Education*
 - Buszek (1968) *College and University*
- *Must* focus on large multi-institutional samples or comprehensive meta-analyses.



What is large enough to matter?

	Die	Live
No Treatment	60%	40%
Treatment	40%	60%



One Equation and Three Wrong Conclusions: Predictive power, incremental power, and SES

HSGPA .28

SAT I .02

SAT II .24

Family Income .03

Parents Education .06

“They found that high school grades (HSGPA) and subject specific tests, such as the SAT II, strongly predicted college grades, but not the SAT.” -- *Window on Wake* 2008

Source	Sample	$r_{\text{test-grade}}$
U California – SAT	77,000	.37
U California – SAT II	77,000	.40
U California -- HSGPA	77,000	.39
Sackett, Kuncel, et al. 2009a	155,000	.35
Sackett, Kuncel, et al. 2009b	17,000	.37



Lacking Incremental Predictive Power

Source	HSGPA	SAT	HSGPA + SAT
U California	.39	.37	.46
Berry & Sackett (in press)	.38	.36	.52

Test score add substantial predictive information to high school grades. SAT II and writing tests may add more.



“When one statistically controls for SES, the weak contribution of the SAT in a regression model drops down to near zero”

– *Window on Wake* 2008

SAT I	.37	SAT II	.40	HSGPA	.39
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SAT I	.34	SAT II	.37	HSGPA	.38
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Income	.01	Income	.02	Income	.06
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Education	.04	Education	.06	Education	.11
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Regression Output Page 179.

Something you should know.

HSGPA .30

SAT I .22

Family Income .03

Parents Education .05



Consistent SES Findings

Source	Sample	$r_{\text{test-grade}}$	$r_{\text{test-grade.SES}}$
U California	77,000	.37	.34
Sackett, Kuncel, et al. 2009a	155,000	.35	.33
Sackett, Kuncel, et al. 2009b	17,000	.37	.36

Minor reduction in test score predictive power when controlling for parental education and income.

Controlling for more and more high school era variables further reduces, but does not eliminate, test validity.

Ultimately these controls can be atheoretical and silly.

Hart and Risley longitudinal study

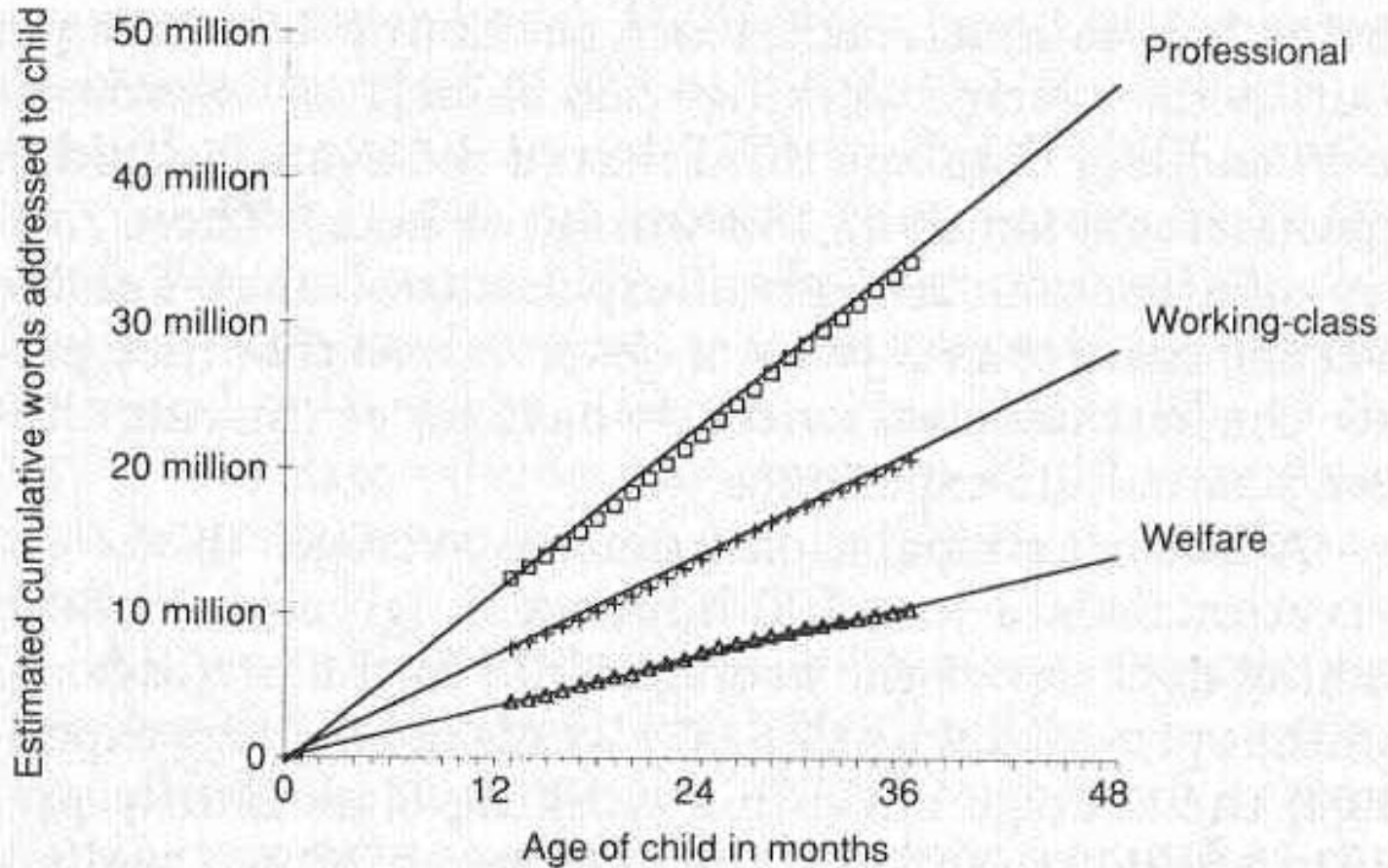
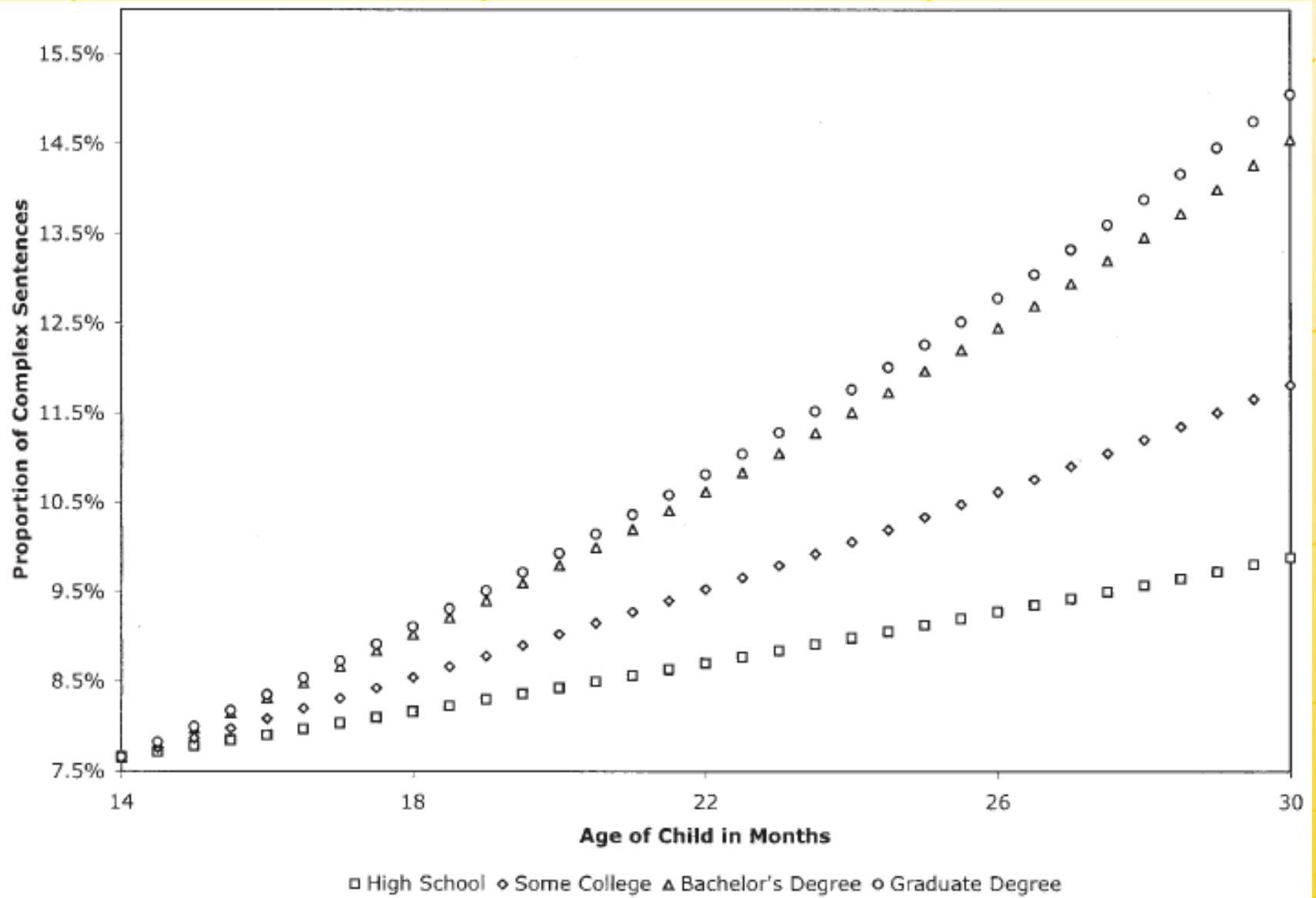


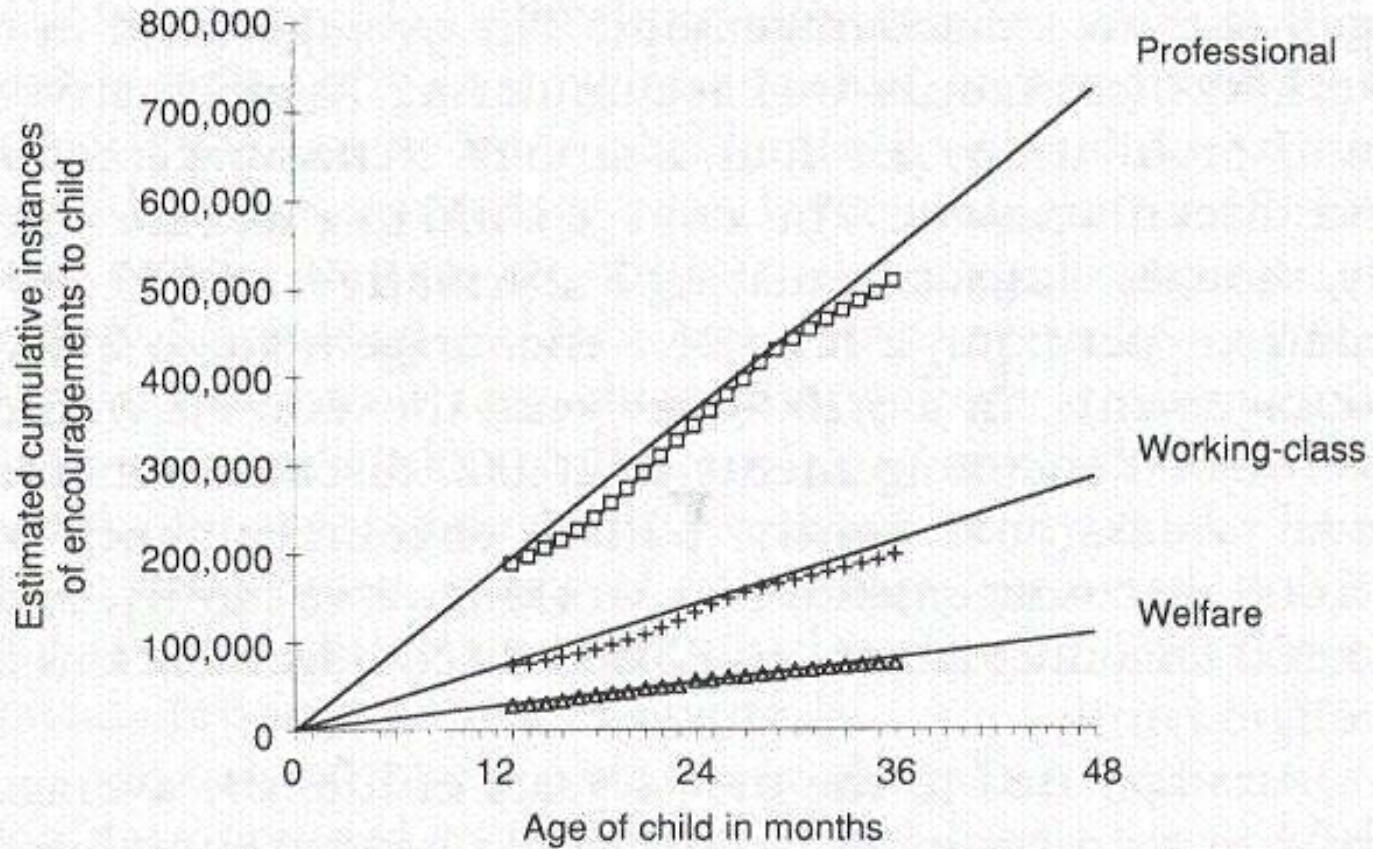
Figure 19. Estimated cumulative differences in language experience by 4 years of age. (See Appendix B for a detailed explanation of this figure.)



Proportion of Complex Sentences

Huttenlocher et al., (2007)

Encouragements



Encouragements to Child

“Better family resources in a child’s formative years are associated with higher quality education and better environments that foster cognitive and non-cognitive skills” (p. 3) Carneiro & Heckman (2002)

Early Intervention to the Rescue:

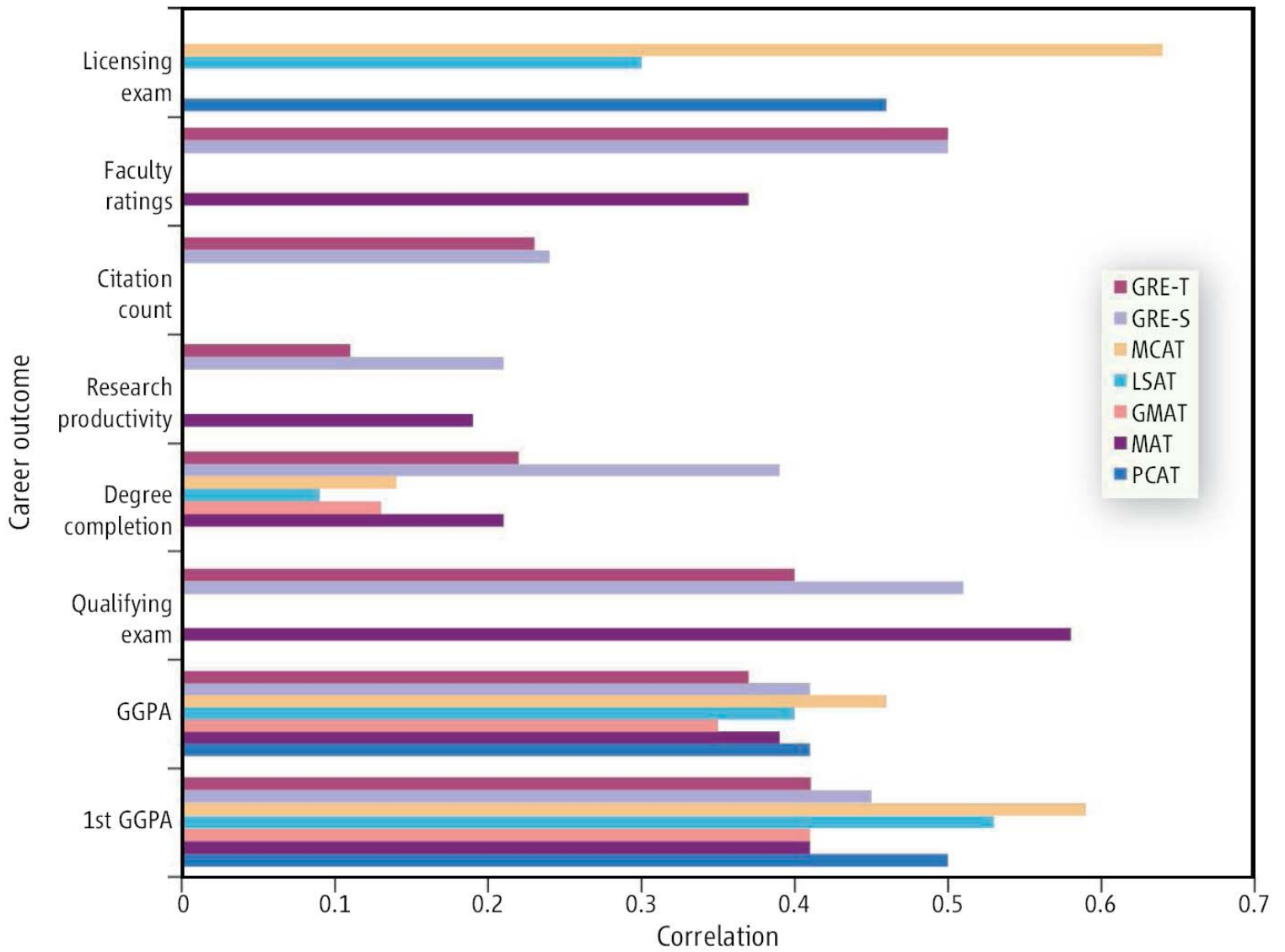
- Heckman (2006) *Science*
- Heckman (2008) *Economic Inquiry*

Ok, but who cares about grades anyway?

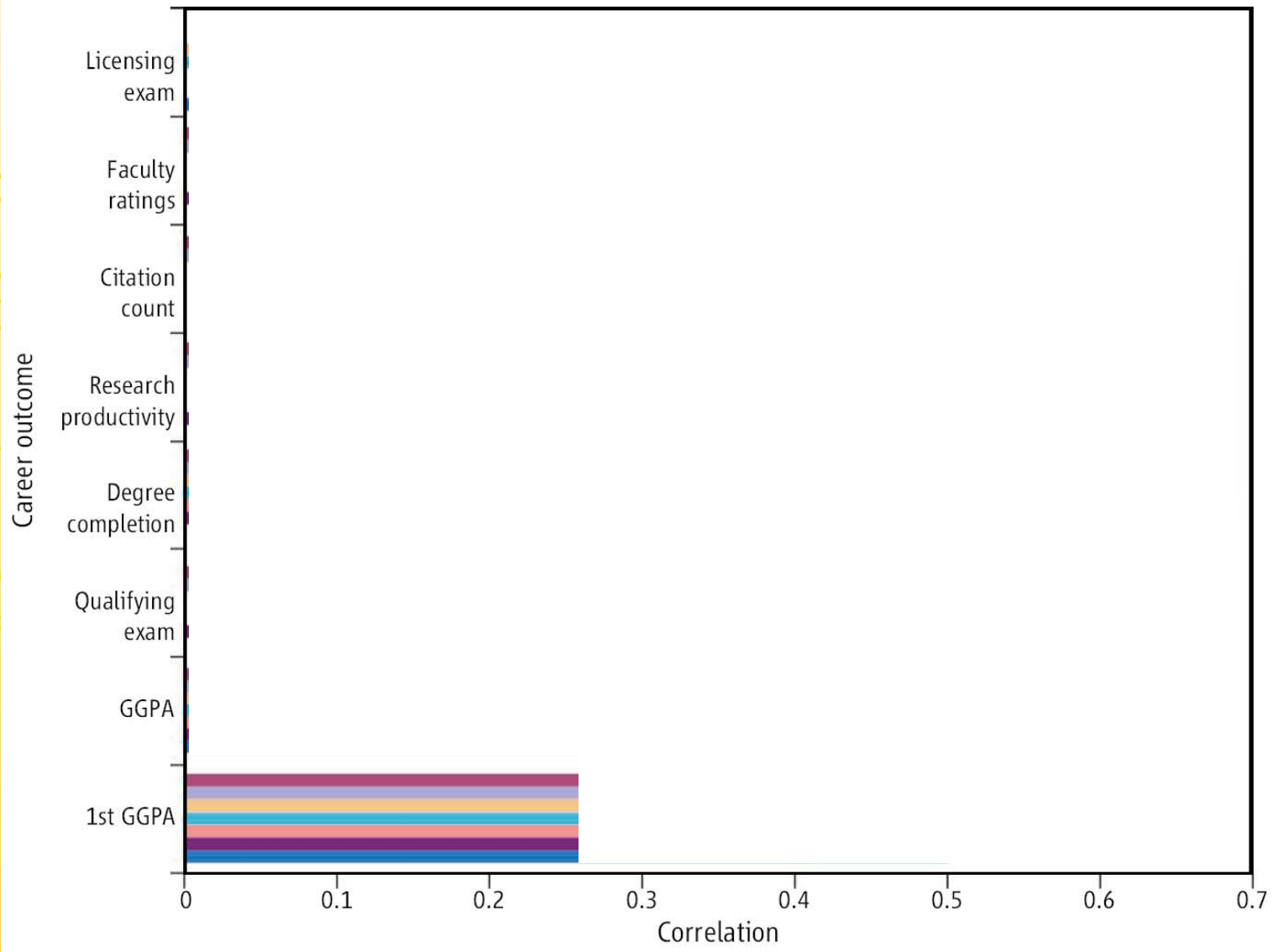


In fact, tests predict a lot of things beyond grades.

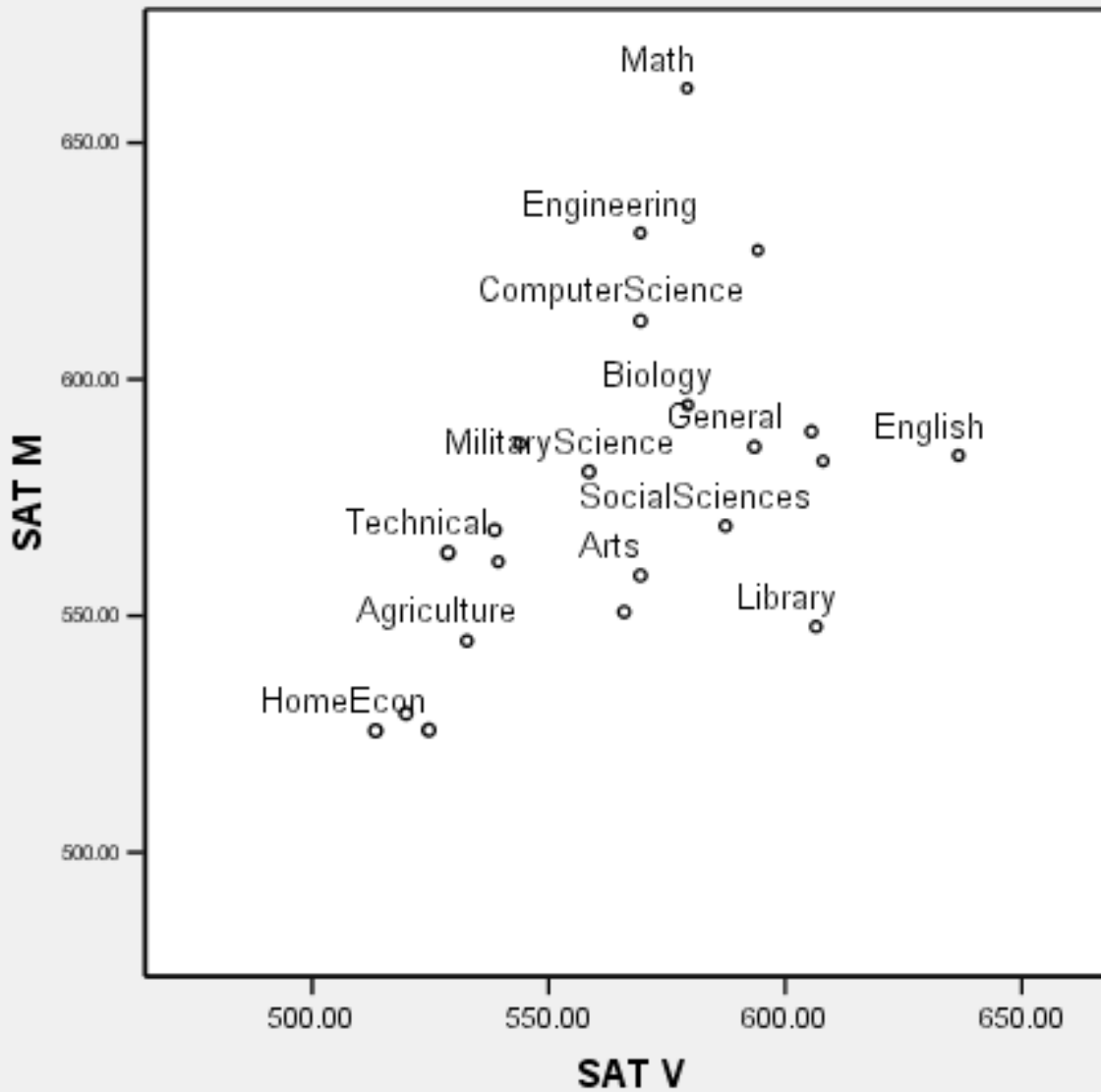
- Performance on complex skill acquisition tasks including team tasks and multi-tasking.
 - The relationship increases as the complexity of the task increases.
- Evaluations of Creative Performance
- Job Performance
 - The relationship increases as the complexity of the job increases.
- Career Advancement
- Graduate School Performance

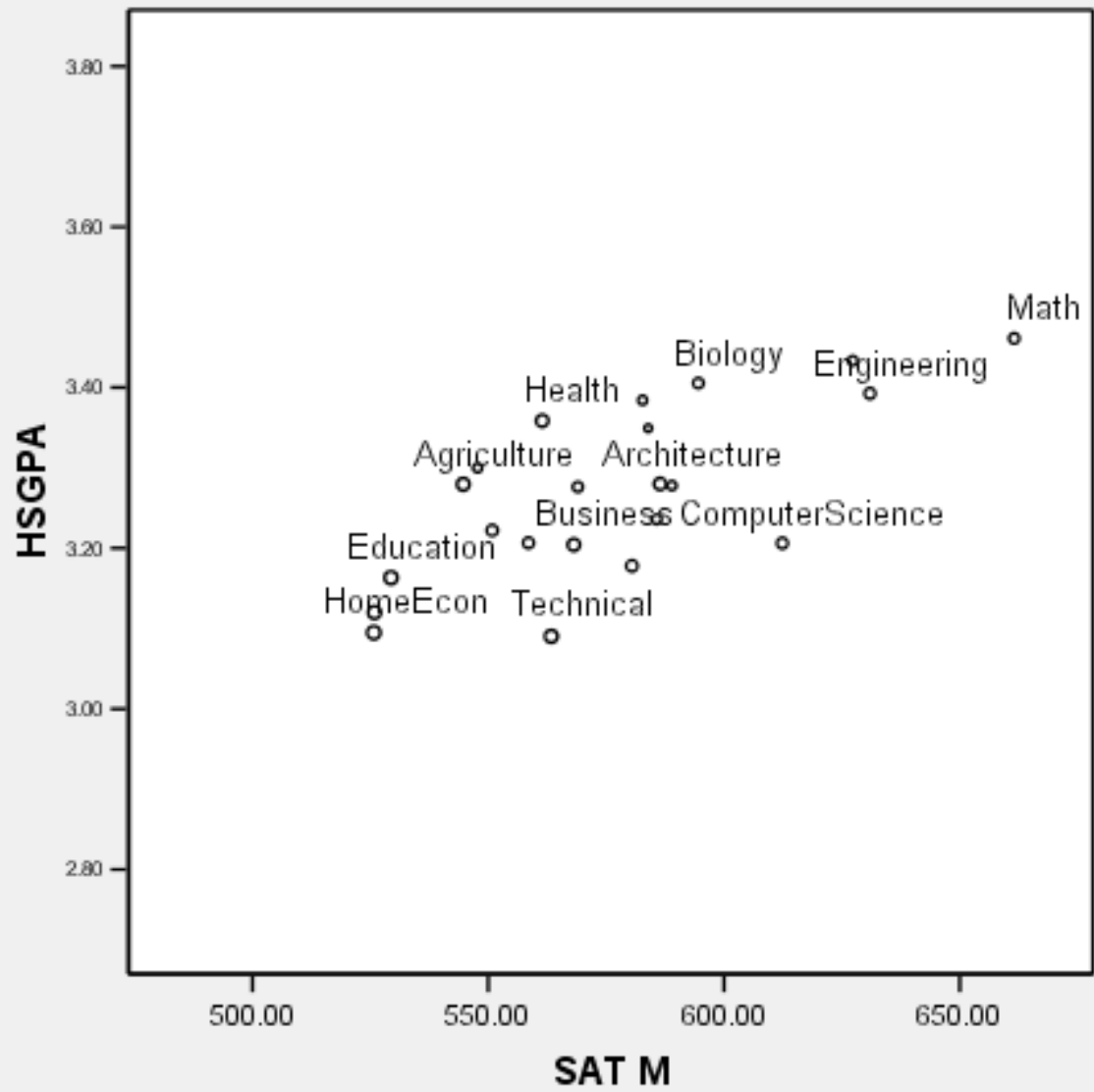


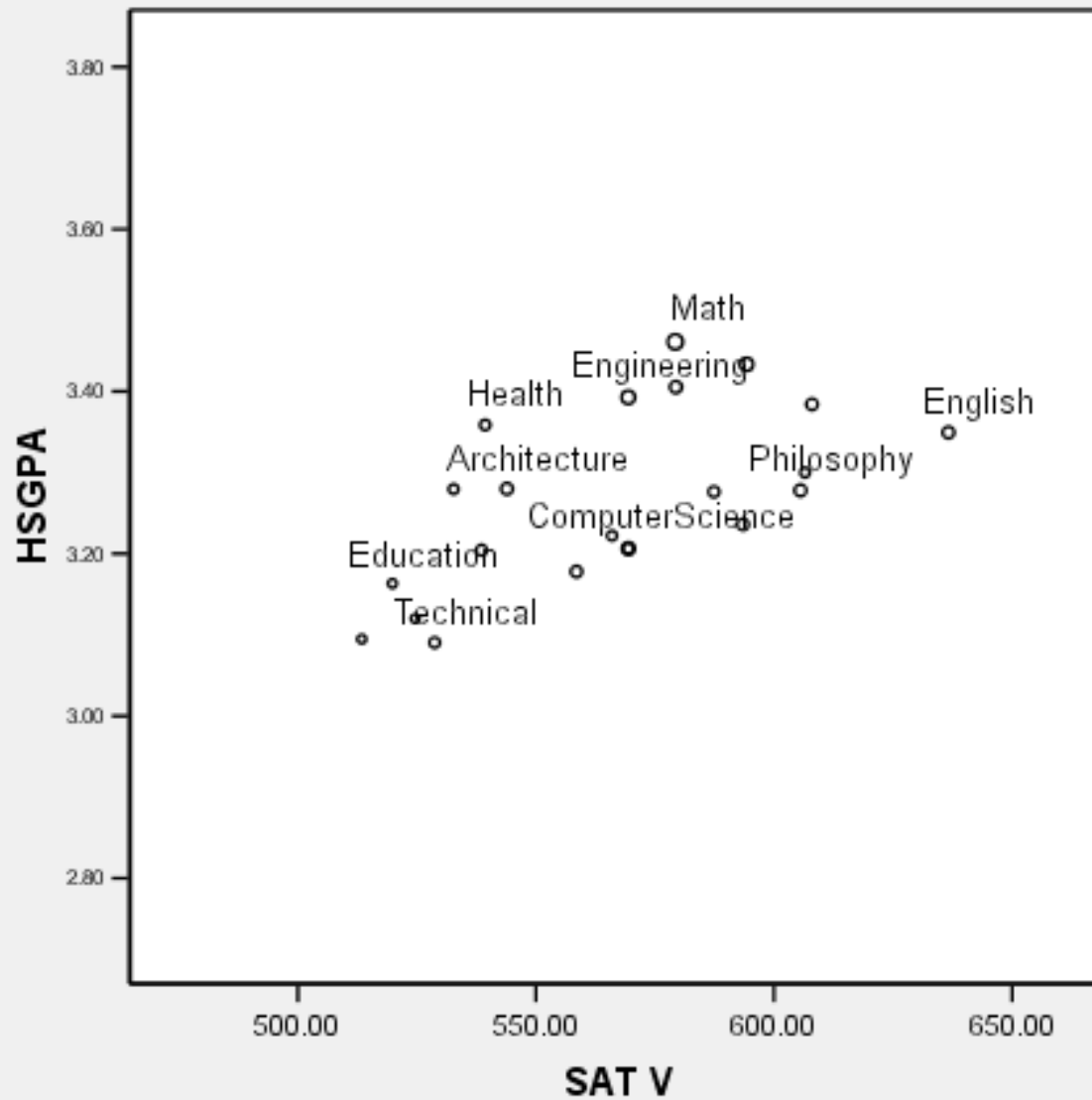
Kuncel & Hezlett (2007). *Science*, 315, 1080-1081.



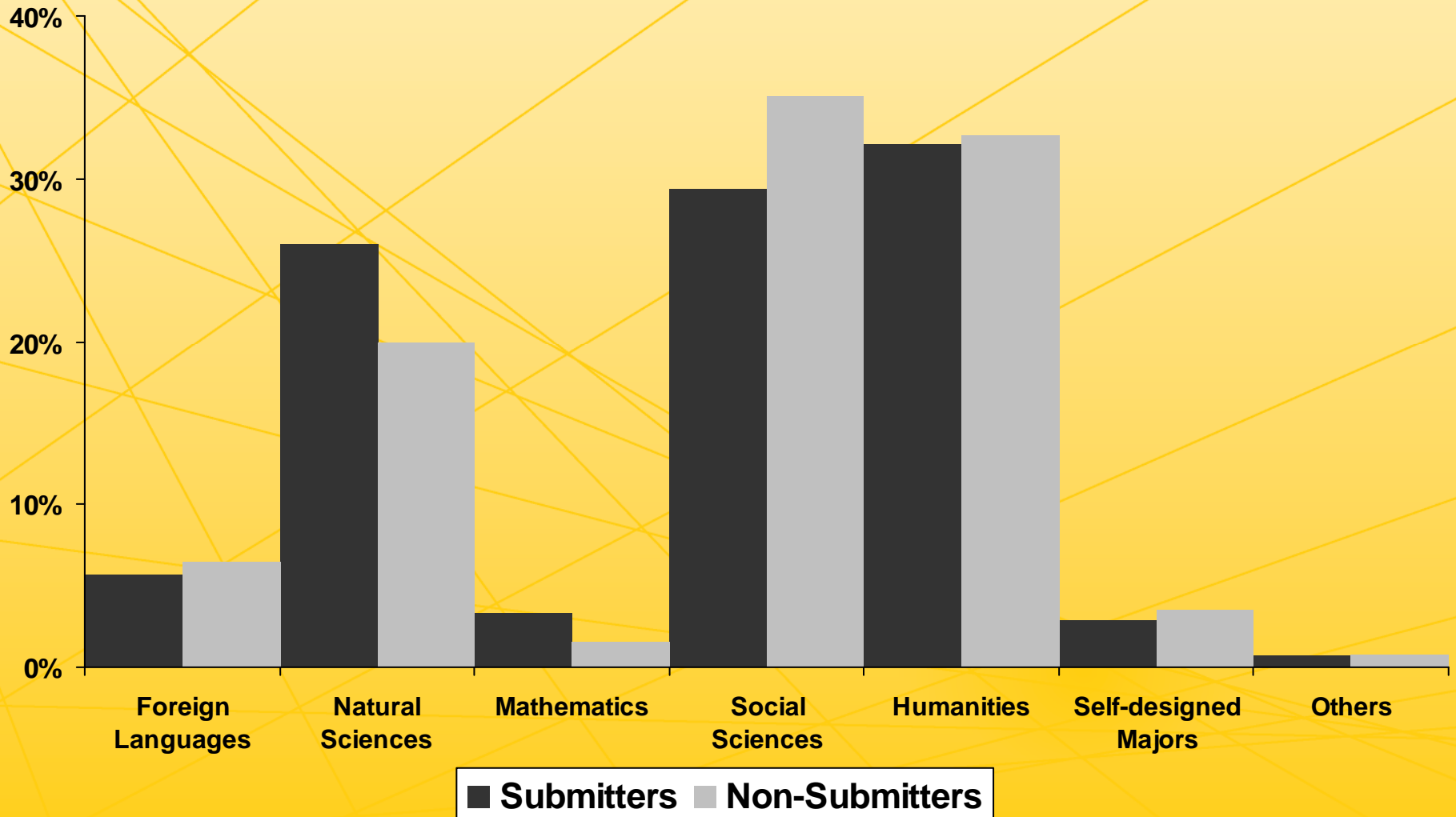
If the critics were right....



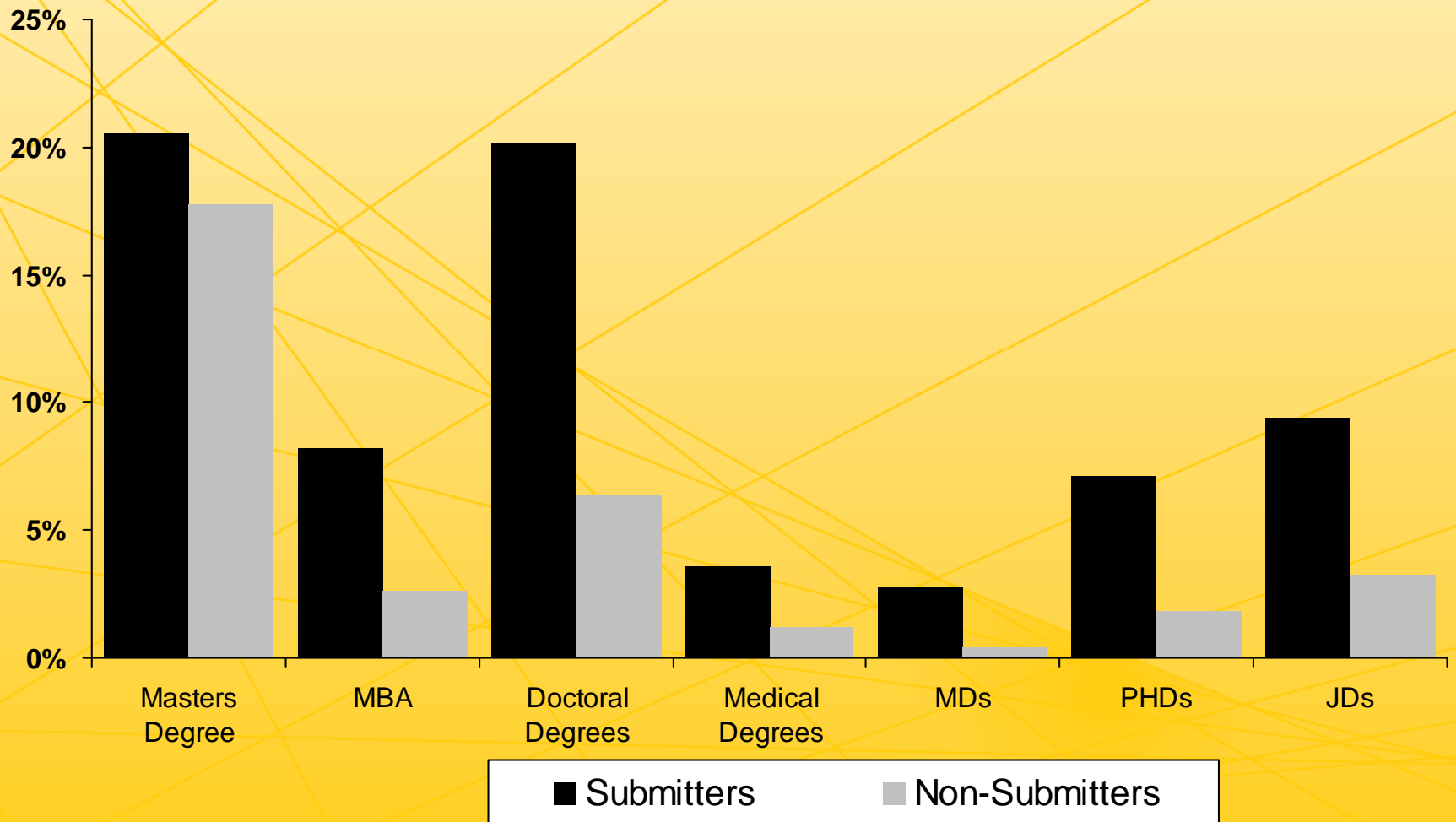




Bates College Distribution of Submitters and Non-Submitters by Disciplines (Graduates Only)

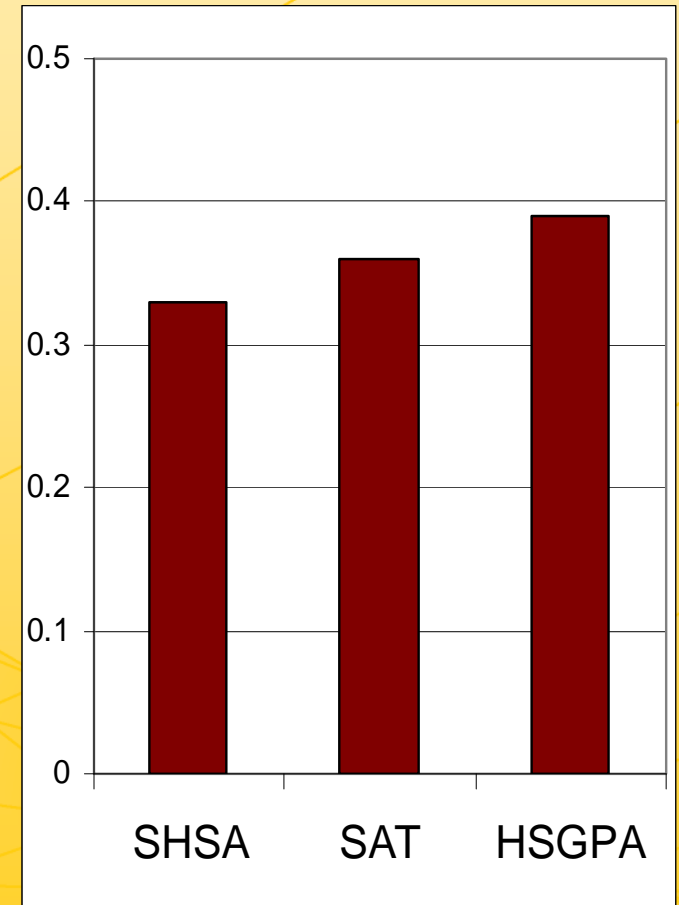


Post College Degree Attainment of Bates Graduates



Other Things Matter: Study Habits, Skills, and Attitudes

	N	k	r
Aggregate Measures	18,517	107	.33
Study Skills	24,547	87	.25
Study Habits	23,390	102	.23
Study Attitudes	7,211	37	.26



Crede & Kuncel (2007) *Perspectives in Psychological Science*

But...faking is real.

A Few Factors that Influence Interviews

- Racial and Ethnic Bias (Campion et al., 1998)
- Attractiveness (Kinicki & Lockwood, 1985)
- Gender Bias (Olian et al., 1988)
- Clothes (Parsons & Liden, 1984)
- Applicant Scent (Arvey & Campion, 1982)
- Rating Errors (Harris, 1989)
- Interview Coaching (Arvey & Campion, 1982)

Structure and panels can help, but at a price.



Historically Common SAT Words

- Convened
- Implication
- Peruse
- Frivolous
- Diligent
- Eminent
- Empirical
- Anecdotal

