Table of contents

Prelude

References

Part I Going inside the Black Box	
1 and Neuroeconomics Appears and Spreads,	
by GianMario Raggetti	19
References	54
2. Reward-Economic Choices-Decision Making and Dopamine,	
by Rocco Cerroni, Maria Albanese, Nicola Biagio Mercuri	65
2.1 Behavioral economics	66
2.2 Neural correlates in decision making	67
2.3 Dopamine	70
2.4 Pathology	77
2.5 Conclusions	80
Figures	81
References	82
3. Functional Magnetic Resonance Imaging (fMRI) in Neuroeconomics,	I
by Girolamo Crisi	87
Figures	91

4. Neuroimaging: Investigation Tools in Neuroeconomics,

by Gabriele Polonara, Mara Fabri	95
4.1 Defining cerebral plasticity	96
4.2 Diffusion tensor imaging	96
4.3 What the diffusion tensor imaging can do?	97
4.4 Clinical and research applications of DTI	99
4.5 Human connectome project	102
4.6 Conclusions	102
References	104

Part II - The Brain Functioning

5. Emotion and Decision Making,

by S	Simona Luzzi	107
5.1	What is an emotion?	107
5.2	The story of emotions: Moving from philosophy to neurology	108
5.3	Emotions and Decision Making	111
5.4	Emotion and decision making in psychiatric diseases	113
5.5	Emotion and decision making in degenerative brain disorders	114
5.6	Conclusions	115
Figu	ires	116
Refe	erences	117

6. Decision Making under Risk, Uncertainty and Ambiguity,

by Lucrezia Fattobene, Maria Gabriella Ceravolo	121
6.1 Traditional models of choice under risk	121
6.2 A neuroeconomics perspective of risk	124
6.3 Anticipatory Affect Model	127
6.4 Risk perception	129
6.5 Framing effect and neural circuits	131
6.6 Ambiguity and Uncertainty	133
6.7 Regret	134
6.8 Conclusions	135
Figures	136
References	138

7. The Neuroscience of Human Intertemporal Choice: State-ofthe-Art,

by Manuela Sellitto, Giuseppe di Pellegrino	141
7.1 Intertemporal choice and temporal discounting	141
7.2 Lesion studies	143
7.3 Intertemporal choice and other clinical populations	146
7.4 The malleability of intertemporal choice	148
7.5 Conclusions	149
References	151

Part III - The Brain in Economics

8. From Mental Accounting to Neuroaccounting,			
by Frank G.H. Hartmann	157		
8.1 Accounting, accountants and accounting research	158		
8.2 Levels of analysis in accounting research	160		
8.3 Conclusions	163		
References	164		

9. Neuromarketing: a Scientific Frontier for Marketing Research,

	rear official keeping, a Scientific Frontier for Marketing Research,	
by (Gianpiero Lugli	167
9.1	How to improve marketing research	167
9.2	Information and choice	168
9.3	Emotions and choice	169
9.4	How to improve advertising with the help of affective computing	
	technology	170
9.5	How to improve price promotion with the help of affective	
	computing technology	171
9.6	How to improve product innovation with the help of brain	
	imaging technology	172
9.7	How to improve nutrition communication with the help	
	of brain imaging technology	174
Figu	ures and tables	180
Refe	erences	185

10. Neurofinance: New Frontiers and Further Perspectives,

by Lu	crezia Fattobene, Maria Gabriella Ceravolo	1 87
10.1	Affective processes and financial decision making	188
10.2	Neuroscience and the possibility to test hypotheses in finance:	
	the realization utility	189
10.3	Traders' behaviour in an ecological setting	192
10.4	The predictive power of neurofinance: theory of mind	
	and financial bubbles	194
10.5	Ocular movements to test hypotheses in finance: the eye tracking	
	methodology	196
Figure	es	198
Refere	References 2	

11. *Homo Oeconomicus*: Personality Neuroscience and Psychopathy,

by Li	uca Passamonti	203
11.1	The concept of 'homo oeconomicus' and its critique	204
11.2	Behavioural economics and neuroeconomics	206
11.3	Decision-making neuroscience and its relationship with	
	neuroeconomics	208
11.4	The need to integrate emotions in decision-making models	
	and the contribution of personality neuroscience	211
11.5	Neuroscience of psychopathy as a modern model of the 'homo	
	oeconomicus'	218
11.6	Conclusions	221
Figur	res	222
Refer	rences	226

Part IV - New Curiosites about the Brain

12. A Viable Systems Approach (vSa) to Social Neu	rosciences,
by Sergio Barile, Francesca Iandolo, Stefano Armenia	235
12.1 The Viable Systems Approach: the viable system	as an
information variety	237

Can System Dynamics constitute a viable quantitative	
manifestation for a VSA?	239
Evidencing the Systemic Structure of the Learning Process	243
Conclusions	246
es	247
References	
	manifestation for a VSA? Evidencing the Systemic Structure of the Learning Process Conclusions es

13. Eye Movements and Investment Decisions,

by M	aria Gabriella Ceravolo, Vincenzo Farina, Lucrezia Fattobene,	
Lucia	a Leonelli	257
	Eye tracking and economic and financial decision making	258
13.2	Investor behaviour and the Key Investor Information Document	
	(KIID)	260
13.3	Conclusions	262
Figur	Figures 2	
Refer	rences	265
14. N	leuroeconomics and Insurance: a Look Forward,	
by Ri	iccardo Guerrini	267
Som	Some Reflections and Perspectives	
List o	List of Contributors	