CONTENTS

IN	TRODUCTION	1
CF	IAPTER 1: LAW AND DEFEASIBILITY	
1.	Introduction	7
2.	Kinds of defeasibility 2.1 Non-monotonicity and defeasibility	8
	2.2 Ontological and conceptual defeasibility2.3 Epistemic and justification defeasibility	9 10
	2.4 Justification defeat and defeasible reasoning	1 1
	2.5 Absolute and relative justification	11
	2.6 Logical defeasibility	14
3.	Is legal reasoning defeasible?	15
	3.1 Justification defeat and the burden of proof	15
	3.2 Justification defeat and the context of discovery	17
	3.3 The defeasibility of legal rules	21
4.	Does legal reasoning require non-monotonic logic?	24
	4.1 Alchourrón's criticism of non-monotonic logic	24
	4.2 Soeteman on legal justification	26
	4.3 The nature of logic	29
5.	Conclusion	31

vi		Contents
CH	APTER 2: LAW AND COHERENCE	
1.	Introduction	33
2.	Justification 2.1 Acceptances 2.2 Internal personal justification 2.3 Justification for an audience 2.4 Broad coherentism	35 36 37 40 40
3.	Mutual support 3.1 Deductive support 3.2 Coherence as constraint satisfaction	43 43 45
	A case study 4.1 Contributive reasons 4.2 Missing links 4.3 Connections as elements of the theory 4.4 Abstract reasons as elements	48 49 50 51 52
5.	Conclusions from the case study	54
6.	Integrated coherentism	58
7.	The relativity of justification	60
8.	The base of coherence	62
9.	Authority versus coherence?	64
10.	Conclusion	67

Contents	vii
CHAPTER 3: REASON-BASED LOGIC	
1. Reason-based logic as an extension of predicate logic	69
 The language and ontology of RBL Sentences, states of affairs and facts Abstract states of affairs 	72 72 76
 3. Reasons 3.1 Kinds of reasons 3.2 Decisive reasons 3.3 Contributive reasons 3.4 Weighing contributive reasons 3.5 Abstract reasons 3.6 Weighing knowledge 	77 78 79 79 81 84
4. Reasoning with contributive reasons	84
 5. Rules 5.1 The representation of rules in RBL 5.2 Rule application 5.3 Applicability as a contributive reason to apply a rule 5.4 Non-applicability as a contributive reason against application 	87 88 90
6. Reasoning with rules6.1 Simple rule application6.2 Rule conflicts	92 93 94
7. Reason-based logic as a non-monotonic logic	95
Appendix	98

	•		•
V	1	1	1

Contents

CHAPTER 4: COMPARING ALTERNATIVES

1.	Right and better	101
	Qualitative comparative reasoning 2.1 Comparing reason sets 2.2 Degrees and probabilities 2.3 The 'logic' of comparison 2.4 Weak Transitivity	102 103 104 105 107
3.	Theory construction	108
4.	Comparing solutions for a case type	110
5.	Comparing goal sets	112
6.	Case-based reasoning as a form of comparative reasoning	113
7.	Qualitative comparative reasoning and legal proof	119
8.	Comparing sets of reasons	122
9.	Comparative reasoning about sets of contributive reasons	127
10.	Comparing alternatives	129
11.	Application of the formalization	131
12.	Related research	134

•
1X

CHA	PTER	5.	RIII	E	CONSISTENCY
		0			

1.	Introduction	135
2.	Rules as conditionals	136
3.	Consistency, compatibility and constraints	139
4.	Rules as constraints	142
5.	Conditionless rules	144
6.	Exceptions to rules	145
7.	Model theory for rules	147
8.	Constraints	149
9.	Compatibility of states of affairs	152
10.	The consistency of rules	153
11.	Minimizing exceptions	156

CHA	PTER	6:	WHA	T	IS	A	NORM?
		-	, ,				

1.	Introduction	159
2.	The command theory of norms	161
3.	Norms as effects of commands	164
	3.1 Searle's distinctions	165
	3.2 Constitutives, commissives, orders and obligations	166
	3.3 Conventional acts	168
	3.4 Conclusions concerning the command theory	170
4.	Deontic facts	171
	4.1 Linguistic evidence for the view that norms are deontic 171	facts
	4.2 Searle on social and institutional facts	173
	4.3 Weinberger on the dual nature of norms	174
	4.4 A moderate form of idealism	175
5.	The correspondence theory of truth	176
	5.1 Criticisms of the correspondence theory	177
	5.2 Language-dependent entities	178
	5.3 The correspondence theory rehabilitated	179
	5.4 Ockam's razor?	180
6.	Reason-based facts	181
	6.1 Dependent facts	182
	6.2 Two kinds of reason-based facts	184
7.	Deontic facts	184
	7.1 The gap between 'is' and 'ought'	185
	7.2 The social existence of rules	186
	7.3 Why the world is not inert	188
	7.4 Types of deontic facts	191
8.	Of rules	192
	8.1 The ontological effects of rules	193
	8.2 Legal rules	194
	8.3 The world-to-word fit of rules	195
	8.4 Deontic rules and commands	196
	8.5 The descriptive counterpart of deontic rules	197
9.	What is a norm?	201

CHADTEL	7.	IFCA	TZ	ATICS	ANDI	FCAT	DYNAMIC	C
CHAPIRE	(/ ;	LICITA		AIICO	AND			13

1.	Modeling the law	203
2.	Two types of connections between states of affairs	204
	States of affairs 3.1 Temporary and durable states of affairs 3.2 Supervenience 3.3 Modalities	206206207207
4.	Events 4.1 The effects of an event 4.2 Supervenience of events	208209211
5.	Rules	212
6.	Signing a sales contract	214
7.	Classification	216
	Rights 8.1 Claims 8.2 Property rights 8.3 Human rights	218219220222
9.	Juridical acts	222
10.	Validity	223
11.	Juristic facts	225

V	1	1
Λ	1	

CHAPTER 8: DIALECTICS IN ARTIFICIAL INTELLIGENCE AND LAW

1.	Introduction	227
2.	The pioneering work of Lorenzen and Lorenz 2.1 Validity as the outcome of a winning strategy 2.2 Dialectical characterization of logical operators 2.3 Some characteristics of the Dialogische Logik	228229230231
3.	Defeasibility and dialectics 3.1 Battles of arguments 3.2 Static dialectics 3.3 Dynamic dialectics	232234237238
	Variations on the dialectical theme 4.1 The HYPO-system 4.2 Dialectics as models of bounded rationality 4.3 Dialectics as a theory of rational acceptance	240 240 242
5.	Truth and justification; a philosophical digression 5.1 Habermas' consensus theory of truth 5.2 Overcoming foundationalism 5.3 Law as reason-based fact	243244245247
6.	Gordon's Pleadings Game	248
7.	The procedural and rhetorical nature of the law	251
8.	The role of legal rules in law-establishing dialogues	254
9.	Reasoning about dialogue rules and dialogue moves	256
10.	The burden of proof and the role of the arbiter	257
11.	Mediating systems	259
12.	Concluding observations	262

Contents

CHAPTER 9: LEGAL REASONING AND
LEGAL INTEGRATION

1.	Introduction	265
2.	The case of the murderous spouse	266
3.	The law as an open system	269
4.	Of reasons and their logic 4.1 Reasons 4.2 Rules 4.3 Principles	270271272273
5.	The subsumption model of rule-based reasoning	274
6.	The reason-based model of rule application 6.1 The first extension of the reason-based model of	276
	rule-application	276
	6.2 The second and third extension to the reason-based model of rule-application	278
7.	The two-layer model of the law	279
8.	The reason-based model of rule application and the open nature of the law	281
9.	The reason-based model of case-based reasoning	284
10.	Comparing case-based and rule-based reasoning	288
11.	The case of the murderous spouse revisited	290
12.	The possible and the actual	293
13.	Conclusion	294
BIE	BLIOGRAPHY	297
INI	DEX	319