META-ANALYSIS

A Ca_e S_ d

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This article raises some questions about the usefulness of meta-analysis as a means of reviewing quantitative research in the social sciences. When a meta-analytic model for SAT coaching is used to predict results from future studies, the amount of prediction error is quite large. Interpretations of meta-analytic regressions and quantifications of program and study characteristics are shown to be equivocal. The match between the assumptions of the meta-analytic model and the data from SAT coaching studies is not good, making statistical inferences problematic. Researcher subjectivity is no less problematic in the context of a meta-analysis than in a narrative review.

Keywords: *meta-analysis; literature review; SAT coaching; statistical inference*

t o o l *Meta-Analysis in Social Research* (1981) *Statistical Methods for Meta-Analysis* (1985) 1980. l l o o l oo . A *meta-analysis* C (C) 1980 2003 to 1,000 L *Experimental and Quasi-Experimental Design for Generalized Causal Inference*, t

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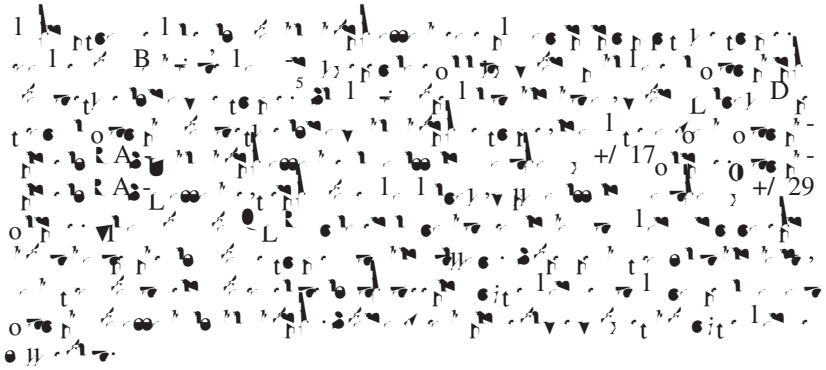
TABLE 1: Observed and Predicted Effects From New Coaching Studies

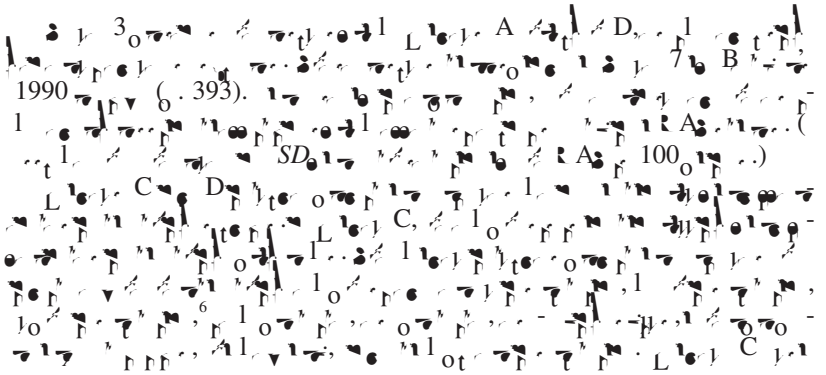
			Predicted Change in Effect From Bereby (1990)			
Re	*S d*	*C ac Effec*	*M de A*	*M de B*	*M de C*	*M de D*
H e e (1984)	SAT-V	57	30	11.6	12.9	24.5
	SAT-M	37	30	25.5	1.2	35.8
F a e (1987)	SAT-V	16	30	11.6	1.9	0.8
	SAT-M	16	30	25.5	13.6	12.1
Ha e (1988)	SAT-M	21	30	25.5	14.5	8.1
W a (1988)	SAT-V	11	30	11.6	2.7	0.5
	SAT-M	16	30	25.5	14.4	11.8
S edec (1989)	SAT-V	0	30	11.6	2.7	0.2

TABLE 2: Average Prediction Error From Becker's (1990) Meta-Analytic Models



INTERPRETING META-ANALYTIC REGRESSIONS AND QUANTIFYING STUDIES

INTERPRETING META-ANALYTIC REGRESSIONS



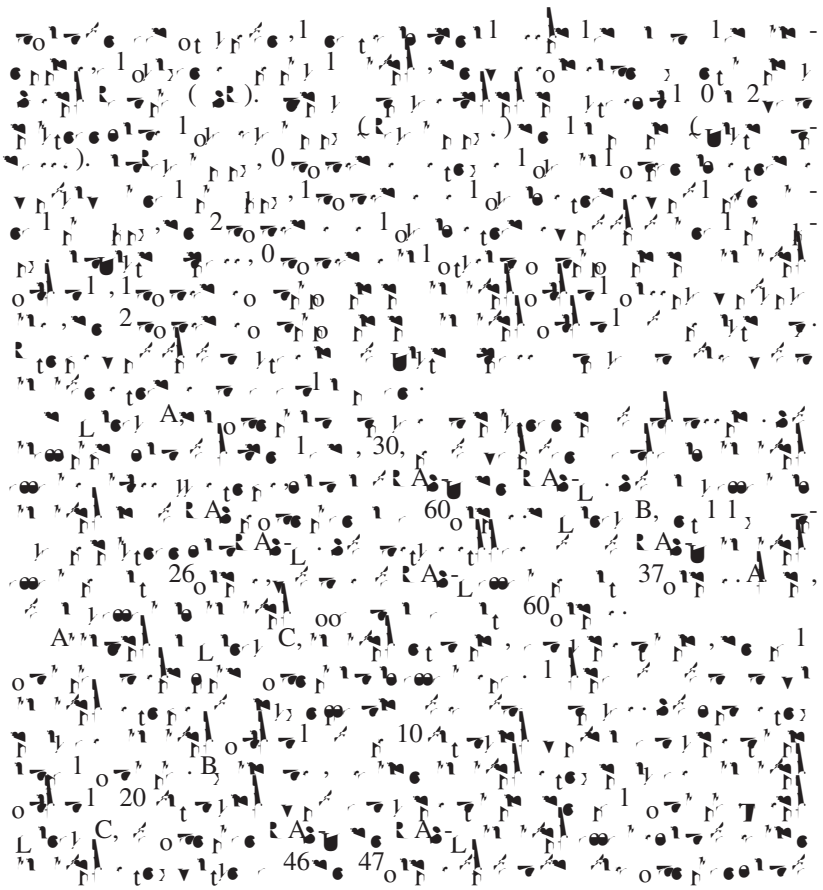


TABLE 4: Estimated Coaching Effects in Randomized Studies

Re a d S d	*SAT-M*	*SAT-V*
A de a a d P e (1980)		
Sc A		22
Sc B		9
Sc C		14
Sc D		14
Sc E		1
Sc F		14
Sc G		18
Sc H		1
E a a d P e (1973)		
G A	12	
G B	25	
G C	11	
La c e e (1985)	8	0
R be a d O e e (1966)		
Sc A		17
Sc B	12	
Z a (1988)	51	14
Med a effec e a e	12	14

TABLE 5:

TABLE 6: Studies by Coaching Mode and Design

C ac T e	*Me d ca De*		
	Ra d ed C	*Ob e a a C*	*N C*
Sc -ba ed	R be a d O e e (1966)	D e (1953)	Pa e (1961)
	E a a d P e (1973)	F e c (1955)	Ma (1965)
	A de a a d P e (1980)	Dea (1958)	J (A a a, Ne Y e) (1984)[a]
	S a (1992)	Keefa e (1976)	
		K c (1979)	
		J (Sa F a c c e) (1984)[a]	
		B e (1986)	
		Re d a d Obe a (1987)	
		Ha e (1988)	
		W , C d , a d Ma e (1989)	
		Sc ede (1992)	
		W e (1996)	

C e c a -ba e d

C e -ba e d H e e (1984)
La c e e (1985)

F a e (1960)
W a (1962)
Fede a T ade C d a d ea a e
B Re a Off ce (1978)
B ea f C e P ec (1979)
R c (1980)
S d (1980)
Se , Be a d , a d K a (1982)
F a e (1987)
W a (1988)
Z a (1988)[a]
S edec (1989)
S (1989)
S (1990)
P e a d R c (1999)
B (2001)

Ka a (2002)

APPENDIX A
SAT C. ac .. Re . . . , 1953-2001

Sa e S e[a] (C ac ed/T a)

G ade *Yea ( )* *SES fb.9998 -7.9998 1.7004 79484019916 269.*

Z a (-SES a e) (1988)	21/55	21/55	11	M e b c (ba)	NY	1985-1986	H
S (1989)	200/438	200/438	12	8 a e (b ba)	MD, D.C.	1987-1988	H
S edec (1989)	264/535	264/535	12	10 b c a d a e	PA	1988-1989	H
S (1990)	631/1,132	631/1,132	12	14 a e (b ba)	MD, NJ	1989	H
P e a d R c (1999)	427/2,086	427/2,086	11 , 12	M e b c a d a e	USA	1995-1996	M ed
B (2001)	503/3,144	503/3,144	11 , 12	M e b c a d a e	USA	1991-1992	M ed
Ra d ed de Sc -ba ed c ac							
R be a d O e e (1966)	154/265	188/310	12	18 b c (a B ac , ba , a d a)	TN	1965	L
E a a d P e (1973)	NA	288/417	11	12 b c (ba a d b ba)	NJ, OH, PA	1970-1971	M ed
A de a a d P e (1980)	239/559	NA	11	8 b c a d a e	7 Ne E a d a e	1977-1978	M ed
J (Sa F a c c e) (1984)	23/35	23/35	11	M e b c (a B ac , ba)	CA	1983-1994	L
S a (1992)	61/122	61/122	12	3 b c (b ba)	CA	1988	M ed
C e ca c ac							
Z a (-SES a e) (1988)	16/33	16/33	11	M e b c (ba)	NY	1985-1986	L

(c ed)

C e -ba ed c ac							
H e e (1984)	42/71	61/93	9 , 10 , 11	1 b c (b ba)	FL	NR	M ed
La c e e (1985)	13/27	13/27	11	1 a e (b ba Ca c)	NY	NR	M ed

APPENDIX B
C d T ea e C a ac e c f Ne S d e

S d	G a d Mea	SAT-M	C G	D	VI	MI	AI	IP	TP	TS	OA	HW	CI	WC	AC
H e e	1	1	1	3.5	1	1	1	1	0	1	0	0	1	0	0
F a e	1	1	1	**15**	1	1	0	1	1	1	0	0	0	0	0
Ha e	1	1	1	4	0	1	1	1	0	1	0	0	0	0	1
W a	1	1	1	**15**	1	1	1	1	1	1	0	0	0	0	0
S edec	1	1	1	**15**	1	1	1	1	1	1	0	0	0	0	0
W , C d , a d Ma e	1	1	1	**15**	1	1	1	1	1	1	1	0	0	0	0
S	1	1	1	**15**	1	1	1	1	1	1	0	0	0	0	0
S a	1	1	1	4	1	1	0	0	0	1	0	0	0	0	0
Sc ede	1	1	1	16	0	1	2	1	1	1	1	0	0	0	0
H e a d Keffe	1	0	1	8	1	0	1	0	0	0	0	0	1	0	0
W e	1	0	1	68	1	0	2	1	1	1	0	0	0	0	0
P e a d R c	1	1	1	**15**	1	1	1	1	1	1	0	0	0	0	0
B	1	1	1	**15**	1	1	1	1	1	1	0	0	0	0	0
Ka a Yea 1	1	1	0	30	0	1	2	1	1	1	1	1	0	0	0
Ka a Yea 2	1	1	0	30	0	1	2	1	1	1	1	1	0	0	0

NOTE: D = d a f c ac (b d a e a e bee ed a Bec e ' [1990] e e), VI = e ba c , MI = a c- , AI = a a c , IP = e ac ce, TP = e ac ce, TS = e - a , OA = e ac e , WC = a - c , AC = a e a- e c .

APPENDIX C

Coded Descriptive Characteristics of Neo-Soul Artists

Song	Year	Pub	Mus	Rad	ETS	Sex	Voc
Hopeless	82	0	0	1	0	1	2
Fade	87	0	0	0	0	2	2
Hate	88	0	0	0	0	1	2
Want	88	1	0	0	0	2	2
Seduce	89	1	0	0	0	2	2
Wish, Could, and Maybe	89	0	0	0	0	2	2
Sure	90	1	0	0	0	2	2
Sail	92	0	0	1	0	1	2
Succeed	92	0	0	0	0	2	2
Head and Keffe	95	1	0	1	0	2	2
Woe	96	0	1	0	0	2	2
Peed and Rec	99	1	0	0	1	1	2
Bees	101	1	0	0	0	1	2
Kaia Year 1	101	1	0	0	0	2	2
Kaia Year 2	101	1	0	0	0	2	2

NOTES

1. (1976) (1987).
2. A 1994, A :
3. g^{C}_{hi} g^{U}_{hi} B 1988).
4. G (1999) (1989) 1990
5. B 2.
6. D B (1989)
7. C D.
8. (1965).
9. A
10. A A A A.
11. C D, (1953), (1955), D (1958), (1988), A (1980).
12. B (2004, o. 4).
13. B L (1987).

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