Psychology

Pythagoras to Present

John C. Malone

A Bradford Book The MIT Press Cambridge, Massachusetts London, England

© 2009 Massachusetts Institute of Technology

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

MIT Press books may be purchased at special quantity discounts for business or sales promotional use. For information, please email special_sales@mitpress.mit.edu or write to Special Sales Department, The MIT Press, 55 Hayward Street, Cambridge, MA 02142.

This book was set in Palatino on 3B2 by Asco Typesetters, Hong Kong. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Malone, John C.

Psychology: Pythagoras to present / John C. Malone.

p. cm.

Includes bibliographical references and index (p.).

ISBN 978-0-262-01296-6 (hardcover: alk. paper) 1. Psychology—History. I. Title.

2008034947

BF81.M35 2009

150.9—dc22

10 9 8 7 6 5 4 3 2 1

| Alexander, 68–70 | Pelagian heresy and faculties, 101-103 |
|---------------------------------------|--|
| American psychology's beginnings, 333 | private experience, 99–100 |
| Anaxagoras, 37–38 | psychology, 99–100 |
| Anaximander, 28–29 | the self, 100 |
| Anaximenes, 29 | theology, 99 |
| Angell, J., 367 | time, 103–104 |
| Antisthenes, 84–85 | Averroës, 108–109 |
| Apparent motion, 426–428 | Avicenna, 105-108 |
| Aquinas, 104–105, 109–114 | Awareness and memory, 267 |
| adaptation of Avicenna, 110–111 | • |
| and the afterlife, 112–113 | Bacchus/Dionysus, 20 |
| vs. the Averroëists, 111–112 | Bacon, F., 120–126 |
| and Hume, 114 | Experimenta, 124 |
| reason vs. will, 113-114 | his life, 120–121 |
| Summa Theologica, 111–112 | idols, 124–125 |
| Arcesilaus, 86 | induction, 122-124 |
| Aristotle, 68–87 | Novum Organum, 121–124 |
| actualization, 71–72 | Bain, A., 210–213 |
| and Alexander, 68-69 | Behaviorism, 483-520 |
| and Ayn Rand, 81–82 | how many kinds?, 491-493 |
| De Anima, 73–77 | Rachlin's molar view, 495-496 |
| entelechy, 72 | Bell, C., 288–289 |
| four causes, 71–72 | Berkeley, G., 163-171 |
| free will, 80–81 | associationism, 168-169 |
| habit, 79–80 | destroying the calculus, 169-171 |
| and motivation, 75-76 | his life, 163–165 |
| Nichomachean Ethics, 77-81 | New Theory of Vision, 165–167 |
| not an associationist, 76-77 | Bernoulli, D., 515-516 |
| patterns of actions, 78-79 | Binet and Henri, 348-350 |
| soul and body, 74-75 | Boring, E., 9–10 |
| Arousal, 300–301 | British Empiricism, 162–178 |
| Asklepios, 39–40 | Broca, P., 293–294 |
| Assimilations, 319–322 | Brown, D., 200–202 |
| Associationism, 202–203 | |
| Attribution theory and awareness, 513 | Calkins, M. W., 329, 347-348 |
| Augustine, 96–104 | Carneades, 86 |
| his life, 96–97 | Carpenter, W., 209-210 |
| memory, 100-101 | Cognitive neuroscience, 485 |
| | |

Cognitive psychology, 485–486, 489–492, Empedocles, 36–37 502-510, 519 Enlightenment, 115-120 and radical behaviorism, 485-486 and "Aristotelianism," 116-118 Cognitive revolution, Leahey's view, 489chemistry, 115–116 physics, 116-118 Color vision, 267-274 rise of skepticism, 118-119 Clerk-Maxwell, 270-271 Epictetus, 91 Helmholtz, 269-271 Epicurus, 87-88 Hering vs. Helmholtz, 271–273 Equipotentiality, 296–297 Land, 273-274 ESP, 255-256 Newton, 267-268 Evolutionary epistemology, 497–499 Young, 268-269 Fechner, 247-254 Computer simulation, 506-510 Elements of Psychophysics, 251-254 de Groot's chess players, 509-510 difficulties, 508 his life, 249-251 early success, 506-507 unconscious sensations, 254 Comte, A., 6 Ficino, M., 118–119 Cynics, 84-85 Framing effect, 517–519 Freud, S., 351-366 Darwin, C., 217-238 after 1923, 366 contribution, 237-238 Anna O., 357-359 human/animal schism, 224–226 biological research, 352 his life, 218–223 and Charcot, 353-354 and Wallace, 224 early practice, 355-356 Decision theory and irrationality, 513-519 electrotherapy, 355-356 Democritus, 40-43 free association, 361 atomism, 41 his life, 352-354 epistemology, 42-43 and hypnosis, 356-357 motivation, 362 maxims, 42 and the psyche, 41-42 psychoanalysis, 359-361 Descartes, R., 132-147 repression, 360-361 and Christina of Sweden, 147 seduction hypothesis, 364–366 the unconscious, 362-364 dualism, 143, 145-147 Discourse on Method, 136-137 Functionalism, 367–371 his life, 132-133 Fusions, 314 Hobbes's criticisms, 140-142 intuitions, 135-136 Galileo, G., 116-119 Galton, F., 238-243 Meditations, 138-140 Passions of the Soul, 142 eugenics and statistics, 241-242 sources of knowledge, 135-136 Hereditary Genius, 239-241 Ulm dream, 134-135 mental testing, 241 will and understanding, 144 Galvani, L., 287 Dewey, J., 367-369 Gay, J., 204 Diogenes, 84-85 Gestalt psychology, 421–450 beginnings, 422-424 Disputation, 110 Johansson's biological motion, 435-436 Ebbinghaus, H., 265–267, 339, 503–505 Koffka's 3D Gestalten, 428-429, 433-435 Einstellung, 325-326 Kohler and insight, 431–433 Eleatics, 32-36 phi phenomena, 426-428 the All-One, 32-33 as physics, 426, 430-431 and immortality, 33, 36 Glymour, C., 519 paradoxes, 34-36 Gorgias, 47

Guthrie, E., 464–473 sources of ideas, 174-175 abnormal psychology, 466 the "self," 175-176 his life, 464 vs. causality, 175 and Horton, 470-471 vs. Skepticism, 177-178 hunger as contextual, 471–473 Hutcheson, F., 203–204 intentions, 467-468 Huxley, T., 228-229 perception, memory, 468 Hylozoism, 30 reward and punishment, 466-467 Hypothalamus, 299-303 simple theory, 464–466 therapy, 468-470 Implicit memory, 504–505 Information processing, 502–503 Harmonia, 24-25, 63, 67 James, W., 371-386 Harmonics, 22-24 Hartley, D., 204-205 attention, 375-376 Hebb, D., 158-159, 300-301 Bain's law of diffusion, 376-377 Helmholtz, H., 258–265 emotion, 378-380 as antivitalist, 260 and hedonism, 382-383 attention, 265 human instincts, 377-378 his life, 258-260 positivism, 373-375 later research, 263 Principles of Psychology, 372–373 unconscious inference, 263-265 radical empiricism, 385-386 reality, 384-385 vision and audition, 261-262 will, 380-384 Heraclitus, 30-32 Herbart, J., 305-310 James/Lange theory, 379–380 mathematical psychology, 308-310 war of the ideas, 307-308 Kant, I., 178-185 Hippocrates, 38–39 Ayer's positivist critique, 184 Historiography, 3-4 categorical imperative, 183-184 Hobbes, T., 126-132 and Hume, 178-181 conscious experience, 127-128 phenomena and noumena, 182-183 future as fiction, 129–130 transcendental idealism, 181 his life, 126 Whorf's critique, 184–185 Leviathan, 127 Katz, D., 331-332 motivation, 130-131 Kimmel, H., 457-458 speech and concepts, 130 Konorski, J., 456-457 two kinds of thought, 128-129 Kraepelin, E., 322 the will, 131-132 Külpe, O., 322–324 Holt, E., 386 Hughlings Jackson, J., 290-291 Lamarck, 220 Hull, C., 473-482 La Mettrie, J., 148–149 basic assumptions, 475–476 Lashley, K., 295-297 and Gestalt psychology, 481 Lewin, K., 436-450 his life, 473-475 antipathy toward statistics, 440-441 intervening variables, 478-479 group dynamics, 447-449 knowledge, purpose, foresight, 479-480 his life, 436-439 postulate system, 476-478 industrial psychology, 446-447 problems for his system, 481-482 Iowa research, 444-445 Hume, D., 171-181 philosophical interests, 437-438, 450 general ideas, 176-177 Tamara Dembo and insanity, 441-443 impressions and ideas, 173 T-groups, 449-450 topological theory, 439-440 morality, 177 reflection, 173-174 Zeigarnik effect, 443-444

Limbic system, 300–301 Müller, G., 329–332 Lloyd-Morgan, C., 232-237 his life, 329-330 the canon, 235-237 as proto-Gestaltist, 331-332 learning, 234–235 research, 330-331 revising Spalding, 233-234 Muller, J., 291 and Romanes, 232-233 Munsterberg, H., 483–485 Localization of brain function, 276-278, 303 Neural impulse, 286–288 Locke, J., 151–163 Nineteenth-century science, 245–274, 286– association and madness, 161-162 the Essay, 153-154 education in America, 246-247 and Hebb, 158-159 education in Europe, 246 his life, 151-153 supremacy of Germany, 245-246 and Lady Masham, 162-163 and Molyneux, 158-159 Orphism, 20-21 motivation, 160-161 the New Way of Ideas, 154-156 Papez's circuit, 300-301 as physician?, 152-153 Paradigms, 11–13 primary and secondary qualities, 156-Parmenides, 33–34 157 Pavlov, I., 451-464 reflection, 159 American interpretation, 455 brain mechanisms, 459-460 words and ideas, 159-160 Lorber, J., 297–298 drug tolerance, 462-463 his life, 451-453 Mach bands, 459 inhibition and excitation, 456 Macrocosm and microcosm, 30 medical applications, 460–462 Magendie, F., 288-289 mind of the glands, 454–455 Malthus, T., 220-221 neurosis, 458 Marbe, K., 324-325 paradox of inhibition, 457-458 Marcus Aurelius, 91, 93 Russian rivals, 463-464 Masson, J., 364-365 Sherrington's influence, 455-456 Medicine, 38-40, 460-462 Peirce, C., 369-372 Medieval education, 104–105, 110 Penfield, W., 294-295 Memory and forgetting, 503-506 Penfield reconsidered, 298-299 Mental Physiology, 209 Perky, C., 344-347 Mental testing, 241, 348-350 Phrenology, 275-286 Merzenich, M., 292 Combe, 284–285 Metempsychosis, 21 Flourens's critique, 285–286 Meynert, T., 353-354, 368 Gall, 278 Milesians, 26–28 physis, 28 Mill, J. S., 213–216 Spurzheim, 279–284 vs. Hamilton, 214-216 Plato, 53-67 and Harriet Taylor, 214 the Academy, 55–56 his life, 214 adjustment, 63-65 mental chemistry, 215 allegory of the cave, 61–62 Mill, James, 205-209 cycle of governments, 65-66 his life, 205-206 the divided line, 57-58 mental mechanics, 205-206 the Forms, 56-58 and Freud, 66-67 psychosomatics, 208-209 "weight," 208 functions of the forms, 58 his life, 53-55 Mindlessness, 510-511 Motor cortex, 291-292 opinion vs. knowledge, 56-58

| psyche and society, 62 | Kuhn's stages, 12 |
|-----------------------------------|---------------------------------------|
| purpose of dialogues, 55 | nineteenth century, 245–247, 286–291 |
| reincarnation, 58–59 | objectivity, 6–7 |
| reminiscence, 58–59 | positivism, 5–6 |
| the Republic, 62–66 | postmodernism, 13–15 |
| Theaetetus, 59–61 | refutability, 7–8 |
| Plotinus, 94–96 | verifiability, 7 |
| Pluralists, 36–38 | and the Zeitgeist, 9 |
| Popper, K., 7–8 | Scottish School, 187–202 |
| Pragmatism, 369–372 | Sechenov, I., 290–291 |
| James, 371–372 | Secondary laws of association, 202– |
| Peirce, 369–372 | 203 |
| Presentism, 2–3 | Self-perception, 511–513 |
| Pribram, K., 292–294, 302 | Seneca, 92–93 |
| Protagoras, 44–47 | Senses and the Intellect, 211 |
| on perception, 46 | Sherrington, C., 292–293 |
| as Pragmatist, 46–47 | Signal detection theory, 257–258 |
| radical empiricism, 45 | Skeptics, 85–86 |
| the recoil argument, 46-47 | Skinner, B., 486–506 |
| Pythagoras, 18–26 | behaviorism, 486–488 |
| analysis of music, 22-24 | the case against punishment, 499-500 |
| cosmology, 24–25 | vs. cognitive psychology, 485–487 |
| geometrical atomism, 24–25 | and etymology, 493 |
| his life and influence, 19 | freedom, 496 |
| precepts, 25 | legacy, 494–506 |
| religious views, 20–22 | significance, 486–487 |
| | Staddon's critique, 497-502 |
| Quine, W., 500 | vs. theories, 487–488 |
| | Social darwinism, 227–228 |
| Radical behaviorism and cognitive | Socrates, 48–52 |
| psychology, 510-511 | and Alcibiades, 48-50 |
| Rationality, 515 | contribution, 51–52 |
| Reflex action, 289–290 | his death, 51 |
| Reflex-arc concept, 148, 367–369 | life, 48–51 |
| Reid, T., 187–193 | philosophy, 50-52 |
| common sense, 189–190 | Sophists, 44–45, 47 |
| faculties, 192 | Specific nerve energies, 291 |
| and Hume, 187-191 | Spencer, H., 226-228 |
| perception, 191–192 | Staddon, J., 497-502 |
| his problem, 192–193 | Stevens, S., 255–257 |
| vs. the theory of ideas, 188 | Stewart, D., 193-199 |
| Representational theory, 42-44 | active and moral powers, 197-199 |
| Risk seeking, 516–517 | intellectual powers, 195-196 |
| Romanes, G., 229–233 | Outlines of Moral Philosophy, 194–195 |
| ambassadors of the mind, 230-231 | Stoicism, 88–94 |
| animal intelligence, 230 | cosmology, 88–90 |
| instinct, 232 | determinism, 89, 91-94 |
| mental evolution, 231–232 | free will problem, 91 |
| | reason and feeling, 89-90 |
| Satiety center, 301–303 | Stoic counseling, 90–91 |
| Science, 5–15 | Structuralism, 333, 337 |
| Kuhn's revolutions, 9–12 | Szasz, T., 413–415 |
| | |

Thales, 27-28 pattern reactions, 402–403 Themistoclea, 22 personality, 410-413 Thorndike, E., 387-399 private experience, 404 "S" and "R," 401-402 Animal Intelligence, 390-391 applied psychology, 397–399 scandal, 415-416 and faculty psychology, 392-393 speeches and articles, 417-419 heredity, 396-397 Weber, E., 247-249 Wertheimer, M., 422-428 his life, 387-390 law of effect, 391–392 Wundt, W., 310-323 vs. mentalism, 390 conscious experience, 317 1932 revisions, 395-396 critique of associationism, 318-319 subsidiary laws, 394-395 emotion, 317 three main laws, 393-394 fundamentals, 315 Time-order error, 313-314 his life, 310-311 Timon, 85-86 legacy, 328-329 Titchener, E., 333-351 Leipzig laboratory, 311–312 attention, 340 Leipzig research, 312-315 context theory, 341-342 no storage/retrieval, 315-316 elements, 338-339 not an introspectionist, 317–318 and Galton, 350 psychic causality, 319 his life, 335-336 reaction to Wurzburg School, 326 Instructor's Manual, 343-344 the self, 316 introspective studies, 344-348 two methods, 316-317 legacy, 350-351 will, 322 mind, 337-338 Würzburg School, 322–328 sensation vs. image, 345-348 Kulpe, 322–324 Stella Sharp and mental measurement, Kulpe's positivism, 323-324 348 - 350legacy, 327-328 stimulus error, 340-341 research, 324-326 Wundt's reaction, 338 and Wurzburg, 342-343 Xenophanes, 32-33 Trial and error, 212–213 Zeno of Citium, 88-89 Turing machine, 100 Zeno of Elea, 34-36 Volta, A., 287 Von Ehrenfels, C., 425 von Haller, A., 286–287

Wall, P., 298

Watson, J., 399–419 advertising, 417–419 Albert B. myth, 407 behaviorism, 399–401 child psychology, 410–413 comparative psychology, 404–405

emotion, 406–410 his life, 399–400 instincts, 405–406 learning, 401–402

Washburn, M., 314, 336–337, 345, 350

memory and thinking, 403–404 mental "illness," 413–414