Contents

WORLD PERSPECTIVES—What I his Series Weans	
Ruth Nanda Anshen	хi
Acknowledgments	xix
•	
PART I MENTAL EVOLUTION	
1. Natural Fate Versus Human Control: The Process	
of Ecological Liberation and Domination	3
Freedom of Choice	J
Awareness	
Responsibility	
Accumulation of Power	
2. The Imbalance Between Material and Mental	
Evolution	13
3. Mental Liberation and Domination	17
PART II THE BRAIN AND MIND AS FUNCTIONAL ENTITIES	
4. What is the Mind?	23
Mind and Soul	
The Brain Defined	
The Mind as a Functional Entity	
Heterogeneous Qualities of the Mind	
5. Extracerebral Elements of the Mind: When and	
How the Mind Is Formed	36

V111	CONTENTS
1 111	

6.	The Mindless, Newborn Brain	47
7.	Sensory Dependence of the Adult Mind	59
8.	Working Hypothesis for the Experimental Study of	
	the Mind	67
9.	Historical Evolution of Physical Control of the	
	Brain	7º
PΑ	RT III EXPERIMENTAL CONTROL OF BR	AIN
	FUNCTIONS IN BEHAVING SUBJECTS	
10.	Physicochemical Bases of Behavioral Activity	76
11.	Methodology for Direct Communication with the	
	Brain	81
	Implantation of Electrodes in Animals	
	Electrodes in the Human Brain	
	Two Way Radio Communication with the Brain	
12.	Electrical Stimulation of the Brain (ESB)	97
13.	Motor Responses	100
	Motor Activation in Animals	
	Motor Effects in Man	
14.	Hell and Heaven Within the Brain: The Systems for	
_	Punishment and Reward	117
	Perception of Suffering	
	Violence Within the Brain	
	Anxiety, Fear, and Violence Evoked by ESB in	
	Man	
	Pleasurable Excitation of the Animal Brain	
	Human Pleasure Evoked by ESB	
	Friendliness and Increased Conversation under	
	Electrical Control	
15.	Hallucinations, Recollections, and Illusions in Man	150
16.	Inhibitory Effects in Animals and Man	159

PART IV EVALUATION OF ELECTRICAL CONTROL OF THE BRAIN

17. Brain Stimulation Triggers Physiological	
Mechanisms	180
18. Electrical Activation of the "Will"	184
19. Characteristics and Limitations of Brain Control	190
Predictability	
Functional Monotony	
Skillful Performance	
Individual Stability	
Technical Complexity	
Functions Beyond ESB Control	
20. Medical Applications	196
Diagnosis	
Therapy	
Circumvention of Damaged Sensory Inputs	
Brain Viability	
21. Ethical Considerations	207
Clinical Use of New Procedures	
Human Experimentation	
Electrical Manipulation of the Psyche	
22. Social Implications	219
23. Neurophysiology and Mental Activity	224
PART V TOWARD A PSYCHOCIVILIZED SOC	CIETY
24. Social Dependence and Individual Freedom	231
25. Natural Causality and Intelligent Planning	245
26. A Tentative Plan	257
Bibliography	263