Errors and Corrections

to *Behavioral Risk Management*

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This file contains corrections and edits to *Behavioral Risk Management* which were identified after the book went to press.

Corrections to Chapter 1, last paragraph on page 11 page proofs, add sentence highlighted in yellow.

Executives and board members need to know that they can introduce interventions that nudge employees to cheat less frequently. Simply brightening a room can have a positive effect. So can asking people to recall past instances of immoral behavior on their part. So too can asking people to reflect on how being caught would embarrass their loved ones, lead them to lose social standing, and damage their careers. Most people who cheat do not like to think of themselves as cheaters, and look for ways to rationalize their behavior in order to maintain self-esteem. Many will cheat to the point where they are able to maintain the fiction. That is why the admonition "don't be a cheater" is more effective than "don't cheat."

Correction to Chapter 4

Page 57. Table 4.1 should read as follows.

Table 4.1 Activities and technologies associated with question 2 in chapter 4

Possible Risk Events	
1 Motor vehicles	16 Contraceptives
2 Food coloring	17 Bicycles
3 Mountain climbing	18 Surgery
4 Fire fighting	19 Prescription antibiotics
5 General aviation	20 Skiing
6 Motorcycles	21 Commercial aviation
7 Smoking	22 Hunting
8 Food preservatives	23 X-rays
9 Power mowers	24 Handguns
10 Police work	25 Spray cans
11 Large construction	26 Vaccinations
12 Swimming	27 Nuclear power
13 Alcoholic beverages	28 Home appliances
14 Pesticides	29 Railroads
15 High school and college football	30 Electric power

Correction to Appendix B

On p. 373, Table B.1, the rightmost column at the bottom has two numbers:

0

-10,000

These should be replaced with

10,000

0

with no minus sign in the 10,000. There are minus signs elsewhere, but not in the last two entries at the bottom.

Corrections to Appendix D

Page 415 should read as follows.

Table D.2 Activities and technologies associated with question 2 in chapter 4 and question D1

Possible Risk Events	
1 Motor vehicles	16 Contraceptives
2 Food coloring	17 Bicycles
3 Mountain climbing	18 Surgery
4 Fire fighting	19 Prescription antibiotics
5 General aviation	20 Skiing
6 Motorcycles	21 Commercial aviation
7 Smoking	22 Hunting
8 Food preservatives	23 X-rays
9 Power mowers	24 Handguns
10 Police work	25 Spray cans
11 Large construction	26 Vaccinations
12 Swimming	27 Nuclear power
13 Alcoholic beverages	28 Home appliances
14 Pesticides	29 Railroads
15 High school and college football	30 Electric power

b. On a 10-point scale, rate each activity by how well you feel you understand the risks in the list above. If you feel you know risks extremely well, assign the item a 1. If you feel the item is virtually unknown to you, assign the item a 10.

c. On a 10-point scale, rate each activity by the degree to which you would dread the consequences attached to the item. If you feel the possibility of this item induces the highest level of dread, enter a 10. However, if you feel that there is virtually no dread attached to the possibility of this item, enter a 1.

Over a span of 15 years, I administered question D1 above to a variety of groups such as executive MBA students and undergraduate finance majors in the United States, business professionals and graduate students in Europe, and an international group of risk managers. The common finding from these responses supports Slovic's contention that dread risk and unknown risk loom large as drivers of perceived risk, with the impact of dread risk being dominant.

To analyze these responses, I regress the perceived risk rankings on the associated rankings for dread risk and unknown risk. Regression coefficients tend to vary from group to group, but for the most part conform to the pattern described above.

Slovic provides a risk ranking for the activities in Table D.2 that is based on the judgments of experts. This ranking provides the opportunity for a comparison between expert judgments and the judgments of the groups

Page 416 should read as follows.

mentioned in the previous paragraph. The comparisons are based on rank orders. In this regard, I identified the activities in which a group's rank differed from the rank associated with expert judgments by at least five. If the group assigned a higher rank (greater risk) to such an activity, I inferred that the group overestimated the risk. If the group assigned a lower rank, I inferred that the group underestimated the risk.

Table D.3 summarizes the results. Notice that in respect to some activities, at least three of the four groups exhibit the same bias. Activities especially associated with underestimation of risks are food preservatives and X-rays. Activities especially associated with overestimation of risks are power motors, police work, skiing, hunting, and nuclear power. Entries marked NCIB signify no clearly identifiable bias. The non-experts surveyed by Slovic also uniformly underestimated the risks attached to home appliances and uniformly overestimated the risks attached to general aviation.

Table D.3 This table summarizes the results for five different groups who answered question in table D1

	Risk	Business Professionals, Europe	Executive MBA U.S.	Undergraduate Finance Majors, U.S.	Graduate Students in Finance, Europe	Risk Managers
1	Motor vehicles	NCIB	underestimate	NCIB	NCIB	underestimate
2	Food coloring	underestimate	underestimate	underestimate	NCIB	underestimate
3	Mountain climbing	overestimate	overestimate	overestimate	overestimate	overestimate
4	Fire fighting	overestimate	overestimate	overestimate	overestimate	overestimate
5	General aviation	underestimate	NCIB	NCIB	underestimate	NCIB
6	Motorcycles	NCIB	NCIB	NCIB	overestimate	NCIB
7	Smoking	NCIB	NCIB	NCIB	NCIB	NCIB
8	Food preservatives	underestimate	underestimate	underestimate	NCIB	underestimate
9	Power mowers	overestimate	overestimate	NCIB	overestimate	overestimate
10	Police work	overestimate	overestimate	overestimate	overestimate	overestimate
11	Large construction	underestimate	overestimate	NCIB	NCIB	overestimate
12	Swimming	NCIB	underestimate	underestimate	underestimate	underestimate
13	Alcoholic beverages	NCIB	underestimate	underestimate	NCIB	underestimate
14	Pesticides	NCIB	underestimate	underestimate	NCIB	NCIB
15	High school and college fo	NCIB	overestimate	overestimate	NCIB	overestimate

Page 417 should read as follows.

Table D.3 Continued

16 Contraceptives	underestimate	underestimate	underestimate	underestimate	underestimate
17 Bicycles	overestimate	NCIB	underestimate	underestimate	NCIB
18 Surgery	underestimate	underestimate	NCIB	NCIB	underestimate
19 Prescription antibiotics	NCIB	NCIB	overestimate	NCIB	NCIB
20 Skiing	overestimate	overestimate	overestimate	overestimate	overestimate
21 Commercial aviation	NCIB	underestimate	NCIB	underestimate	underestimate
22 Hunting	overestimate	overestimate	overestimate	overestimate	overestimate
23 X-rays	NCIB	underestimate	underestimate	underestimate	underestimate
24 Handguns	NCIB	NCIB	NCIB	NCIB	NCIB
25 Spray cans	NCIB	overestimate	NCIB	NCIB	NCIB
26 Vaccinations	NCIB	NCIB	NCIB	NCIB	NCIB
27 Nuclear power	NCIB	overestimate	overestimate	overestimate	overestimate
28 Home appliances	overestimate	NCIB	NCIB	overestimate	NCIB
29 Railroads	underestimate	NCIB	NCIB	NCIB	underestimate
30 Electric power	NCIB	underestimate	NCIB	underestimate	underestimate

Notice that most groups overestimate the risk associated with nuclear power. The overall correlation coefficients between the expert risk rankings and the perceived risk rankings tend to lie around 0.5.

Slovic's study compared the rankings of three groups to those of experts. The three groups were members of the League of Women Voters, college students, and active club members. The first two groups ranked nuclear power as the riskiest activity, and active club members ranked it as number eight. In contrast, experts ranked it as number 20. The top ranking by the first two groups raises the question of whether judgments reflect gender and age.

As an independent test of the impact of gender and age on judgments, I examined the risk ratings of three groups in respect to gender, one a group of executive MBA students, all of whom were business professionals, second a group of undergraduate finance majors, and third a group of professional risk managers. The executive MBA group was an outlier, with men having perceived 75% of the activities they assessed to be more risky than did women. Although the risk perceptions of men in this group for activities such as large construction, skiing, and mountain climbing were higher than for women, men perceived nuclear power to be less risky than did women. Nevertheless, both men and women in this group overestimated the risk of nuclear power, with men's implicit rank having been 11 and women's implicit rank having been eight.

Page 418 should read as follows:

For the sample of undergraduate finance majors and the sample of professional risk managers, women perceived the majority of activities to be riskier than did men. For undergraduates, this was the case for 90% of activities, and for professional risk managers the corresponding figure was about 70%. Male undergraduates implicitly assigned nuclear power a rank of 11 while female undergraduates assigned it a rank of three. Comparing undergraduate students to the executive students, the findings suggest an age effect for women. Notably, women in every group judged nuclear power to be risker than did men. However, for the group of professional risk managers, only the subsample of women overestimated the risk, having implicitly ranked it number nine.

REPRESENTATIVENESS

The following question is my adaptation of a Tversky-Kahneman experimental procedure for eliciting information on how people might rely on representativeness to make predictions. I have used this question for many years, and the results are very robust across groups.

Question D2 : Santa Clara University is attempting to predict the grade point average (GPA) of some graduating students based upon their high school GPA levels. As usual, a student's GPA lies between 0 and 4. Below are some data for undergraduates at Santa Clara University, based on students who entered the university in the years 1990, 1991, and 1992. During this period, the mean high school GPA of students who entered as freshmen and graduated was 3.44 (standard deviation was 0.36). The mean college GPA of those same students was 3.08 (standard deviation 0.40). Suppose that it is your task to predict the college GPA scores of three graduating students, based solely on their high school GPA scores. The three high school GPAs are 2.2, 3.0, and 3.8. Write down your predictions for the college GPAs of these students upon graduation. Then read on.

People who rely on representativeness when answering Question D2 tend to base their predictions on stereotype. The stereotype of a good student is someone with favorable attributes in respect to intelligence, organization, diligence, good study habits, and grades. The stereotype of a poor student is someone whose comparable attributes are weak. Representativeness suggests that a student with good grades in high school will continue to have good grades in college, and likewise a student with bad grades in high school will tend to have bad grades in college. Because the question provides statistical data, high grades correspond to GPA scores well above the mean, and low GPA scores correspond to grades well below the mean.

Table D.4 displays the mean predictions for the four main groups we have been discussing. Notice that the predictions in each row of the table are quite close to each other, suggesting that people's responses to these questions are quite robust. This is especially notable given that the undergraduate finance majors are closest to having firsthand experience with predicting the grades of undergraduates.

What is common across the four groups whose results are displayed in Table D.4 is the nature of the bias in prediction. Historical data from the

Correction to Appendix E

p. 443, line 13, replace “Figure E.2” with “the figure”

p. 444, lines 1 and 2 should read

If traders can invoke risk management to receive the second bonus, but fail to comply, then some form of valuation control such

REPLACES Because risk managers might

first then in second line gets struck

Correction to Endnotes

Page 474.

Endnote 5 in chapter 3 should read as follows.

5 . For general groups the figure is closer to 12%, but is higher for undergraduates and miniscule for risk managers. Most of these percentages are greater than the 6.25% associated with the random assignment, but are still much small relative to 100%, which applies when everyone behaves in accordance with prospect theory.