



The Max Wertheimer Minerva Center for
Cognitive Processes and Human Performance



Technion
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On the Robustness of Decision Tasks to Response Distortion

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Response Distortion

Response Distortion (or Social Desirability):

the tendency to respond to test items inaccurately or dishonestly, consequently presenting the person as different from his or her true psychological portrait

(Ellingson, Smith & Sackett, 2001).

Response distortion in personality testing

- “Do you enjoy co-operating with others?”
- “Do you worry too long after an embarrassing experience?”

(The Eysenck Personality Questionnaire: Eysenck, Eysenck & Barrett, 1985)

Respondents instructed to create a favorable impression are able to inflate their scores (Viswesvaran and Ones, 1999) .

Response distortion is prevalent among job applicants as well as in other settings.

(e.g.: Barrick & Mount, 1996; Rosse, Stecher, Miller & Levin, 1998)

Inaccuracy, Unfairness

Decision Tasks

- Behavioral (rather than self-report) measures.
- Typically involve a choice between two or more alternatives.
Performed in an attempt to maximize one's payoffs.
- Can detect individual differences in risk taking, learning patterns, cognitive style, and even personality traits.

However,

- Instructions and interface don't appear to reveal what is being measured.

Are Decision Tasks Robust to Response Distortion?

Description-based tasks

Prospects Task

(Based on Kahneman & Tversky, 1979)

Please select between:		
3000	OR	0.8, 4000 (0)
0	OR	0.5, 1000 (-1000)

- Risk taking
- Moderately associated with **personality** traits (e.g. Extraversion + Neuroticism -).
- 13 prospects, random order.
Each prospect presents a **Safe** alternative and a **Risky** one.

Experience-based tasks

Iowa Gambling Task (IGT):

(Bechara ,Damasio, Damasio & Anderson, 1994)

Disadvantageous		Advantageous	
+ 100	+ 100	+ 50	+ 50
-1250	-250	-250	-50
(0.1)	(0.5)	(0.1)	(0.5)

- Impulsivity
- Associated with risky behavior in real-life settings.
- Moderately associated with **personality** traits, particularly Sensation Seeking and Behavioral Activation.

Experience-based tasks

Two-Button Tasks

(Barron & Erev, 2003; Ert & Yechiam, 2008)



- Risk taking

Mixed				Gain			
1.	0	+100	-100	1.	100	0	200
2.	0	+200	-200	2.	200	0	400

- 4 tasks in total. Each task lasts 120 trials.

Hypothesized effect of impression management on risk taking

- **Self-report measures of risk taking:**

Social desirability negatively correlated with risk-taking propensity
(e.g. Mills, Loza & Kroner, 2003).

- **Description-based decisions:**

Having to explain one's choices to others results in less risk-taking
(Weigold & Schlenker, 1991)

- **Experience-based decisions:**

Evidence mixed (BART – Ronay & Kim, 2006; Pleskac et al., 2008)

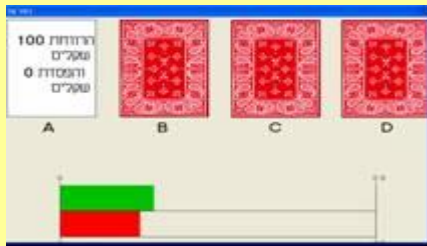
We hypothesize:

Having to make good impression will result in less risk taking.

When performed in an attempt to make a good impression...

Hypothesized impact on the three types of measures:

Experience



	A	B
		-100
You got:	-100	
Total:	-200	

<

Description

Please select between:
0 OR 0.5 1000 (-1000)
...

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Self-report

**Eysenck
Personality
Questionnaire,
Revised, Short
(EPQ-R-S)**

“Big 3” + L

The Impression Manipulation

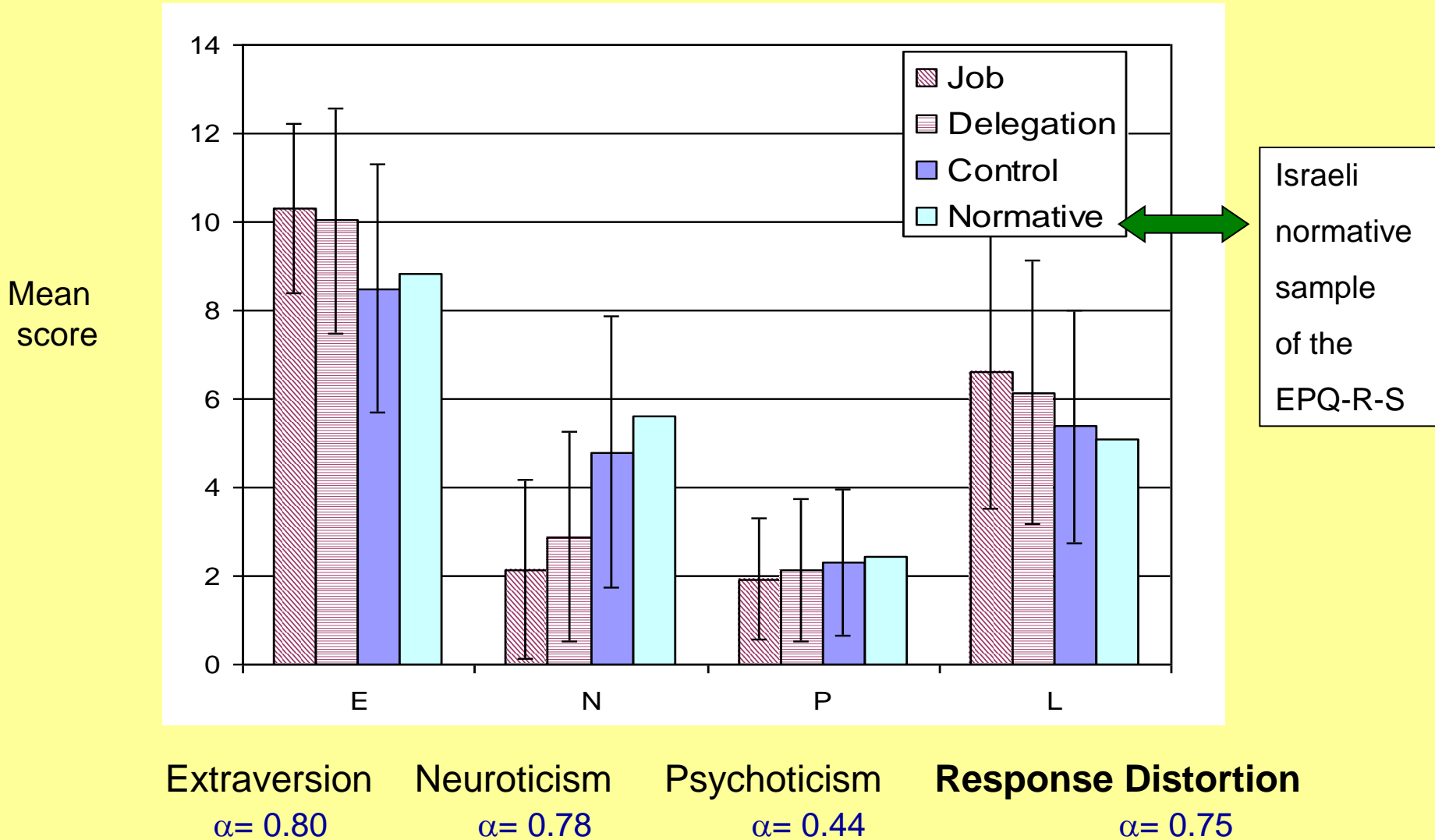
2 experimental conditions:

Control (n=54)	Impression (n=54)
<ul style="list-style-type: none">• “Perform at your best”	<ul style="list-style-type: none">• “Make a good impression, as if trying to be selected”<ul style="list-style-type: none">- Job (n=27)- Delegation (n=27)
<ul style="list-style-type: none">• Payoff affected by performance	<ul style="list-style-type: none">• Payoff affected by impression made.

108 Technion students (48% women).

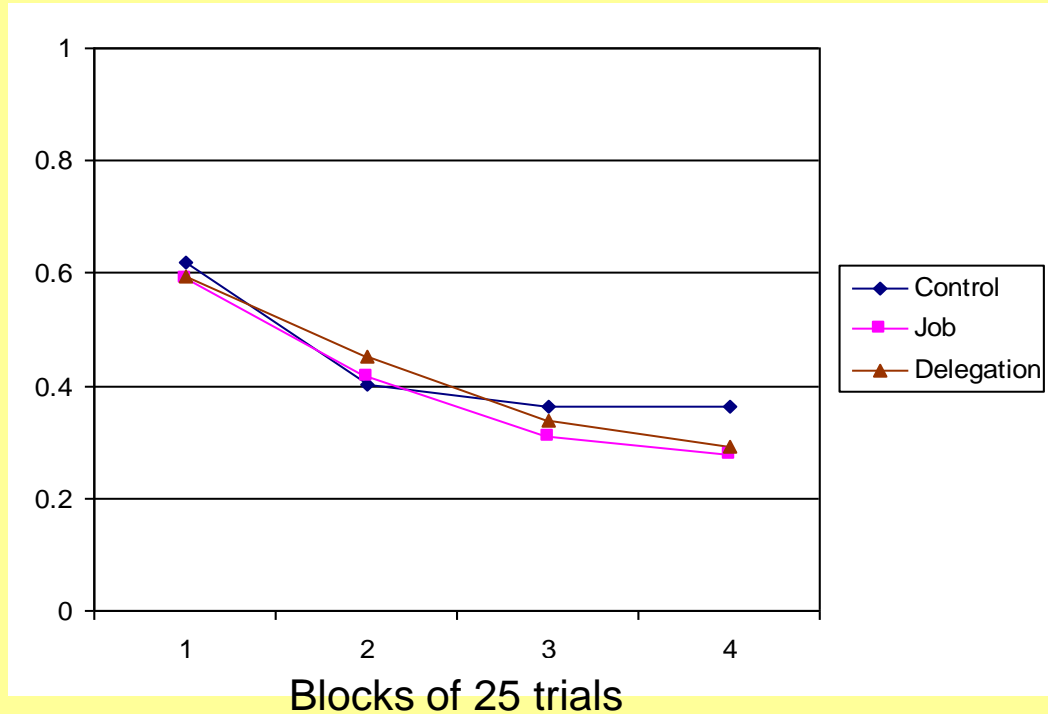
No differences: “Job” + “Delegation” = “Impression”

Results: Self-Report Inventory (EPQ-R-S)



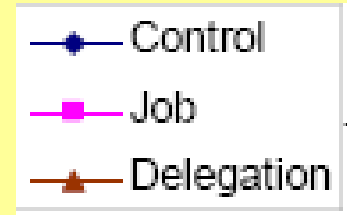
Results: Iowa Gambling Task (IGT)

Proportion of Disadvantageous decks choices

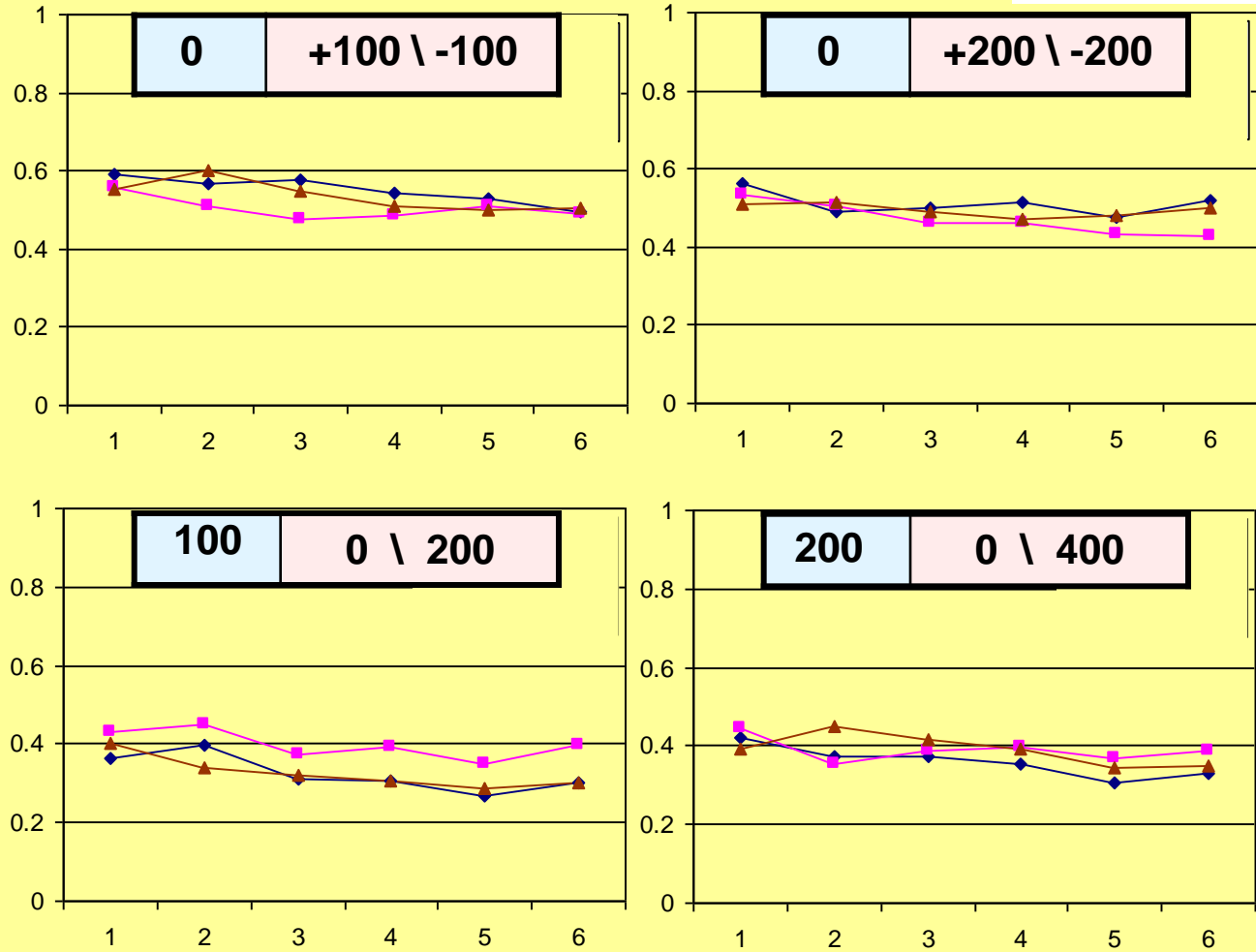


Disadvantageous		Advantageous	
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Results: Two-Button Tasks



Proportion of Risky Choices



Blocks of 20 trials

Results: Prospects Task (Description-based)

	Control	Impression	<i>p</i>
% Choice of Risky Alternative	49%	45%	<0.05 Mann-Whitney test

Reduction of extreme risk taking ?

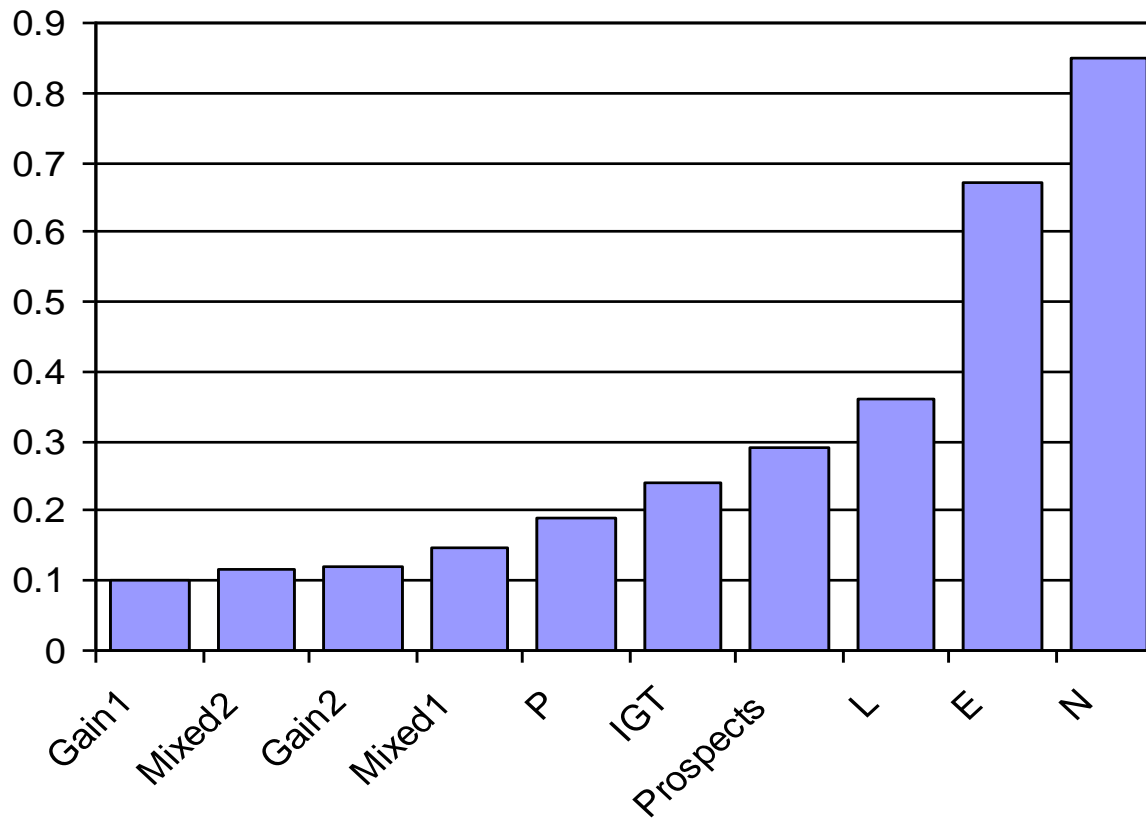
	Mixed	Gain
0	1000 or -1000	500
		0 or 1000

% Risky in both	15%	2%	<0.05 z test of proportions
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Summary:

Differences between Impression and Control (effect sizes)

Cohen's d



Discussion

Our interpretation of the findings is that response distortion decreases as the task becomes less transparent.

Although Description-based and Experience-based decision tasks measure similar constructs (risk taking in the two types of tasks was positively correlated), they are not affected by response distortion to the same extent.

The need to make good impression is associated with a tendency to take less risk, but this trend is evident only in description-based tasks.

Discussion

The findings suggest the potential of decision tasks (especially experience-based tasks) for applied use, in situations where response distortion is prevalent.

To the best of the authors' knowledge, this systematic examination is a first.

Therefore, the findings should be considered preliminary.

The challenge remains for future research to examine the external validity of decision tasks in various settings.