## **Contents**

## PREFACE VII

1	Introduction: The Construct of Motivation	1
	The Construct of Motivation	2
	Observable Events and Inferred Events 2 Some Historical Considerations 2 Usefulness of the Construct 5	
	Motivation in Specialty Areas within Psychology	12
	Summary	14
	Suggested Readings	15
2	Methodological Issues	16
	Defining a Construct	16
	Operational Definitions and Problems of Measurement 16 Response Measures 21	
	Differentiating the Relevant Variable	31
	Subject versus Task Variable 31	
	Antecedent versus Outcome 33 Performance versus Learning 35	
	Performance versus Learning 33	
	Summary	38
3	Doing an Experiment	40
	Designing an Experiment	41
	Experiment versus Field Study 41 Statistical Tests 43 Design and Hypothesis 48 An Assignment: Students Design an Experiment 53 An Illustration of Errors of Design 53	
	Conducting an Experiment	56

	0
XII	Contents

L	Contents	
	Writing up an Experiment	58
	Guidelines for Writing up Experiments	58
	Title 59 Abstract 59 Introduction 59 Method 60 Results 60 Tables 61 Figures 61 Discussion 62 References 63 References Cited in the Text 63 Use of Headings 64	
	Summary	64
	Suggested Readings	65
4	Dynamic Tension: Generalized Drive, Arousal, Activation	67
	Energizing Function of Motivation	67
	Some Basic Terms and Fundamental Assumptions	68
	Physiological Processes Involved in the Energizing Function	70
	Physiological Measures Indicative of the Energizing Function of Motivation 70 The Reticular Activating System 77 Historical Overview 79	
	Physiological and Behavioral Arousal	80
	Peripheral versus Central Physiological Processes 80 Behavioral versus Physiological Processes 82 Linear versus Curvilinear Predictions 84	
	Theoretical Controversies	86
	Cues and Direction versus the Energizing Function of Motivation 86 How Is Emotion Related to Motivation? 90 Activity versus Activation 92	
	Physiological Arousal, Need, and Motivation	97
	Oxygen Deprivation: Need versus Motivation 98 Is Physiological Arousal the Same as Motivation? 99	

	Contents	xiii
	An Experiment	103
	An Experimental Test of the Effect of Arousal on Response Strength 104	
	Summary	107
5	Dynamogenic Factors in Motivation: I. Activity	110
	Activity	110
	Problems of Measurement and Apparatus 111 Activity as Motion 115	
	Does Activity Increase with Drive? 120 Is Activity a Drive? 128	
		130
	Experiments	150
	Experiment II. The Effect of Food Deprivation on Activity in the Rat 130	
	Experiment III. Observation of Activity of Animals in the Zoo 133 Experiment IV. The Effect of Activity Restriction on Activity 135	
		400
	Summary	136
6	Summary  Dynamogenic Factors in Motivation: II. Tension and Arousal	136
6	Section	
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139	138
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145	138
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139  The Problem of Stereotypy 140  Individual Differences: Personality Variables 141	<b>138</b>
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145 The Role of Situational Variables 150  Performance and Arousal	138
6	Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145 The Role of Situational Variables 150  Performance and Arousal Is Performance Linearly Related to Arousal? 156 Does Performance Have an Inverted-U Relationship to Arousal?	<b>138</b>
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145 The Role of Situational Variables 150  Performance and Arousal Is Performance Linearly Related to Arousal? 156 Does Performance Have an Inverted-U Relationship to Arousal? 166 The Yerkes-Dodson Law 173	<b>138</b>
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145 The Role of Situational Variables 150  Performance and Arousal Is Performance Linearly Related to Arousal? 156 Does Performance Have an Inverted-U Relationship to Arousal? 166	<b>138</b>
6	Dynamogenic Factors in Motivation: II. Tension and Arousal  Arousal and Physiological Measures  Does Motivation Involve Diffuse Generalized Arousal? 139 The Problem of Stereotypy 140 Individual Differences: Personality Variables 141 Do Physiological Measures in General Indicate Arousal 145 The Role of Situational Variables 150  Performance and Arousal Is Performance Linearly Related to Arousal? 156 Does Performance Have an Inverted-U Relationship to Arousal? 166 The Yerkes-Dodson Law 173	<b>138</b>

•	~
XIV	Contonte
AIV	Contents

Summary

	Experiment VI. The Effect of Dynamometer Tension on Pursuit- Rotor Performance 188 Experiment VII. A Test of the Yerkes-Dodson Law with Pursuit- Rotor Performance 190	
	Summary	191
7	Homeostatic Drives and Consummatory Behavior: Hunger and Thirst (Richard E. Musty)	194
	Hunger	197
	Drive Instigation and Consummatory Response 197 Drive Stimuli (Internal) and Consummatory Response 204 Drive (Cortical) Processes and Consummatory Response 214	
	Thirst	218
	Drive Instigation and Consummatory Response 218 Drive Stimuli (Internal) and Consummatory Response 219	
	Experiments	229
	<ul><li>Experiment VIII. Effects of Deprivation on Consummatory Behavior in the Rat 229</li><li>Experiment IX. Effects of Sugar Solutions on Cessation of Eating 230</li></ul>	
	Summary	231
8	Drive, Reward, Cognition, and Incentive	232
	Drive and Learning	232
	Drive, Reward, and Expectation	232
	The Drive-Reward Relationship 233 Primary and Secondary Drives and Rewards 236 Goals as Incentives and Expectancies 243 Level of Aspiration and Expectation 246	
	Experiments	250
	Experiment X. The Effect of Hunger and Amount of Food Reward on Running Speed 250  Experiment XI. Information about the Performance of Others, Goal Setting, and Performance 252	
	Summary	255
	.3000000000	

	Comen	ts Av
9	Escape, Avoidance, and Anxiety	257
	Escape and Avoidance	257
	Escape and Avoidance Conditioning 257 Punishment, Fear, and Anxiety 260 Learned Helplessness 263 The Information Value of Aversive Events 264	
	Escape and Avoidance Procedures with Human Subjects	267
	Avoidance, Aggression, and Reward Omission 268 Aversiveness of Signaled versus Unsignaled Shock 270 Response Prevention (Flooding) 273	
	Human Anxiety	276
	Anxiety Theory 276 Methods of Measuring Anxiety 280 Empirical Evidence 281	
	Experiments	290
	Experiment XII. Aquatic Avoidance Conditioning 290 Experiment XIII. The Effect of Situationally Induced Anxiety on Verbal Learning 293	
	Summary	297
10	Success, Failure, Causal Beliefs, and Need for Achievement	301
	Causal Beliefs and Need for Achievement	303
	Relationship between Beliefs and Behavior 303 The Theory of Achievement Motivation 305	
	Causal Beliefs Concerning Praise and Reproof, Success and Failure	310
	Praise and Blame, Rewards and Punishments 311 Attribution of Responsibility and Locus of Control 316	
	An Experiment	318
	Experiment XIV. The Effect of Belief on Task Performance 318	
	Summary	321

XV1	Contents
VAT.	Comens

NAME INDEX 445

1	Social Motivation and Behavior: I. Aggression and Mastery	325
	Aggression	325
	Aggression in Animals 325 Aggressive Behavior in Humans 331	
	Mastery and Achievement	350
	Machiavellianism, Need for Power, and Need for Achievement 351 Motivation and Achievement in Women 352	
	Summary	358
12	Social Motivation and Behavior: II. Love, Affection, and Sex	362
	Sexual Motivation	363
	Biological Perspectives 363 Sexual Arousal in Humans 375	
	Love and Attachment	382
	Love and Attachment in the Young 383 Love and Attachment among Friends 385 Love and Attachment in Heterosexual Relationships 387	
	Summary	389
ΑF	PPENDIX: THE t TEST 393	
RE	EFERENCES 397	
SU	JBJECT INDEX 439	