W04635

The papers of Warren Sturgis McCulloch are available for scholarly use at the American Philosophical Society in Philadelphia, Pennsylvania.

TABLE OF CONTENTS

VOLUME II

		Page
39	Functional Organization of the Medial	
	Aspect of the Primate Cortex [56]*	381
40	The Functional Organization of the	
	Cerebral Cortex [57]	386
41	Cortico-Cortical Connections [58]	
42	Physiological Neuronography of Some	
	Cortico-Subcortical Connections in the	
	Chimpanzee [62]	441
43	The Modern Concept of Schizophrenia [65]	
44	Changes of Noble-Metal Electrode EMF	
	of Cerebral Cortex [66]	465
45	A Heterarchy of Values Determined by	
	the Topology of Nervous Nets [67]	467
46	Letter to the Editor [68]	472
47	Michael Arbib: A Note on	
	A Heterarchy of Values	473
48	Rapid Changes in Cerebral Oxygen Tension	male 3a
	Induced by Altering the Oxygenation and	
	Circulation of the Blood [69]	
49	A Cortico-Bulbo-Reticular Pathway	fieleI
	from Area 4-s [70]	
50	The Projection of the Frontal Lobe of	Alasii 102
	the Hypothalamus [71]	488
	/1	

Numbers in brackets [] following articles by W.S. McCulloch refer to the list of his publications in the Appendix.

51	A Suppressor Cerebello-Bulbo-Reticular	
	Pathway from Anterior Lobe and	
	Paramedian Lobules [72]	496
52	Sundry Changes in Physiology of Cerebral	
	Cortex Following Rapid Injection of	
	Sodium Cyanide [74]	497
53	Valentino Braitenberg: Comments on	
	Modes of Functional Organization of the	
	Cerebral Cortex	498
54	Modes of Functional Organization of the	
	Cerebral Cortex [75]	500
55	Michael Arbib: A Note on	
	How We Know Universals	511
56	Jerome Y. Lettvin: Warren and Walter	514
57	How We Know Universals: The Perception	
	of Auditory and Visual Forms [76]	530
58	The Statistical Organization of Nervous	
	Activity [80]	551
59	A Recapitulation of the Theory with a	
	Forecast of Several Extensions [81]	560
60	Mallory Selfridge: W.S. McCulloch and the	
	Foundations of Al	579
61	The Brain as a Computing Machine [86]	582
62	A Cerebello-Bulbo-Reticular Pathway for	
	Suppression [88]	597
63	Physiological Processes Underlying	
	Psychoneuroses [00]	607
64	How Nervous Structures Have Ideas [93]	621
65	Machines That Think and Want [95]	629
66	The William Is in the Head 197/981	650
67	in Electrical Hypothesis of Central	630
	Inhibition and Facilitation [90]	720
68	Positivity in Ventral Horn during	/20
	Bulbar Reticular Inhibition of	
781	Motoneurons [99.1]	721
69	Brain and Behavior [100]	
70	Donald M. Mackay: Introductory Notes	
	The Limiting Information Canacity	
	of a Neuronal Link	-1/
		746

	The Limiting Information Capacity of a Neuronal Link [104]	749
72	A Confession of Ignorance [105]	758
73	The Past of a Delusion [107]	
74	Jack Cowan: Epilogue	792

ARTICLES IN VOLUME I

Prefa	ice by Heinz von Foerster	i
Fore	word by Rook McCulloch	1
Intro	duction by Jerome Y. Lettvin	/
1	Recollections of the Many Sources	21
	of Cybernetics [213]	21
2	Jerome Y. Lettvin: Strychnine Neuronography	50
3	An Extinction Phenomenon on Stimulation	50
	of the Cerebral Cortex [6]	59
4	A Photokymographic Method with Continuous	-
	Cathode Ray Oscillograms [11]	63
5	On the Nature and Distribution of Factors	
	for Facilitation and Extinction in the	
	Central Nervous System [17]	66
6	Functional Activity and pH of the	
	Cerebral Cortex [19]	68
7	Functional Organization in the Sensory Cortex	
	of the Monkey (Macaca Mulatta) [20]	81
8	The Direct Functional Interrelation of	
	Sensory Cortex and Optic Thalamus [21]	98
9	Irreversibility of Conduction in the	
	Reflex Arc [24]	109
10	Observations on the pH of the Arterial	
	Blood, the pH and the Electrical	
	Activity of the Cortex [26]	111
11	Factors for Facilitation and Extinction	
10	in the Central Nervous System [28]	117
12	The Knee-Jerk Following Facilitation	
	and Extinguishing Stimulation of the	
12	Related Cortical Foci [30]	154
13	Physiological Delimitation of Neurones	
14	in the Central Nervous Systems [32]	155
14	The Sensory Cortex of the Chimpanzee [34]	164
16	Schooly Cortex of Chimpanzee [38]	167
17	The cortex of the Chimpanzee [41]	184
17	and the dependence of Sensory	
	Cortex and Thalamus [42]	201

18	Suppression of Motor Response Obtained from	
	Area 4 by Stimulation of Area 4s [43]	208
19	Functional Organization of Sensory and	
	Adjacent Cortex of the Monkey [44]	221
20	Cortical Origin and Distribution of	
	Corpus Callosum and Anterior Commisure	
	in the Monkey (Macaca Mulatta) [45]	228
21	Physiological Neuronography of the	
	Cortico-Striatal Connections [47]	237
22	Excitability of Cerebral Cortex in Infant	
	Macaca Mulatta [48]	264
23	Joannes Gregorius Dusser de Barenne	
	(1885-1940) [37]	270
24	Henk van der Tweel: A Center Around	
	One Person	274
25	A. Verveen: A Personal Account	
26	The Uses of Strychnine [177]	
27	The Functional Organization of	
	Occipital Lobe [49]	290
28	Motor Response to Stimulation of Cerebral	La
	Cortex in Absence of Areas 4 and 5	
	(Macaca Mulatta) [50]	318
29	Long Association Fibers in Cerebral Hemispheres	
	of Monkey and Chimpanzee [54]	326
30	Jerome Y. Lettvin: Warren as a Teacher	332
31	Manuel Blum: Notes on McCulloch-Pitts'	
	A Logical Calculus of the Ideas Immanent in	
	Nervous Activity	339
32	Michael Arbib: Comments on McCulloch-Pitts'	
	A Logical Calculus of the Ideas Immanent in	
	Nervous Activity	341
33	A Logical Calculus of the Ideas Immanent	
	in Nervous Activity [51]	343
34	Rook McCulloch: On F.S.C. Northrop	
35	F.S.C. Northrop: On W.S. McCulloch	
36	A Statistical Consequence of the Logical	
	Calculus of Nervous Nets [52]	370
37	Rapid Changes in the O, Tension of Cerebral Cortex	
	during Sleep Induced Convulsions [55]	373
	O Contractor Cont	

38	Norman Geschwind: McCulloch's Publication on	
	Mapping of Cortical Connections by	
	Strychnine Neuronography	378
	ARTICLES IN VOLUME III	
75	Heinz von Foerster: Circular Causality	808
76	Introductory Remarks [109]	
77	Summary of the Points of Agreement Reached in the	
	Previous Nine Conferences on Cybernetics [110]	
78	Investigation on Synaptic Transmission [108]	
79	The Colloquy of Living Things [162]	
80	Knower, Known and Knowledge Analytical [216]	865
81	Through the Den of the Metaphysician [120]	879
82	M. Vasalis: Introduction to Poetry	895
83	The Natural Fit [143]	
84	Poetry	
85	One Word After Another [215]	956
86	Mysterium Iniquitatis of Sinful Man	
	Aspiring into the Place of God [124]	980
87	Information in the Head [116/117]	989
88	R.C. Gesteland: The Olfactory Adventure	1007
89	P.D. Wall: An Assessment of the Significance of the	
ERR	Physiological Contributions after 1950	1015
90	Reflex Inhibition by Dorsal Root Interaction [127]	1017
91	Effects of Strychnine with Special Reference to	
00	Spinal Afferent Fibers [128]	1034
92	The Terminal Arborization of the Cat's Pyramidal	
02	Tract Determined by a New Technique [120]	1058
93	Ellints on Nerve Impulse Transmission [130]	1069
94	Toward Sollie Circuitry of Ethical Robots	
	of all Observational Science of the Genesia	
	of Social Evaluation in the Mind-Like	
95	Behavior of Artifacts [133]	1077
15	Tactors Eliming the Waximum Impulse	
	Transmitting Ability of an Afferent	
96	System of Nerve Fibers [136] The Biologist, the Physicist and the	1086
- 0	Description of the state of the	
	Engineer [138a]	1110

97	Biological Computers [138b]	1120
98	Membrane Currents in Clamped Vertebrate	
WEE.	Nerve [139]	1123
99	Jack Cowan: Neuronal Nets	1127
100	The Stability of Biological Systems [140]	1139
101	Agathe Tyche, of Nervous Nets -	
	the Lucky Reckoners [144]	1148
	and a local state of the second of the secon	
	ARTICLES IN VOLUME IV	
102	What the Frog's Eye Tells the Frog's Brain [146]	1161
103	Two Remarks on the Visual System of the	
	Frog [155]	1173
104	The Reliability of Biological Systems 149]	1193
105	Where Is Fancy Bred? [152]	
106	What Is a Number That a Man May Know It,	
	and a Man That He May Know a	
	Number? [153]	1225
107	Abracadabra [154]	1244
108	The Utility of Anastomotic Nets [157]	1256
109	Neurological Models and Integrated	
	Processes [158]	1260
110	The Imitation of One Form of Life by	
	Another - Biomimesis [159]	1271
111	Anastomotic Nets Combating Noise [160]	1276
112	Reliable Systems Using Unreliable Units [170]	
113	J. Drooglever-Fortuyn: Reticular Formation and	
	Choice of Behavior	
114	The Command and Control System of the	
	Vertebrates [182]	1306
115	Regenerative Loops [205]	1307
116	A. Scheibel: Warren and the Brain Stem	
	Reticular Core	1315
117	The Reticular Formation Command and	
	Control System [208]	1322
118	Control of Posture and Motion [210]	1333
119	M.A. Arbib: Note on	
	Control of Posture and Motion	1338

120	Studies in Carbohydrate Metabolism and Its Regulation in Health and Disease of the	
		1339
121	Norbert Wiener and the Art of Theory [171]	
122	What's in the Brain That Ink	
122	May Character? [172]	1351
123	1.2m) C	
123	What's in the Brain That Ink May Character?	1361
124	Cybernetic Problems of Learning [183]	
125		
126	Circularities in Nets and the Concept of	1570
120	Functional Matrices [199]	
127	Of I and It [204]	
128		1300
120	Ragnar Rokr: The Effects of Conscious	1 400
	Purpose on Human Adaptation [211]	1400
	APPENDIX	
	ntributors	1411
List	of Photographs	1415
Bio	graphical Dates	
	blications by W.S. McCulloch	1/10
Ind	ex	