

Index

- Abrams, Sam, 76
 achromatopsia, 32, 58
 Adams, Fred, 159, 160
 Addis, Laird, 81, 83, 84
 Adrià, Ferran, 166
 Agamben, Giorgio, 173
 Aizawa, Ken, 159, 160
 Álvarez Buylla, Arturo, 18
 Álvarez Leefmans, Francisco Javier, viii, ix, 25
 Anzieu, Didier, 74, 75
 Aquinas, Thomas, 97
 Arbib, Michael A., 53, 54
 Àrhem, P., 126
 Aristotle, 82
 Arsuaga, Juan Luis, 9
 Aunger, Robert, 49
 autism, 36, 37, 38, 39, 41, 61, 151
 Axel, Richard, 79
- Bach, Johann Sebastian, 157
 Bach-y-Rita, Paul, 7, 55
 Bagarinao, Epifanio, 127
 Bailey, Craig H., 99
 Ballard, Dana, 72, 73, 163
 Baricco, Alessandro, 89, 90
 Baron-Cohen, Simon, 36, 37
 Barthes, Roland, 167, 171
 Bartsch, Dusan, 99
 Bateson, Gregory, 137, 154
 Bateson, Patrick, 147
 Bauman, Margaret, 38
 Bavelier, Daphne, 15, 22, 77
 Baynes, Kathleen, 105
 Bechara, Antoine, 95
 Beethoven, Ludwig van, 81, 83
- Belcher, Ronald G., 38
 Bentivoglio, Marina, 52
Bereitschaftspotential, 125
 Bergson, Henri, 158
 Berlin, Pascal, 84
 Bernstein, Leonard, 89
 Bertalamffy, Ludwig von, 175
 Bever, T. G., 84
 bicameral mind, 45, 46
 Bihrlé, Susan, 35
 Blackmore, Susan, 48, 91
 Blakeslee, Sandra, 28, 29, 31, 38, 47
 blank slate, 25, 57, 63
 Bor, Daniel, 136
 Brailowsky, Simón, 24
 brain plasticity, 7, 14, 15, 16, 17, 18, 19, 22, 25,
 26, 28, 49, 153, 174
 Brentano, Franz, 19
 Bridgeman, Laura, 61
 Brillat-Savarin, Jean Anthelme, 164
 Brochet, Frédéric, 165
 Brodmann, Korbinian, 51
 Brown, Donald E., 58
 Bruner, Emiliano, 9
 Bruno, Giordano, 97, 98
 Bruyn, Abraham de, 167
 Buck, Linda, 79
 Budd, Malcolm, 85, 86, 87, 89
 Burghardt, Gordon, 151
- Caillois, Roger, 146, 147, 151, 152, 153,
 154, 180
 Cannon, Walter B., 175
 Carmena, José M., 6
 Caro Baroja, Julio, 171

196 Index

- Cassirer, Ernst, 64, 137, 173, 174
 causal closure of the physical world, 39, 41
 Chalmers, David, 154, 155
 Changeux, Jean-Pierre, 20, 30, 74, 77, 78, 153
 Chapin, Heather, 127
 chimpanzees, 33, 34
 Chomsky, Noam, 21, 22, 63, 71, 89, 132, 134, 162, 167, 168, 180
 Chopin, Frederic, 92
 Churchland, Patricia, 134
 Churchland, Paul, 135, 136
 Cicero, 96, 97
 Cieraad, Irene, 163
 Clark, Andy, 71, 136, 154, 155, 160
 Clark, Thomas W., 127
 Cleonides, 82
 Clifford, Erin, 15
 closure of the physical world, 41
 clothing, 166
 Colletti, Patrick, 35
 color
 and smell, 165
 experience of, 6, 31, 58, 76, 78, 79, 93
 in synesthesia, 23
 words for, 58
 computational model, 72, 73
conatus, 121, 124, 142, 179
 and identity, 121
 as consciousness, 121
 conditioned reflexes, 96
 consciousness, vii, viii, ix, 3, 4, 5, 6, 7, 19, 20, 25, 38, 39, 40, 41, 45, 46, 47, 49, 50, 57, 60, 61, 71, 72, 73, 74, 75, 76, 79, 80, 81, 86, 91, 92, 93, 106, 107, 108, 109, 110, 137, 141, 142, 143, 144, 145, 155, 156, 159, 160, 171, 174, 177, 178, 179, 181
 Cooke, Deryck, 82
 corpus callosum, 78, 103, 104
 Cosmides, Leda, 63
 Covarrubias, Sebastián de, ix
 Crick, Francis, 25, 40, 143
 Cro-Magnons, 11
 culinary processes, 167
 Curtiss, Susan, 62
 cyborgs, 6, 155, 181

 Damasio, Antonio, 4, 6, 12, 19, 24, 35, 75, 76, 87, 88, 95, 99, 105, 121, 141, 177
 Darío, Rubén, 76, 77, 78, 79, 80
 Darwin, Charles, 47
 Dawkins, Richard, 48
 Deecke, Lüder, 125, 129
 Dehaene, Stanislas, 135, 179
 deictic encoding, 72, 163
 Delaporte, Yves, 167

 Delius, Juan, 49
 Dennett, Daniel, 48, 49, 50, 124
 Descartes, René, vii, viii, 4, 120, 122, 126
 Deserpz, François, 167
 determinism, 113, 114, 115, 116, 118, 119, 120, 122, 123, 124, 125, 126, 127, 129, 134, 138, 139, 141, 144, 145, 156, 158, 169, 176, 177, 180
 Diamond, Marian, 51
 Díaz, José Luis, ix, 127
 Dickens, Charles, 61
 Dickinson, Emily, 42
 Diderot, Denis, 82
 Doidge, Norman, 174
 Donald, Merlin, 50, 149, 160, 176
 Dorian mode, 82
 Doupe, Allison J., 18
 Draaisma, Douwe, 100
 dreams, 101
 dress, 167
 as a language, 167
 dualism, vii, 4, 19, 30, 39, 102, 103, 107, 122, 126, 128, 175
 Duboudieu, Denis, 165
 Duerr, Hans Peter, 166
 Duncan, Isadora, 67

 Eagleman, David, 130
 Eccles, John, 106, 107, 119
 Edelman, Gerald, 4, 19, 20, 24, 25, 40, 41, 56, 57, 153
 Eibl-Eibesfeld, Irenäus, 150
 Einon, Dorothy, 147
 Einstein, Albert, 51, 52, 118, 119
 Eiseley, Loren, 47
 emotions, 87, 93, 95, 96, 99, 121, 122, 130, 140, 141, 166, 172
 in music, 81, 82, 83, 84, 86, 87, 88, 90
 epiphenomenon (consciousness as), 40, 41, 73, 108, 128
 Erikson, Erik H., 147
 Escher, M. C., 157
 evolution, 9, 10, 47, 48
 cultural, 10, 46, 49
 Lamarckian, 47
 of the brain, 8, 9, 46, 53, 57
 exocerebrum, 6, 7, 10, 12, 13, 25, 26, 29, 32, 33, 34, 35, 36, 37, 38, 43, 44, 45, 46, 47, 54, 57, 63, 65, 67, 69, 72, 76, 79, 80, 100, 101, 104, 105, 107, 108, 115, 136, 137, 141, 144, 145, 147, 154, 157, 159, 160, 172, 180, 181

 Fadiga, Luciano, 52, 53
 Fagen, Robert, 153

- Faubion, James, 133
 Fernald, Russell D., 17
 Fields, R. Douglas, 26, 96, 97
 Fischer, Roland, 110
 Flaubert, Gustave, 108
 Fodor, Jerry, 71, 154
 Fogassi, Leonardo, 53
 food, 164, 166
 Foucault, Michel, 133
 Fourastié, Jean, 158
 Fox, Christopher, vii
 free will, 114, 115, 116, 117, 118, 120, 121, 125,
 126, 129, 130, 135, 137, 138, 144, 145,
 156, 157, 169, 171, 174, 175, 178, 179,
 180, 181
 and play, 159
 and reductionism, 142
 as illusion, 116, 118, 119, 122, 123, 124, 128
 as singularity, 142
 in play, 146
- Gage, Phineas, 35
 Gallagher, Shaun, 129
 Gallese, Vittorio, 52, 53
 García Lorca, Federico, 59
 Garraghty, P. E., 27
 Gaskins, Suzanne, 148
 Gauss, Carl Friedrich, 51
 Gazzaniga, Michael S., 20, 105, 108, 109, 156
 Geertz, Clifford, 71, 143
 Gehlen, Arnold, 174
 Gellner, Ernest, 109
 Gelman, Susan A., 162
 Genie, 62
 Gershon, Michael D., 7
 glial cells, 26, 28, 51
 Gödel, Kurt, 157
 Goebbels, Joseph, 173
 Goethe, Johann Wolfgang von, 87
 Goldberg, Elkhonon, 44, 45, 46
 Gönzü, Artin, 148
 Goody, Jack, 162
 Gould, Stephen Jay, 9, 11, 168, 179
 Graham Brown, Thomas, 56, 57
 grammar, 22, 66
 generative, 89, 132, 180
 in music, 82
 moral, 132, 133
 perceptual, 67
 universal, 55
 Grandin, Temple, 36
 Gray, Jeffrey, 40
 Grieg, Edvard, 83
 Griffiths, Timothy D., 88
 Groos, Karl, 150
- Habermas, Jürgen, 174
 Haeckel, Ernst, 168
 Haidt, Jonathan, 135
 Hallett, Mark, 130
 Hanslick, Edward, 85
Haplochromis burtoni (cichlid fish), 16
 Harnad, Stevan, 4, 6, 39, 91, 92, 103
 Hauser, Marc, 132, 133, 134, 135
 Haydn, Franz Joseph, 86
 Hayek, Friedrich August, 14, 174, 175, 176
 Hayhoe, M., 73, 163
 hearing, 27, 50, 61, 164
 Hebb, Donald, 14, 96, 174
 Hegedus, Stephen, 154
 Heidegger, Martin, 173
 Heisenberg, Werner, 118, 124
 Henshilwood, Christopher S., 13
 Hering, Ewald, 78
 hermit crabs, 47
 Hernández, Adrián, 100
 herring gulls (and art), 67, 68
 heterostasis, 178
 Heusden, Barend von, 174
 Hickok, Gregory, 53
 Hindemith, Paul, 83
 Hirschfeld, Lawrence A., 162
 Hitler, Adolf, 173
 Hofstadter, Douglas, 128, 156, 157
 Hombert, Jean-Marie, 65
 home space, 163
 homeostasis, 87, 130, 137, 175, 177, 178, 179
 sociocultural, 177
Homo erectus, 8, 149
Homo habilis, 8
Homo sapiens, 8, 10, 13, 33
 homunculus, 20, 24, 28, 36, 68, 69, 99, 100, 176
 Hooch, Pieter de, 163
 Hubbard, Edward, 23
 Hubel, D. H., 15
 Huizinga, Johan, 146, 152, 154, 158, 180
 Hume, David, 134, 139, 140, 141
 Humphrey, Nicholas, 38, 39, 41, 57
 Hussler, Edmund, 173
 Huxley, T. H., 40, 41
- Iacoboni, Marco, 153
 identity, vii, viii, 12, 29, 70, 77, 79, 80, 88,
 106, 110
 poetic, 110
 split, 104
 incompleteness, 28, 34, 43, 147, 149, 157,
 178, 180
- Jackendoff, Ray, 162
 Jackson, Frank, 76

198 Index

- Jaeger, Werner, 94
 Jakobson, Roman, 168
 James, Henry, 172
 James, William, 19, 41, 172
 Jaynes, Julian, 45, 46
 Jones, Peter E., 63
 Jones, William Jervis, 162
 Jouary, Jean-Paul, 166
- Kaas, J. H., 27
 Kandel, Eric R., 99
 Kanner, Leo, 36
 Kant, Immanuel, 19
 Katz, Lawrence C., 16
 Keller, Helen, 60, 61, 62, 64, 65, 80
 Kennepohl, Stephen, 18
 Kercel, Stephen W., 55
 kinship systems, 161, 162
 Klein bottle, 20, 75
 Klimt, Gustav, 108
 Knowlton, Barbara J., 37, 102
 Koch, Christof, viii, 25, 40, 143, 144
 Kornhuber, Hans Helmut, 125, 129
 Korsmeyer, Carolyn, 163, 164, 165
 Kovaleski, Sonja, 51
 Kozulin, Alex, 66
 Kubrick, Stanley, 181
 Kuhl, Patricia, 22
 Kuper, Adam, 10, 48
- LaCasse, Lori, 35
 Langer, Susanne, 64, 65, 81, 83, 84, 85, 144, 149
 language, 21, 22, 23, 25, 65
 and speech, 65, 66
 brain, 23, 24, 32, 136
 of apes, 33
 sign, 33
 lateralization of the brain, 84
 Leiber, Justin, 62
 Leibniz, Gottfried, 98
 Lencz, Todd, 35
 Lenin, Vladimir Ilyich, 51, 52
 Lévi-Strauss, Claude, 166
 Lewin, Roger, 34
 Lewontin, Richard, 71
 Li, Charles N., 65
 Libet, Benjamin, 125, 126, 129
 Lindahl, B. I. B., 126
 Liszt, Franz, 83
 Linás, Rodolfo R., 47, 56, 57, 58
 Lull, Ramon, 98
 Locke, John, vii, viii, 19, 107, 172
 Lois, Carlos, 18
 Lorenzo, Guillermo, 64
 Luria, Alexandr Romanovich, 63, 66, 98
- Mackey, Sean, 127
 Magnus, Albertus, 97
 Magritte, René, 32
 Manzi, Giorgio, 9
 maps
 brain, 15, 22, 23, 27, 30
 sensory and motor, 22, 27, 28, 29
 sight, 29
 speech, 23
 Mare, Heidi de la, 163
 Martin, Emily, 161
 Martin, Kelsey C., 99
 McEwen, Bruce S., 17
 McGinn, Colin, 6
 McLean, Paul D., 7
 McLuhan, Marshall, 24, 157
 meme theory, 48, 49, 50
Merkwelt (receptor system), 170
 Merleau-Ponty, Maurice, 154, 174
 metaphor, 168
 metonymy, 168
 Milhaud, Darius, 91
 Mishkin, M., 27
 Mithen, Steven, 64
 Mixolydian mode, 82
 modules in the brain, 42, 44, 68, 108, 109, 134,
 135, 137, 162, 168
 modular theory, 63
 moral, 135, 136
 moral agnosia, 45
 Moreno-Armella, Luis, 154
 morphic fields, 102, 103
 Morrot, Gill, 165
 Mountcastle, Vernon B., 73
 Mozart, Wolfgang Amadeus, 90
- Neanderthals, 9, 10
 neuronal reconversion, 179
 Neville, Helen J., 15, 22, 77
 North, Douglass, 176
- O'Regan, J. Kevin, 168
 Ommaya, A. K., 27
 Orr, H. Allen, 135
 Ortega y Gasset, José, 171, 172
- Paterniti, Michael, 51
 Pavlov Ivan Petrovich, 96
 Pellis, Sergio M., 147
 Pellis, Vivien C., 147
 Penfield, Wilder, 28
 Phrygian mode, 82
 Piaget, Jean, 146, 148, 149, 152, 154, 167,
 168, 180
 Piattelli-Palmarini, Massimo, 167

- Picasso, Pablo, 67
Pinker, Steven, 25, 126, 134, 135
Plato, 82, 85, 94, 106
play, 116, 146, 147, 148, 149, 150, 151, 152, 153, 155, 156, 158, 159, 168, 169, 180
Pons, Tim, 27
Pook, P. K., 73, 163
Popper, Karl, 106, 107, 109, 126, 127
Potegal, Michael, 147
Pratt, Carroll C., 85
Prigogine, Ilya, 118
Prokofiev, Sergei, 108
Ptolemy, 82
Putnam, Hilary, 132
- qualia*, 31, 57, 58, 69
- Raine, Adrian, 35
Ramachandran, Vilayanur S., 23, 28, 29, 31, 38, 47, 53, 57, 67, 68, 69, 76, 150
Ramón y Cajal, Santiago, 6
Rao, R. P., 73, 163
Rapoport, Judith, 114
Rawls, John, 134
Reyna, Stephen P., 137
Rheims, Maurice, 163
Ribeiro, Aileen, 166
Ricoeur, Paul, 20, 30, 74
Rimbaud, Arthur, 110
Rizzolatti, Giacomo, 52, 53, 54, 55
robotic
 prostheses, 6, 154
 robots, 56, 180
 with consciousness, 181
Romo, Ranulfo, 100
Rose, Steven, 128
Rosen, Charles, 90
Rosenbleuth, Arturo, 81
Rossini, Juacchino, 86
Rousseau, Jean-Jacques, 82, 172, 173
Rubin, Sue, 38
Rymer, Russ, 62
- saccadic movements, 72, 163
Sacks, Oliver, 36, 63, 92
Salinas, Emilio, 100
Sartre, Jean-Paul, 115
Saussure, Ferdinand de, 64, 148
Savage-Rumbaugh, Sue, 33, 34
Schatz, C. J., 14
Schiller, Friedrich, 151
Schoenberg, Arnold, 90
Schopenhauer, Arthur, 86, 87, 88, 89
Schwartz, Jeffrey, 127
Searle, John, 103, 106, 128, 142, 156
- Selye, Hans, 178
Shattuck, Roger, 60
Sheldrake, Rupert, 102, 103
Shepherd, Gordon, 165
Shostakovich, Dmitri, 67
Sibelius, Jean, 82
Simonides, 96
Singer, Isaac Bashevis, 126
Skinner, Burrhus F., 4, 123
Smith, Adam, 107
Smith, Marcia Datlow, 38
somatic marker, 95, 105
soul, 97, 106, 107, 109, 110
 and body, vii
 and consciousness, 107
 and identity, viii
 and memory, 97
 and the brain, 122
 and writing, 94
 Cartesian, 121
 causal powers, 122, 126
 Spinoza, 120, 121
spandrels, 11
Spang, Michael, 96
Sperber, Dan, 162
Sperry, Roger, 104, 157
Spinoza, Baruch, 119, 120, 121, 122, 124, 129, 140, 141, 142, 148, 179
split-brain, 103
Squire, Larry R., 37, 102
Staminov, Maxim I., 55
Steen, Jan, 163
Storr, Anthony, 89
suffering, 5, 12, 33, 62, 83, 86, 110
Sullivan, Anne, 60
symbolic modes, 64
symbolic substitution system, 7, 37, 43, 44, 72, 80, 116, 117, 178
symbols
 different from signs or signals, 64
synesthesia, 23, 24, 68, 98
- Tagore, Rabindranath, 118, 119
taste, 164, 165
Tattersall, Ian, 11
Taub, E., 27
Taylor, Lou, 167
Tchaikovsky, Pyotr, 83
Thaut, Michael H., 63
Tinbergen, Nikolaas, 67, 69
Tomasello, Michael, 8, 13, 42
Tononi, Giulio, 19, 20, 24, 143, 144
Tooby, John, 63
Tort, Patrick, 167, 168
Tranel, Daniel, 95

200 Index

- translating apparatus, 20, 24, 32, 70, 97
Treffert, Darold A., 37
Trotsky, Leon, 115
- Uexküll, Jakob von, 137, 170, 171, 172, 173, 174, 177
Umwelt, 137, 170, 171, 172, 173, 174, 175, 177
Utekhin, Iliia, 171
- Varela, Francisco, 91
Vecellio, Cesare, 167
Veidt, Conrad, 113
Velmans, Max, 39, 40, 41, 57
vision, 15, 23, 79, 164
 visual cortex, 15, 16
 visual field, 25
 visual information, 22, 25, 70, 72, 78
Vogt, Oskar, 51, 52
Vuilleumier, P., 16
Vygotsky, Lev, 22, 66, 136, 148
- Wallace, Alfred Russell, 47, 48
Wallace, Gregory I., 37
- Walter, Henric, 142
Wandell, Brian A., 79
Weber, Andreas, 174
Weber-Fechner law, 57
Wegner, Daniel, 119, 122, 123, 124
Welters, Linda, 167
White, Stephanie A., 17
Whitehead, Alfred North, 64
Wiene, Robert, 113
Wiener, Norbert, 102
Wiesel, T. N., 15
Wilson, Robert A., 71, 72, 73
Wirkwelt (effector system), 170
Wittgenstein, Ludwig, 109, 110
Wong, Kate, 13
Wurzburg, Geraldine, 38
- Yates, Frances, 95, 97, 98
- Zahan, Dominique, 58
Zatorre, Robert J., 84
zebra finches, 18
zombies, 91, 92