# Unnumbered Figures for Prospect Theory for Risk and Ambiguity

by Peter P. Wakker (2010);

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All unnumbered figures were made using only the drawing facilities of MS-Word of 2009. There are no curves.

p. 31:

UNNUMBERED FIGURE 1.6.1

2.50

payoff next month

s

2.50

payoff next month

s

2.50

payoff next month

s

x(s)

y(s)

z(s)

p. 47:

UNNUMBERED FIGURE 2.2.1

3/6

1/6

2/6

20

14

12

p. 47:

UNNUMBERED FIGURE 2.2.2

1

10

p. 57:

UNNUMBERED FIGURE 2.5.1

½

½

1.5β

 β

p. 58:

UNNUMBERED FIGURE 2.6.1

1p

p

M

m

1q

q

M

m

.

Elucidation: I left the period to the right of the figure. In my text the figure is part of a sentence and, then, assuming that you can let it be that too, the period at the end of the sentence should be there.

p. 63:

UNNUMBERED FIGURE 2.7.1

x ~ y implies

1λ

λ

x

C

1λ

λ

y

C

~

.

p. 64:

UNNUMBERED FIGURE 2.7.2

1λ

λ

x

C

y

C

1λ

λ

x y implies

.

p. 82:

UNNUMBERED FIGURE 3.5.1

½

½

β

–β/2

p. 113:

UNNUMBERED FIGURE 4.7.1

**α**Ex ~ **β**Ey

**α**´Ff ~ **β**Fg

&

**γ** Ex ~ **δ**Ey

**γ** Ff ~ **δ**Fg

&

&

⇒ ´ = 

(4.7.1)

Elucidation: (4.7.1) is an equation nr. that is part of the equation nrs. in the text.

p. 155:

UNNUMBERED FIGURE 5.4.1

80

60

40

20

0

p. 158:

UNNUMBERED FIGURE 5.4.2

1/6

1/2

1/3

80

30

20

p. 159:

UNNUMBERED FIGURE 5.4.3

1

× U(80) + [( + ) − ] × U(30) + [( + + ) − ( + )] × U(20)

rank of more than 30

rank of more than 20

rank of more than 0

p. 159:

UNNUMBERED FIGURE 5.4.4

x1

xn

.

.

.

p1

pn

.

.

.

.

p. 160:

UNNUMBERED FIGURE 5.4.5

∑[(pj + ... + p1) − (pj−1 + ... + p1)]U(xj).

rank of xj+1

rank of xj (0 for j = 1)

p. 165:

UNNUMBERED FIGURE 5.6.1

⅜

⅛

½

70

20

30

⅜

½

⅛

70

30

20

Rewrite as

p. 166:

UNNUMBERED FIGURE 5.6.2

0.3

0.2

0.5

50

80

10

p. 166:

UNNUMBERED FIGURE 5.6.3

0.2

0.3

0.5

80

50

10

p. 167:

UNNUMBERED FIGURE 5.6.4

1/6

1/3

1/2

49

64

9

(a)

(b)

1/6

1/12

1/2

80

40

20

1/4

60

p. 167:

UNNUMBERED FIGURE 5.6.5

1/2

1/6

1/3

30

80

20

p. 168:

UNNUMBERED FIGURE 5.6.6

½

¼

¼

25

81

0

p. 176:

UNNUMBERED FIGURE 6.4.1

&

75K

0

0.07

r

0.06

*0*

*0.87*

25K

25K

0.07

s

0.06

*0*

*0.87*

75K

0

0.07

r

0.06

*25K*

*0.87*

25K

25K

0.07

s

0.06

*25K*

*0.87*

p. 177:

UNNUMBERED FIGURE 6.4.2

0.93

0

1

w

p. 180:

UNNUMBERED FIGURE 6.4.3

1 ‑106

106

106

0

p. 197:

UNNUMBERED FIGURE 6.7.1

Fig. a

p1 = 0.1

p2 = 0.2

p3 = 0.3

p4 = 0.4

x1 = 25

x2 = 16

x3 = 16

x4 = 9

q2 = 0.5

q1 = 0.1

q3 = 0.4

y1 = 25

y2 = 16

y3 = 9

Fig. b

Unnumbered Figures for Elaborations of Exercises

p. 408:

UNNUMBERED FIGURE J.3.2.1

p1

x1

p2

pn−2

pn−1 + pn

x2

xn−2

.

.

.

xn

−−

−

xn−1

p1

x1

p2

pn−2

pn−1 + pn

x2

xn−2

.

.

.

−

× xn

−−

× xn−1,

(

)

p1

x1

p2

pn−1

pn

x2

xn−1

xn

.

.

.

Fig. a

Fig. b

Fig. c

p. 410:

UNNUMBERED FIGURE J.3.3.2

(106 , 106) (2.5  106 , 0.05 )

(106 , 106) (0.05 , 2.5  106)

(2×106, 2×106) <

2.5 ×106

0.05

2.5 ×106

+

0.05

+

,

the right prospect assigns higher outcomes to each state.

p. 410:

UNNUMBERED FIGURE J.3.3.3

2 exercised  
 today

½

½

1 exercised  
 tomorrow

0 exercised  
 tomorrow

$65

today

1 exercised  
 today

0 exercised  
 today

½

½

2 exercised  
 tomorrow

0 exercised  
 tomorrow

EU = 18

EU = 20

EU = 20.5

$ 10

18

$ 20

$ 5

31

10

$ 30

$ 0

40

0

outcome

utility

$45

$65

$45

p. 425:

UNNUMBERED FIGURE J.4.12.1

Figs. 2.4.1g and h violate the sure-thing principle for risk.

0.10

10 × 106

0.89

0.01

50 × 106

0

0.10

10 × 106

0.89

0.01

10 × 106

10 × 106

and

0.10

0

0.89

0.01

50 × 106

0

0.10

0

0.89

0.01

10 × 106

10 × 106

p. 427:

UNNUMBERED FIGURE J.5.6.1

1/3

1/6

1/2

64

49

9

p. 432:

UNNUMBERED FIGURE J.6.6.2

λ

1−λ

P(x ≥ U−1(t))

Outcomes with utility ≥ t

Outcomes with utility < t

1−P(x ≥ U−1(t))

x

P(y ≥ U−1(t))

Outcomes with utility ≥ t

Outcomes with utility < t

1−P(y ≥ U−1(t))

y

z

p. 435:

UNNUMBERED FIGURE J.7.2.2a

⅓

⅔

the ⅓ probability mass allocated to the lowest outcomes receives this decision weight.

the ⅓ probability mass allocated to the middle outcomes receives this decision weight.

the ⅓ probability mass allocated to the highest outcomes receives this decision weight.

p. 436:

UNNUMBERED FIGURE J.7.2.2b

3/4

1/4

the 1/4 probability mass allocated to the lowest outcomes receives this decision weight.

the 1/4 probability mass allocated to the highest outcomes receives this decision weight.

p. 451:

UNNUMBERED FIGURE J.11.3.1

0.09 is risk premium due to U

RDU (U,w)

17.500

0.50 is additional risk premium due to unknown probability

EU (U)

17.410

EV

16.940

16.440

RDU (U,W)

0.47 is additional risk premium due to w

1.06 is  
total risk premium under RDU(U,W)

*CE*

*Theory*

*Separate additions to risk premium*

Figure. Various components contributing to risk premium

pp. 456-460: ALL FIGURES FROM CHAPTER K

**1.3.EV**

1.4.da-

tafit

1.5.no

book

1.6.foun-dation EV

1.9.kinds of preference conditions

1.7.dis-cussion

1.8.general nature of behavioral foundations

Ch. 1

1.10.Lit-

erature

2.1 risk ⊂ uncertainty

2.3.risk ⊂ unc; continued

2.6.founda-  
 tion EU

2.7.inde-pendence

2.8.basic inconsis-tencies

Ch.2

2.5.EU

**2.2 .decision under risk**

2.4.deci-sion trees

*1.3.EV*

1.1.basic

definitions

4.9.3.  
A&A

4.4.dec. process

4.8.further implications

4.9.1.single  
 stage

4.6.found.EU

4.9.2.  
behav.F.

4.2  
EU

4.5.TO

4.3.test

4.10.data-fit EU

***3.2.risk aversion***

4.1. 15 ques-  
 tions

4.7.dis-cussion

4.11.statistical  
 analysis

4.12.Allais

*3.7. mul-tiat-tri-bute*

*App.A*

Ch. 4

3.7.multi-attribute

3.8.car-dinal U

3.3.appli-cations risk aversion

3.4.indexes

3.5.para-metric U

3.6.data fit EU

**3.2.risk aversion**

3.1.health applica-tion

*2.5.EU*

Ch.3

*App.A*

1.2.basic

properties

*App.A*

6.5.3.example

6.5.4.measure w

6.6.RDU≠EU

6.5.5.implications

6.5.2.foundation RDU

**6.1.RDU defined**

*4.6.foun-dation EU*

6.5.1.measuring U

6.4.RDU≠EU

*4.3 mea-suring U*

6.7.collapse

6.8.dw/dp

6.9.integral

Ch.6

6.2.ranks  
 discussed

6.3.pessimism

*3.2.risk aversion*

7.4.testing properties

7.1.two components

7.5.alternative test

7.6.bad-news

7.7.inverse-S

7.8.insty. region

7.11.binary RDU

7.12.cavex

***6.3.pessimism***

7.2.parametric w

7.3.datafit

Ch.7

*App.A*

7.9.discuss inv-S

7.10.indexes

8.2.real culprit

8.4.loss aversion

8.5.fundamen-tal breakaway

8.7.future directions

8.8.pro-blems

8.1.choice paradox

***3.2.risk aversion***

8.3.initial wealth

Ch.8

8.6. Rabin's paradox

***3.2.risk aversion***

5.6.calculating

5.1.probabilistic

sensitivity

5.2.old way

5.3.stoch. dom.

5.4.ψ intuition

5.5.math intuition

Ch.5

10.5.3.foundation RDU

10.7.1.single  
 stage

10.7.2. behav.F.

10.6.binary RDU

10.4.1.pessimism

10.4.2.inverse-S

10.11.collapse

10.5.2.measuring U

10.9.further

10.1.prob. soph

**10.2.RDU uncertainty**

10.3.1. Ellsberg

*4.2  
EU*

*6.3 pessimism*

*7.7.in-verse-S*

Ch.10

*7.11.bin-ary RDU*

10.8.bad-news

*7.6.bad-news*

10.4.3.tests

10.5.1.rank conditions

10.7.3.Schmeidler & Jaffray

*6.5.1.mea-suring U*

*6.5.2.founda-tion RDU*

*4.9.1.single-  
 stage*

*4.9.2 be-hav.F.*

*4.9.3.A&A*

10.10.integral

10.12.comonotonicity

*6.9.integral*

*6.7.collapse*

10.3.2. Further

*7.6.bad-news*

9.1.symmetry about 0

*8.4.loss aversion*

**9.2.PT defined**

9.3.cal-culations

9.4.PT∩EU

*6.5.RDU  
∩EU*

9.5.Empirical findings

9.6.Problems power-U

Ch.9

9.7.Theory-issues PT

*7.2.w  
.func-tions*

11.1.Ellsberg

11.2.rank amb.

11.3.examples

11.4.CORE

11.5.MP

11.6.literature

11.7.index  
 amb.av.

11.8.index  
 amb.att.

11.9.discuss

11.10.monot.

11.11.belief

***10.2.RDU uncertainty***

Ch.11

*App  
A*

12.3.3.measuring λ

*9.4.2.U for PT*

*10.5.1.rank conditions*

12.3.1.sign-conditions

*10.4&11.2.RDU≠EU*

12.2.PT≠RDU

**12.1.PT defined**

*10.2.RDU uncertainty*

*9.2.PT defined*

12.3.2.measuring U

*10.5.2.U for RDU*

*Ch.8.PT≠RDU*

12.8.theory-issues

12.3.4.foundation PT

*8.4.loss av. def.*

12.4.hybrid

12.5.loss av. amb. aversion

*10.10.integral*

*10.12.comonotonic*

Ch.12

12.6.violations

12.7.indexes amb.

*10.5.3.foundation RDU*

*10.7.hybrid*

*11.8.indexes amb.*

*7.2 par.w  
 &App.A*

*1.2.basic  
properties*

App.F nonmonotonic RDU

App.A distance measure

App.B revealed pref.

App.C dynamic

App.D other fields

App.E bisymmetry

App.H measure theory

App.I other books

*1.1.basic*

*definitions*

*6.1.RDU  
 defined*

*10.2.RDU uncertainty*

*4.6.founda-tion EU*

*4.2.EU*

Appendices

11.8.index  
 amb.att.

11.7.amb.av.

6.3.pessimism

9.2.PT defined

10.2.RDU uncertainty

10.1.prob.soph

6.1.RDU defined

4.2.EU

11.1.Ellsberg

8.4.loss aversion

7.6.bad-news

7.2.parametric w

3.2.risk aversion

1.3.EV

1.2.basic  
 properties

2.5.EU

2.2.decision under risk

2.4.deci-sion trees

1.1.basic

definitions

12.7.PT’s indexes  
 of ambiguity

12.1.PT defined

App.A

Figure K.2. The reading required to under­stand the pragmatic indexes of ambiguity attitudes based on prospect theory

2.1.DUR⊂DUU

App.G Infinite dimensions

10.1.prob.soph.

10.2.RDU for  
 uncertainty

6.1.RDU for risk

6.3.pessimism

3.2.risk aversion

1.3.EV

1.2.basic  
 properties

2.5.EU

2.2.decision under risk

2.4.deci-sion trees

4.2.EU

8.4.loss aversion

9.2.PT defined

12.1.PT defined

7.6.bad-news

Figure K.1. The reading required to under­stand the definition of PT for uncertainty in §12.1

1.1.basic

definitions

2.1.DUR⊂DUU