

Fabrice Correia • Sven Rosenkranz

Nothing To Come

A Defence of the Growing Block
Theory of Time



Contents

1	Taking Tense Seriously	1
1.1	The Operator Approach to Tense	2
1.2	Propositional Tense Logic	4
1.3	<i>Truth simpliciter</i>	8
2	Existence, Quantification and Identity	13
2.1	Temporaryism vs Permanentism	14
2.2	Quantification Theory and the Logic of Identity	17
2.3	Unrestricted Quantification and the Temporal <i>Being Constraint</i>	20
3	Temporal Relations	27
3.1	McTaggart on the B-Series	28
3.2	Temporal Location	30
3.3	Precedence	33
4	The Growing Block	35
4.1	The Broad Picture	36
4.1.1	Constant Growth	36
4.1.2	The Edge of Becoming	39
4.1.3	Where Does the Edge of Becoming Lie?	41
4.2	GBT Reloaded	42
4.3	No Funny Business	51
5	The Other Contenders	59
5.1	The Problem with Presentness	62
5.2	Presentism without Presentness	65
5.3	Dynamic Permanentism	71
6	The Epistemic Objection	85
6.1	How Past Things Are	88
6.2	Looking Back Onto the Past	92
6.3	Knowing to Be on the Edge of Reality	95

7 Bivalence, Future Contingents and the Open Future	99
7.1 The Semantic Objection.	100
7.2 The Grounding Requirement on Truth Revisited.	106
7.3 Indeterminism and the Open Future	112
8 Classical Theories of Time, and Relativity	117
8.1 Relativistic Physics and an Absolute and Total Temporal Order.	119
8.2 On Privileging a Foliation: Contents <i>vs</i> Structure	125
8.3 Preparing for the Worst: The Revisionary Strategy	131
9 Spatiotemporayism	135
9.1 Causal Structure and Factual Variation across Spacetime	137
9.2 Spatiotemporal Logic.	139
9.3 Varieties of Spatiotemporayism	146
9.4 The Intransitivity of Being.	151
9.5 Recapture of the Classical Views.	156
Concluding Remarks	163
Appendix 1: Semantic Characterisation of the Classical Systems	165
Appendix 2: Semantic Characterisation of the Relativistic Systems	177
Appendix 3: Recovering the Classical Systems	185
Bibliography	191
Index	195