

Table of Contents

1	Introduction	1
2	Theories of Attention	8
2.1	Early Theories	8
2.2	Posner and Snyder: Automatic Activation and Conscious Attention	13
2.3	Shiffrin and Schneider: Controlled and Automatic Processes	18
2.4	Treisman and Gelade: Features and Objects	24
2.5	Summary	27
3	Theories of Processing Resources	28
3.1	Baddeley and Hitch: Working Memory	28
3.2	Norman and Bobrow: Data-Limited and Resource-Limited Processes	33
3.3	Johnston and Heinz: Multi-Mode Theory	35
3.4	Navon and Gopher: Multiple Resources	39
3.5	Conclusions	43
4	Theories of Arousal and Performance	47
4.1	The Yerkes-Dodson Law	47
4.2	Easterbrook's Hypothesis	49
4.3	Broadbent: Decision and Stress	54
4.4	Näätänen's Theory	56
4.5	Kahneman: Attention and Effort	57
4.6	Thayer: Self-Reported Arousal	60
4.7	Hasher and Zacks: Automatic and Effortful Processes	63
4.8	Summary and Conclusions	66
5	Incentives and Motivation	67
> 5.1	Reinforcement and Incentives	68
> 5.2	Learning and Memory: Atkinson and Wickens (1971)	68
5.3	Short-Term Memory: Weiner	73
5.4	Task Characteristics	74
> 5.5	Performance Efficiency	83
> 5.6	Intrinsic and Extrinsic Motivation	84
> 5.7	A Theoretical Overview	87
6	Anxiety and Performance	95
> 6.1	Worry and Emotionality	97
> 6.2	Working Memory Capacity	99

6.3	Spence and Spence (1966): Task Difficulty	101
6.4	Anxiety and Motivation	108
6.5	Failure and Shock	112
6.6	Failure and Success: A Cognitive Approach	113
6.7	Depth and Elaboration of Processing	115
6.8	Theoretical Positions	120
7	Endogenous Determinants of Arousal	124
7.1	Introversion – Extraversion	124
7.2	Time of Day	138
7.3	Sleep Deprivation	146
8	Exogenous Determinants of Arousal: Noise	156
8.1	Vigilance Task Performance	156
8.2	Continuous Tasks: Serial Reaction and Tracking . . .	157
8.3	Learning and Memory	159
8.4	Attentional Selectivity	164
8.5	Theoretical Formulation	167
8.6	Summary	172
9	Conclusions and Speculations	173
9.1	The Yerkes-Dodson Law	173
9.2	Stages of Processing	178
9.3	Two Arousal Systems	182
10	References	187
11	Author Index	201
12	Subject Index	205