

Are All Scales Created Equal?

Response Format and the Validity of Managerial Ratings

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Factors affecting validity

- Linguistic properties of items: short, simple, specific, in context (Brutus & Fecteau, 2003; Kaiser & Craig, 2005)
- Response scale format?
- Moratorium on rating scale research (Landy & Farr, 1980)
 - All scales equally *ineffective* at reducing errors
 - But no direct comparisons of predictive validity for alternative formats
 - Premature moratorium?

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Download

- Handouts
www.kaplandevries.com
- More on the new rating scale
www.versatileleader.com



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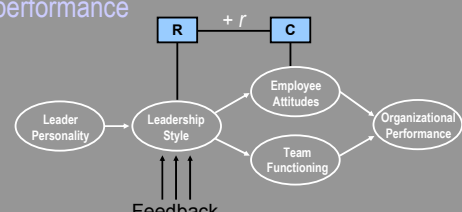
Common response formats

- Frequency: how often, to what extent
By far most common (21 of 24 in *Feedback to Managers*)
"Descriptive"
- Evaluative: how effective, how good
Can be absolute (poor/outstanding) or relative (below/above avg)
"Judgmental"

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The point of feedback

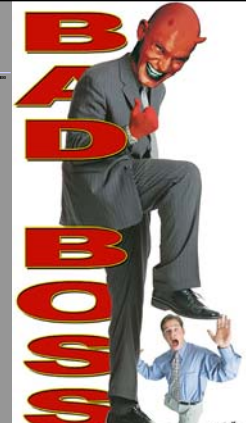
- Change behavior to increase organizational performance



Hogan & Kaiser (2005). What we know about leadership.
Review of General Psychology.

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Example



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Frequency response scale

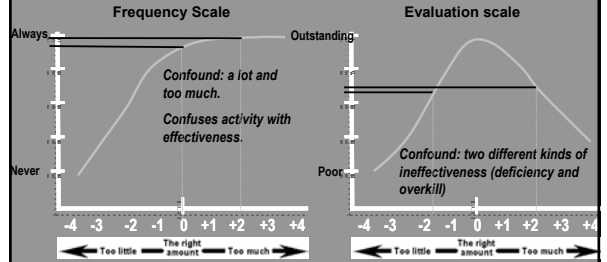
How often does this manager do the following?

1. Direct—tells people when he is dissatisfied with their work.



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Confounds in typical scales?



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Evaluation response scale

How effective is this manager at the following?

1. Direct—tells people when he is dissatisfied with their work.



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Validity

- Nomological: relationships with theoretically relevant external variables (criteria)
- Structural: relationships among dimensions within the model

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Cronbach & Meehl (1955); Loevinger (1957); Binning & Barrett (1987); Messick (1995).

“Too little/too much” response scale



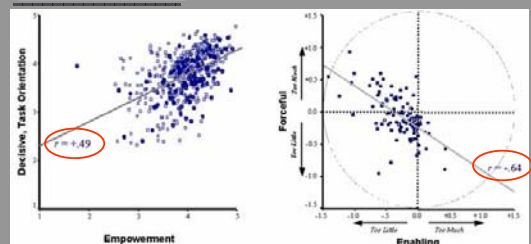
1. Direct—tells people when he is dissatisfied with their work.



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Kaiser & Kaplan (2005). Overlooking overkill. *Human Resources Planning*.

How should *Task-* and *People-* oriented dimensions be related?



Relationship between supposedly “opposite” dimensions of leadership behavior when measured with a traditional frequency scale (left) and the new “curvilinear” scale (right). Both figures represent average subordinate ratings for a sample of executives ($N = 493$ [left] and $N = 107$ [right]).

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Kaiser & Kaplan (2005). On the folly of linear rating scales. *Performance Appraisals: A Critical View*.

Bakeoff Study

1. Relative validity of three distinct response scales in predicting leadership criteria
2. Does new “too little/too much” scale tease apart confounds in typical scales?
3. Relationship between “opposites”

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Dimensions

- **Consideration and Initiating Structure** (LBDQ—XII; Stogdill, 1963; 10 items each)
- **Enabling and Forceful Leadership** (LVI2.0; Kaplan & Kaiser, 2006; 9 items each)
 - Conceptually related to C & IS
 - Designed on “too much/too little” premise

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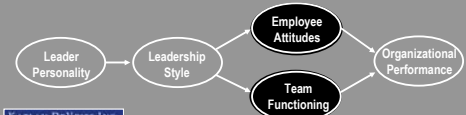
Experimental Design

- Within-subjects survey study
- $N = 79$ employed MBA students
- Rated current boss three times on the same dimensions: Freq, Eval, TL/TM formats (randomized presentation order)
- Criteria: rated their organizational attitudes, their team, and boss’ overall effectiveness.

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Criteria

	7-point “Agree/Disagree” Scale			
	α	k	M	SD
Job satisfaction	.83	5	5.09	1.16
Psych empowerment	.87	12	5.47	.92
Team efficacy	.90	8	5.28	1.05
Boss’ overall effectiveness	.79	3	4.46	1.52

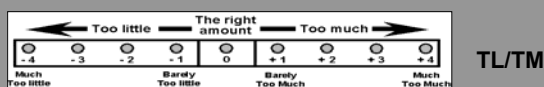


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Response scales

1	2	3	4	5	Freq
Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always	

1	2	3	4	5	Eval
Not developed	Under-developed	Competent	Very Strong	Outstanding	



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Results

Compare by response scale

Nomological validity (predicting criteria)

- Bi-variate validity (correlation)
- Multivariate validity (multiple regression)
- Incremental validity (hierarchical regression)

Structural validity

- Correlations between opposites

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Bi-variate validity

Response format	Overall Effect.	Job Satisfact'n	Psych. Empower.	Team Efficacy	Average
Evaluation					
Initiating Structure	.66	.30	.32	.37	.41
Consideration	.73	.49	.38	.38	.49
Forceful	.56	.28	.26	.31	.35
Enabling	.72	.48	.39	.31	.47
Frequency					
Initiating Structure	.51	.25	.26	.31	.33
Consideration	.68	.43	.32	.36	.45
Forceful	.37	.11	.15	.24	.22
Enabling	.62	.40	.34	.29	.41
"Too little/Too much" *					
Initiating Structure	.51	.33	.32	.38	.39
Consideration	.68	.36	.29	.31	.41
Forceful	.57	.25	.24	.31	.34
Enabling	.50	.30	.18	.17	.29

Structural Validity

Correlation between "opposites"

	$r_{Cons.-Init. Struct.}$	$r_{Forceful-Enabling}$
Evaluation	+.67	+.49
Frequency	+.57	+.12
Too Little/Too Much	+.11	-.41

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Multivariate validity

Summary of multiple regressions using all dimensions to predict criteria

Response format	Multivariate R^2				
	Overall Effect.	Job Satisf'n	Psych. Empow't	Team Efficacy	Average
Evaluation	.58	.24	.16	.15	.28
Frequency	.47	.17	.12	.14	.22
"Too little/Too much"	.47	.16	.11	.17	.23

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Upshot

- "Evaluation" format is the most valid—by a wide margin
- "Frequency" format is least valid—but most common in practice
- "Too little/Too much" format may give a truer read on dimensional performance
- Consider a combo: Evaluation and "Do More/Do Less"

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Incremental validity

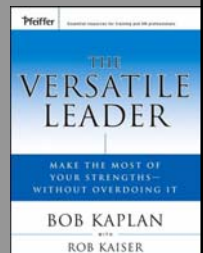
Round-robin: run all pair-wise hierarchical regression models to determine incremental validity of each scale vis-à-vis the other two, compute the average ΔR^2 across both comparisons.

Response format	Multivariate ΔR^2				
	Overall Effect.	Job Satisf'n	Psych. Empow't	Team Efficacy	Average
Evaluation	.19	.08	.07	.04	.10
Frequency	.07	.03	.03	.02	.04
"Too little/Too much"	.10	.04	.05	.03	.06

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More...

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