

---

## Contents

---

<b>Foreword</b> . . . . .	xiii
<b>List of Acronyms</b> . . . . .	xvii
<b>Introduction</b> . . . . .	xxi
<b>Chapter 1. Evolution and Impact of Advanced Technologies on Humankind and Business</b> . . . . .	1
1.1. Introduction . . . . .	1
1.2. Evolution of technologies . . . . .	2
1.2.1. A challenge . . . . .	5
1.3. The United Nations: concerns and recommendations . . . . .	7
1.4. Evolution of production systems . . . . .	10
1.4.1. Question: Innovation and usefulness . . . . .	11
1.4.2. Question: Anticipation . . . . .	12
1.4.3. Toward personification . . . . .	13
1.5. Emergence of nanotechnologies . . . . .	16
1.5.1. Characteristics of nanotechnologies . . . . .	16
1.5.2. A paradigm change . . . . .	17
1.5.3. Perspectives, prospective and comments . . . . .	19
1.5.4. Questions of ethics: a new way of thinking . . . . .	20
1.6. Development of biotechnologies . . . . .	21
1.7. 3D printing and the future of manufacturing . . . . .	23
1.7.1. Impacts of innovation . . . . .	23
1.7.2. Some applications of 3D printing . . . . .	24
1.7.3. Basic questions of ethics . . . . .	26
1.7.4. How to fulfill ethics with 3D printing? . . . . .	27

1.8. The future: wedding of transdisciplinary technologies . . . . .	29
1.9. New opportunities: precision and sustainability . . . . .	30
1.9.1. Bio-wasting . . . . .	31
1.9.2. Importance of the precision process . . . . .	32
1.9.3. Application: oenology of “precision” and the sustainability . . . . .	34
1.10. The current digitization strategy . . . . .	35
1.11. Robotics, how and for which purpose? . . . . .	37
1.12. Cognitive sciences, cognitivism . . . . .	38
1.12.1. Weak artificial intelligence . . . . .	39
1.12.2. Strong artificial intelligence . . . . .	39
1.12.3. False artificial intelligence . . . . .	41
1.13. NBIC: innovation business models . . . . .	41
1.13.1. Vertical integration of the technological innovations . . . . .	41
1.13.2. Horizontal integration of the technological innovations . . . . .	42
1.13.3. Organization: the new business model . . . . .	43
1.13.4. “Data is centric” . . . . .	45
1.14. How to link ethics and innovation . . . . .	48
1.14.1. Introduction . . . . .	48
1.14.2. Some practices in innovation . . . . .	49
1.14.3. Ethical frameworks for innovation . . . . .	51
1.14.4. Conclusion on ethics and innovation . . . . .	53
1.15. Conclusion . . . . .	54
 <b>Chapter 2. Ethics and Transhumanism: Control using Robotics and Artificial Intelligence</b> . . . . .	57
2.1. Introduction to transhumanism . . . . .	57
2.2. Ethics, robotics and artificial intelligence . . . . .	58
2.2.1. Differences between computer, human brain, artificial intelligence and thinking . . . . .	58
2.2.2. We cannot predict the future, as we are living in a complex system . . . . .	60
2.2.3. People who fear risks are predicting reproducible robots . . . . .	64
2.2.4. Ethics: why scientists are so worried . . . . .	64
2.2.5. Ethics and safeguards in business . . . . .	66

---

2.3. Ethics and robotics . . . . .	67
2.3.1. Introduction . . . . .	67
2.3.2. Some characteristics about the weapons sciences: intelligent robots and wars . . . . .	68
2.4. Artilects . . . . .	71
2.5. The world: a hybrid planet with robotics and living species . . . . .	72
2.5.1. Application of the cobots . . . . .	73
2.5.2. From the drone to the autonomous car . . . . .	74
2.5.3. A necessary adaptation. . . . .	76
2.6. Ethics and the elementary rules of Asimov in robotics . . . . .	77
2.6.1. Ethics and sustainability . . . . .	78
2.6.2. General comments . . . . .	78
2.7. Conclusions and perspectives: the problems that could arise from robotics . . . . .	79
<b>Chapter 3. Ethics and the New Business and Labor Organizations . . . . .</b>	<b>81</b>
3.1. Preamble . . . . .	81
3.2. The context: new BDIs of the population, new opportunities . . . . .	83
3.3. Major changes in the shared and collaborative economy . . . . .	84
3.4. Concepts: some definitions and recollections . . . . .	85
3.4.1. The WTS is a modern market organization . . . . .	85
3.4.2. Web-to-Virtual Store . . . . .	86
3.4.3. Characteristics of the new ways of working . . . . .	90
3.5. Key factors of the new economic models . . . . .	91
3.5.1. Networking and the uberization of operations . . . . .	92
3.5.2. Positive and negative impacts of uberization? . . . . .	94
3.5.3. The problem of consumer-producer and producer-consumer . . . . .	95
3.5.4. Underlying mechanisms: differences with the present economic systems . . . . .	96
3.5.5. A social hypocrisy? . . . . .	98
3.6. The P2P management rules . . . . .	99
3.6.1. Ethics, liberalism and autonomy . . . . .	100
3.7. Assignments of means and resources . . . . .	101

3.8. Uber: a resources allocation problem . . . . .	102
3.8.1. Ethics . . . . .	103
3.8.2. Simplexification . . . . .	104
3.8.3. Complexification: influence of the cognitive approaches . . . . .	104
3.9. Business ethics: a resources allocation problem . . . . .	106
3.9.1. Business ethics and goods assignment . . . . .	107
3.9.2. Modeling ethics with utility theory . . . . .	108
3.10. Ethics in the business: more perspectives . . . . .	110
3.11. Ethics in Web-to-Virtual Store applications . . . . .	111
3.11.1. Introduction . . . . .	111
3.11.2. Ethics in the new transportation and moving opportunities . . . . .	112
3.11.3. Four other ways Uber is ethically challenged . . . . .	114
3.12. GIG economy: are the workers at Uber and Lyft happy? . . . . .	116
3.13. The real price of innovation . . . . .	118
3.13.1. Digitization . . . . .	119
3.14. Conclusion . . . . .	120
<b>Chapter 4. Ethics and Social Networking . . . . .</b>	<b>121</b>
4.1. Preamble . . . . .	121
4.2. Introduction: social networking . . . . .	122
4.2.1. Main characteristics of social innovation . . . . .	123
4.2.2. Consequences . . . . .	125
4.3. Some basic social definitions and principles . . . . .	127
4.3.1. Inclusion: the main principle of social networks . . . . .	128
4.3.2. Inclusiveness and virtues . . . . .	129
4.3.3. Principles of emergence . . . . .	130
4.4. Emergence and reverse engineering . . . . .	131
4.4.1. The paradigm change: principle of circularity . . . . .	133
4.5. Moving beyond technology-based solutions to complexity . . . . .	134
4.5.1. Changing our ways of thinking . . . . .	134
4.5.2. Changing the operational context . . . . .	135
4.5.3. Toward a new toolkit . . . . .	138
4.5.4. Consequences . . . . .	140
4.6. How to link ethics and social innovation . . . . .	141
4.6.1. Introduction . . . . .	141
4.6.2. Some practices in innovation . . . . .	141

---

4.7. Ethical frameworks for innovation . . . . .	144
4.7.1. Utilitarianism: the greatest good for the greatest number . . . . .	144
4.7.2. Rights: an individual's rights should not be violated . . . . .	145
4.7.3. Enterprise: personal involvements . . . . .	145
4.7.4. Conclusions . . . . .	146
4.8. Collaboration and cooperation . . . . .	147
4.8.1. Evolution: the development of cooperation and collaboration . . . . .	147
4.8.2. Definitions of collaboration and cooperation . . . . .	148
4.8.3. Main characteristics of collaboration and cooperation . . . . .	148
4.8.4. Differences between cooperation and collaboration approaches . . . . .	149
4.9. Comparison of the different modes of management . . . . .	150
4.9.1. Implementation of the different modes of management . . . . .	152
4.9.2. Required quality properties for an optimal management of “collective systems” . . . . .	154
4.9.3. Methodologies and learning in cooperation–collaboration-based systems . . . . .	155
4.9.4. Some specificities and ethical concerns . . . . .	156
4.10. Ethics and mimicry: a natural approach to social networking . . . . .	157
4.10.1. Artificial life and collective thinking science . . . . .	159
4.10.2. Application: role of feedbacks in mimicry and ascendancy over the others . . . . .	159
4.11. Conclusion . . . . .	160
 <b>Chapter 5. Ethics: Misuses and Whistleblowing in Big Data and the Web . . . . .</b>	163
5.1. Introduction . . . . .	163
5.2. Some statistics . . . . .	164
5.3. Problematic situation . . . . .	165
5.3.1. Data privacy and social networking . . . . .	165
5.3.2. The root causes of data breach . . . . .	167
5.3.3. The GDPR . . . . .	168
5.3.4. Where did ethics begin, and is there good or bad ethics? . . . . .	170
5.4. Accelerating factors . . . . .	171
5.4.1. Consequences . . . . .	173

5.5. Whistleblowing . . . . .	174
5.5.1. Definition of a whistleblower. . . . .	175
5.5.2. Two types of whistleblowing – same ethics?. . . . .	176
5.5.3. Notions of ethics in the case of whistleblowing . . . . .	177
5.5.4. Public support is growing for whistleblowers . . . . .	178
5.6. Business ethics: elements of methodology and implementation. . . . .	179
5.6.1. How to discuss new ethical issues in business? . . . . .	181
5.7. Whistleblower policies and corporate governance . . . . .	182
5.7.1. Lack of the above processes will erode ethics . . . . .	184
5.7.2. Benefits of whistleblower policies and procedures . . . . .	184
5.8. Conclusion . . . . .	185
5.8.1. Useful links and further information. . . . .	186
<b>Chapter 6. The Underlying Mechanisms to Improve Ethics: Virtues, Laws and Cultures . . . . .</b>	<b>187</b>
6.1. Introduction . . . . .	187
6.2. Examples of unethical behavior in the economy . . . . .	189
6.2.1. Example 1: the climate, a common idea of “catastrophism” . . . . .	189
6.2.2. Example 2: ethics and scientific advances . . . . .	190
6.2.3. Example 3: ethics, risks and uncertainties in the economy . . . . .	191
6.3. An exclusive or inclusive society: ethics and social relationships . . . . .	194
6.3.1. Example 4: social relationships and the “inclusive society” . . . . .	195
6.3.2. The challenge of aging in a company or in our society: proper ethics? . . . . .	198
6.4. Better ethics? Some constitutive elements. . . . .	201
6.4.1. Ethics and virtues: a reminder . . . . .	201
6.4.2. Ethics, virtue and corporate culture in a company. . . . .	204
6.5. Ethics and Christian culture . . . . .	204
6.6. Ethics and the evaluation of a corporate culture: application to IBM . . . . .	206
6.6.1. Consequence and aggregation of the concepts of ethics . . . . .	209
6.6.2. Elements involved in a corporate ethics . . . . .	209
6.7. Ethics and the Rotary culture . . . . .	210

---

<b>Chapter 7. Uses of Ethics: Between Virtue, Humanism and Illiteracy . . . . .</b>	<b>213</b>
7.1. Ethics: an attitude between responsibility and conviction . . . . .	213
7.1.1. A reminder: evolution and the role of antagonisms . . . . .	213
7.1.2. Notions of responsibility and conviction in ethics. . . . .	213
7.2. Ethics: between the exact requirements and the intents of the letter and spirit of the law . . . . .	214
7.2.1. Introduction . . . . .	214
7.2.2. The letter and the spirit of the law . . . . .	215
7.2.3. Ethics is not an ideology. . . . .	219
7.2.4. Ethics: illiteracy, education and learning . . . . .	220
7.2.5. The global situation of education and training in France . . . . .	220
<b>Chapter 8. Ethics, Temporality and Spirituality . . . . .</b>	<b>227</b>
8.1. Introduction: problematics . . . . .	227
8.2. Truth: general characteristics of ethics and morals. . . . .	228
8.3. Ethics and morale . . . . .	231
8.3.1. Ethics: an open door to transcendence . . . . .	232
8.3.2. Morality as a limited concept in the content of a law . . . . .	232
8.3.3. Is there a divergence or contradiction between morale and ethics? . . . . .	233
8.4. Ethics and spirituality . . . . .	233
8.5. Application: ethics and bioethics . . . . .	235
8.6. Ethics, spirituality, identity and religion . . . . .	235
8.7. Synthesis: hierarchy of ethics concepts . . . . .	238
8.8. Spirituality out of the religion framework . . . . .	240
8.9. Beyond ethics: the contribution of religious fact to excluded people . . . . .	240
8.10. Conclusion . . . . .	241
<b>Chapter 9. Ethics: Perspectives and the Future . . . . .</b>	<b>243</b>
9.1. Introduction . . . . .	243
9.2. The crisis is still here . . . . .	244
9.3. Post-modernism in detail: the story never ends. . . . .	246

9.4. Consequences: worldwide governance and hyper-democracies. . . . .	247
9.4.1. Application to a global governance . . . . .	248
9.4.2. Ethics and worldwide governance . . . . .	249
9.4.3. Evolution of hyper-collectivities or communities: impact on ethics . . . . .	249
9.5. Business ethics: new trends and perspective . . . . .	249
9.6. Ethics of consideration: a new concept . . . . .	251
9.6.1. The problem . . . . .	251
9.6.2. Generalization. . . . .	252
9.7. Toward a more Sustainable Ethics . . . . .	254
9.8. Ethics: evaluation and measurement . . . . .	256
9.9. A future vision of networking and Business Ethics. . . . .	258
9.10. Main conclusions. . . . .	261
9.10.1. Ethics: difficulties and limits of present approaches. Toward which future? . . . . .	262
9.10.2. Some comments . . . . .	263
<b>Bibliography</b> . . . . .	265
<b>Index</b> . . . . .	275