

Index

- Acton, Lord, 110
 Adams, Henry, 245, 255
 Adams, Robert, 235
 adaptation, 21, 40, 176, 180–4, 189, 205
 Agassiz, Louis, 47–9, 77
 Aliotta, Antonio, 251
 Alter, Stephen, 229
 America, 77, 114–17, 144, 164, 230
 anthropology, 18, 217
 and cultural diversity, 230–6
 and scale of cultures, 86, 121, 140–2, 166
 archaeology, 113, 121, 137–40, 166, 233–4,
 237
 archetype, 185
 Ardrey, Robert, 217
 Argyll, Duke of, 113
 Arkright, Frank, 165
 Arnold, Thomas, 93, 108–9
 Asimov, Isaac, 259
- Babbage, Charles, 55
 Bacon, Francis, 95, 123, 240
 Bacon, Roger, 240
 Baker, K. M., 89
 Baldwin, J. M., 84–5
 Bateson, William, 196
 Bauer, Ludwig, 163
 Beard, C. A., 8, 253
 Becker, Carl, 10, 90
 Bellamy, Edward, 116–18, 238
 Bentham, Jeremy, 16, 131
 Bergson, Henri, 4, 22, 160, 202, 207, 250–1
 Berlin, Isaiah, 12
 Bernal, J. D., 255, 262
 binomial nomenclature, 176
 Blom, Philip, 17, 250
 Blumenbach, J. F., 73
 Boas, Franz, 234
 Bonnet, Charles
 on chain of being, 32–5, 71, 74
 on progress of life, 36–8
 Boule, Marcellin, 80
- Boyle, Robert, 95
 Brand, Stewart, 260
 Brin, David, 221
 Britain, 74, 94, 96, 108–11, 115,
 128–33
 Broca, Paul, 74
 Brokmeyer, H. C., 115
 Bronn, H. G., 50, 60
 Broom, Robert, 152–3, 216
 Brown, J. C., 84
 Buckle, Henry, 133
 Buckley, Arabella, 66
 Buffon, comte de, 31, 181–2
 Bunsen, Christian, 108
 Burnet, Thomas, 95
 Burrow, J. W., 138
 Bury, J. B., 1, 8–9, 122, 237
 Butterfield, Herbert, 244
 Bynum, William, 28, 71
- Cabanis, P. G. J., 41
 Campbell, R. J., 160
 Camper, Petrus, 72, 74
 capitalism and progress, 130, 141, 144, 162,
 168, 230
 Carpenter, W. B., 45, 55,
 186
 Carr, E. H., 11
 Carr, H. Wildon, 251
 Carus, K. G., 45
 catastrophism, 46, 52, 199
 Catching, Waddell, 164
 chain of being, 27–35, 175,
 185
 humans in, 30–1, 69–70
 and social progress, 89, 127
 temporalization of, 3, 30–1
 Chamberlain, Alexander, 86
 Chambers, Robert, 53–8, 77, 187,
 190
 Childe, V. G., 166, 234
 China, 229, 244, 265

- Christianity
and human origins, 90, 152, 156–61, 208–9
and nature, 27, 176
and progress, 47–9, 64–7, 93–9, 107–13, 268
- Churchill, Winston, 246
- Churchwell, Sarah, 116
- Cixin Liu, 265
- Clark, Kenneth, 265
- Clarke, Arthur C., 257, 259, 269
- Cleland, John, 64
- climate, effect on progress, 125, 130–3
- Comte, Auguste, 133, 135–7
- Condillac, abbé de, 41
- Condorcet, J.-A.-N. C., marquis de, 89, 94, 126–8, 189
- Conklin, E. G., 158
- contingency
in evolution, 155, 192–4, 200–1, 206, 208–11, 214–20
in history, 13, 244–7, 256
- continuity
in chain of being, 33
in evolution, 21, 53, 193
- Conway Morris, Simon, 155–6, 211
- Cope, E. D., 60, 77, 84–5, 152, 197
- Cowley, Robert, 12, 246
- Cramb, J. A., 115
- craniometry, 76
- 'creative evolution', 4, 22, 160, 202, 207, 242, 250–1
- Cuvier, Georges, 41, 46, 72, 184–5
- cycles of history, 92, 106, 109, 149, 199
- Dale, E. M., 100, 104
- Dart, Raymond, 152, 216–17
- Darwin, Charles, 44, 150
on evolution, 14–15, 57–60, 187–93
on extinction, 184
on human origins, 75, 78, 83, 213–14
on progress, 190–3
- Darwin, Erasmus, 38, 182–4
- Darwinism
in biology, 21–3, 58–9, 178, 187–211
and human origins, 151, 153–5, 212–21
in society, 138, 144, 146, 224, 235, 238, 249, 252
- Daudin, Henri, 31
- Dawkins, Richard, 217
- De Beer, Gavin, 210
- de Blainville, Henri, 42, 45
- De Forest, Lee, 8
- de Jussieu, A. L., 31
- De Vries, Hugo, 204
- degeneration, 85–8, 198, 237
- Dewey, John, 252
- dialectic, 105, 146
- Dick, Philip K., 246
- Diderot, Denis, 179–81
- Dobzhansky, Theodosius, 205, 208
- Dohrn, Anton, 62, 200
- Drexler, Eric, 260, 263
- Drummond, Henry, 66, 113, 157, 159
- Dubois, Eugène, 78
- Durkheim, Emile, 233
- dystopia, 149, 165, 262, 269
- Eamon, William, 95
- Eiseley, Loren, 46, 157, 219
- Ekirch, A., 10
- Ellul, Jacques, 165
- embryology, as model of development
divergent, 184, 186
linear, 3–4, 42–5, 53–7, 101, 106, 108
in society, 92, 96
- Emerson, R. W., 114
- Endersby, Jim, 261
- Engels, Friedrich, 103, 120, 146–8
- Enlightenment, Age of, 119–21, 124–8, 178–80
- Ettinger, Robert, 263
- eugenics, 261
- evolution (in biology)
convergent, 155
discontinuous, 20, 51–3
divergent, 13, 20–3, 178–211, 217, 239
goal-directed, 38–41, 58–68, 150–6
parallel, 65, 74–6, 80
progressive, 15
- evolution (of societies)
discontinuous, 109, 112
divergent, 132, 222–36, 253–66
goal-directed, 53, 98–116, 124–44
parallel, 121
- extinction, 184, 206
- extraterrestrial life, 156, 181, 215, 218–21, 259
- facial angle, 72, 74
- Falconer, Hugh, 138
- Farrar, Frederick, 110, 229
- Feinberg, Gerald, 259
- Ferguson, Adam, 128, 130
- Ferguson, Niall, 12–13, 246
- Fichte, J. G., 101–3
- Filene, E. A., 164
- Fisher, R. A., 204, 208
- Fiske, John, 65, 113, 133, 195
- Fontenelle, Bernard de, 123
- Ford, Henry, 164
- Fosdick, H. E., 160

304 Index

- fossil record
 and evolution, 45–51, 154, 184–6, 195,
 197–201, 206
 of humans, 77–81, 152, 161, 216–18
 Foster, W. T., 164
 Foucault, Michel, 29, 176
 France, 39, 74, 96, 125–8, 133–7, 139, 167,
 250
 Frazer, Sir J. G., 142
 Freud, Sigmund, 87–8
 Fukuyama, Francis, 103, 168–70, 260, 263
 future, speculations about, 1, 7, 116–17, 124,
 127, 142–3, 238, 241, 253–60
- Galton, Francis, 261
 genetics, 203–5, 262
 Geoffroy Saint-Hilaire, E., 187
 geology, 35, 39, 46
 Germany, 44, 76, 100–1, 108, 115
 Gernsback, Hugo, 257
 Gibbon, Edward, 125, 128
 Gibson, William, 270
 Gillispie, Charles, 38
 Ginsberg, Morris, 9
 Glanville, Joseph, 123
 Gliboff, Sander, 59
 Gliddon, G. R., 76
 Gobineau, Arthur, 73
 Godwin, William, 131, 189
 Goethe, J. W. von, 44
 Goldsmith, Oliver, 31
 Gould, Stephen Jay, 13–14, 37, 60, 86, 154,
 206, 210–11, 216
 Grant, R. E., 44, 49
 Gregory, W. K., 151
- Haeckel, Ernst
 on evolution, 59–62, 196
 on race, 76, 78, 85
 on recapitulation, 60–1
 Haldane, J. B. S., 6, 204, 207, 209, 255, 262
 Hall, G. S., 84–7
 Harari, Y. N., 7, 263
 Harris, Marvin, 233
 Harris, W. T., 115
 Harrison, Harry, 220
 Harrison, Peter, 95
 Hartley, David, 96–8, 183
 Hartmann, Eduard von, 115
 Hattersley, C. M., 163
 Hay, W. D., 143
 Hegel, G. W. F., 91, 100, 103–7, 119, 135,
 168, 226
 Hegelians, 104, 110, 113–15, 145, 167–8
 Herder, J. G., 104, 226–8
- historians
 on idea of progress, 7–13, 89, 123, 224
 on science, 244
 history, 125, 135, 237–41
 ancient, 109, 125, 239
 counterfactual, 12–13, 175, 192, 201, 245–7
 end of, 91, 100, 103, 105, 146, 156, 169
 philosophical, 129–32
 Hobbes, Thomas, 90
 Hodgson, P. C., 104
 Home, Everard, 42
 Hooke, Robert, 95, 178
 Hooker, J. D., 190
 Hooton, E. A., 151, 158
 Hudson, W. H., 116
 humans
 future of, 260–4
 as goal of evolution, 41, 48–9, 61–2, 64, 66–8,
 79, 150–6
 origin of, 57, 77–81, 207–21
 Hunt, James, 74
 Huxley, Aldous, 6, 165, 262, 269
 Huxley, Julian, 22, 153–4, 202, 205, 207–8,
 235, 237
 Huxley, T. H., 59, 78, 195, 197
 Hyatt, Alpheus, 60, 65
- idealism, 44, 99–107, 113–16
 India, 131–2
 Industrial Revolution, 98, 142, 241
 Inge, W. R., 268
 innovation
 in evolution, 14–16, 174, 202, 206–8
 in technology, 16–18, 122, 130, 147, 223–5,
 241–3, 249–53
- James, William, 252
 Jameson, Robert, 42
 Johnston, Sean, 165, 254
- Kahn, Hermann, 259
 Kammerer, Paul, 262
 Kant, Immanuel, 99–101
 Kaufmann, Peter, 114
 Keith, Arthur, 79, 81
 Kingsley, Charles, 109
 Kipling, Rudyard, 86
 Knox, Robert, 42, 45, 74
 Kojève, Alexandre, 104, 167–8
 Kroeber, A. L., 231
 Kurzweil, Ray, 263
- La Mettrie, J. O. de, 180
 Lamarck, J. B., 31, 36
 on adaptive evolution, 182

- on progressive evolution, 38–41
- Lamarckism, 22, 38, 61, 84, 144, 152, 155, 160, 182, 195, 262
- Langdon-Davies, J., 242
- Lankester, E. Ray, 62, 75, 198, 237
- LeConte, Joseph, 64
- Lenin, V. I., 147, 166
- Leslie, Margaret, 97
- Lewis, C. S., 269
- liberal Anglicans, 108, 229
- life-cycle, of cultures, 106, 108–9, 121, 123, 130, 136, 142, 147
- Lightman, Bernard, 66
- Linnaeus, Carolus, 73, 176–7
- Lodge, Sir Oliver, 157
- Lombroso, Cesare, 86
- London, Jack, 164
- Losos, Jonathan, 211
- Lovejoy, A. O., 2, 27, 32, 35, 71
- Lubbock, John, 138–9
- Lull, R. S., 199, 214
- Lunar Society, 98
- Lyell, Charles, 46–7, 53, 138, 192

- Macaulay, T. B., 132
- MacLeay, W. S., 55
- Malthus, T. R., 131, 189, 268
- Manuel, F. E., 89, 135, 137, 227
- Marsh, O. C., 195–6, 198
- Marx, Karl, 120, 143–7, 162
- Marxism, 144–8, 159, 161, 166–7
- materialism in biology, 178–80
- Matthew, W. D., 196, 214, 216
- Maupertuis, P. L. M. de, 179–80
- May, H. F., 253
- Mayr, Ernst, 205, 217–18
- McCarney, Joseph, 104
- McCray, Patrick, 259
- Meckel, J. F., 45
- Meijer, M. C., 72
- Mendel, Gregor, 203–4
- mental powers
 - origin of, 81–5, 150–2, 155, 161, 194, 196, 216, 231
 - scale of, 84
- Mercier, Louis Sébastien, 1, 124
- Mesouli, Alex, 236
- Milburn, Colin, 263
- Mill, J. S., 133
- Mill, James, 129, 131
- Millar, John, 130
- millenarianism, 93–4, 97
- Miller, Hugh, 50
- Minsky, Marvin, 263
- Mivart, St G. J., 64
- Mokyr, Joel, 237, 244
- monstrosities, 179, 187
- Montesquieu, baron de, 225
- morality, origin of, 96–9, 105, 113, 157
- More, Sir Thomas, 2
- Morgan, L. H., 141–2
- Morgan, T. H., 204
- Mortillet, Gabriel de, 79, 139
- Müller, Fritz, 200
- Muller, Hermann, 262
- Müller, Max, 229

- nanotechnology, 263
- natural selection, 22, 203–5
 - Darwin on, 189–90
- nebular hypothesis, 101
- Needham, Joseph, 159, 244
- Nietzsche, Friedrich, 103, 107
- Nisbet, Robert, 9
- Nott, J. C., 76

- O'Brien, George, 104
- O'Duffy, Eimar, 163
- O'Neill, Gerald, 259
- Oken, Lorenz, 44, 47
- organized modernity, 162
- Orwell, George, 269
- Osborn, H. F., 81, 160, 199
- Owen, Richard, 49, 54, 64, 73, 185–6

- Pancaldi, Giuliano, 189
- Panchasi, Roxanne, 250
- paradise, 93–5, 103, 117, 168
- Pengelly, William, 138
- philology, 110, 229
- Piaget, Jean, 85
- Pickering, Mary, 135
- Pietsch, T. W., 177
- Pinker, Stephen, 267
- planning (of society), 161–5, 253
- Pollard, Sydney, 9
- polygenism, 73–7
- Pope, Alexander, 28, 30
- Popper, Karl, 9, 12
- positivism, 133–7
- posthumanism, 264
- Postman, Neil, 248
- Pouchet, Georges, 74
- pragmatism, 251–2
- preformation theory, 32, 35
- Priestley, Joseph, 94, 97–9, 119
- Pritchard, J. C., 73
- progress
 - Christianity and, 65–6, 93–9
 - concepts of, 2–7, 18–24, 174, 248

306 Index

- progress (cont.)
 divergent, 228–41, 249–64
 in evolution, 38–68, 173–5, 182–211, 213–18
 goal-directed (idealist), 99–118
 goal-directed (materialist), 124–48
 psychoanalysis, 87–8
 psychology, 84–5, 97, 148
 punctuated equilibrium theory, 206
- race
 and cultural evolution, 110, 141, 233
 evolution of, 72–7, 151, 217
 hierarchy of, 71–2, 84, 86, 143
 racial senility, 65
 RAND Corporation, 168
 Ranke, Leopold von, 107
 Ratzel, Friedrich, 233
 Raven, Charles, 160
 Ray, John, 95, 176
 Reade, Winwood, 238
 reason and progress, 123, 131
 recapitulation theory, 43, 47–8, 60, 84–5, 87, 200
 Reynolds, Henry, 95
 Richards, Robert, 59, 64
 Ritvo, Harriet, 87
 Rivers, W. H. R., 233
 Robinet, J.-B., 32–3, 36
 Roget, P. M., 45
 Romanes, G. J., 83, 85
 Romer, A. S., 201
 Roosevelt, F. D., 164
 Rostand, Jean, 262
 Rousseau, J.-J., 96
 Rudwick, Martin, 20, 46
 Ruse, Michael, 14, 196, 205
 Russell, Bertrand, 162, 268
 Russell, D. A., 220
 Russell, E. S., 45
- Sagan, Carl, 219
 Sahlins, Marshall, 234
 Saint-Pierre, abbé de, 96, 124
 Saint-Simon, Henri de, 134–5
 Sampson, R. V., 9, 91
 Sarton, George, 243
 Schlegel, Friedrich von, 108
 Schleicher, August, 229
 Schmidt, Wilhelm, 233
 Schwalbe, Gustav, 79
 science fiction, 215, 221, 257–9, 270
 scientific method, 123
 Scientific Revolution, 95
 Scott, Sir Walter, 132
- Segal, Howard, 116
 Serres, Étienne, 45
 Service, Elman, 234
 Sewertzoff, Alexei, 200
 Shute, Nevil, 270
 Shuttleworth, Sally, 84
 Simpson, G. G., 205, 210, 218
 Sinclair, Upton, 164
 Smallhausen, I. I., 200
 Smellie, William, 71
 Smith, Adam, 129–30
 Smith, G. Elliot, 151, 232
 Snider, D. J., 115
 Snow, C. P., 259
 sociology, 127, 136, 233
 Soddy, Frederick, 163
 Sollas, W. J., 79
 Soule, George, 164
 Soviet Union, 146, 148, 163, 166
 Spadaforda, David, 97
 specialization, as barrier to progress, 152–4, 158, 197
 Spencer, Herbert, 4, 11
 on evolution, 53, 193–5
 on social progress, 111, 143–4, 164, 169, 231
 Spengler, Oswald, 92, 149
 spiritualism, 66, 157
 spontaneous generation, 180–1
 Stalin, Joseph, 166
 Stallo, J. B., 114
 Stanley, A. P., 109
 Stapledon, Olaf, 259
 Stepan, Nancy, 71
 Steward, Julian, 234
 Stirling, J. H., 115
 Stocking, George, 138
 Sulloway, Frank, 87
 Sully, James, 84
 Sutherland, George, 250
- Talib, Nassim, 272
 taxonomy (in biology), 31, 39, 175–8
 Taylor, G. R., 263
 technocracy, 165
 ‘technological fix’, 165
 technology and progress, 16–18, 121, 123, 127, 130, 134, 142–3, 162–5, 223–5, 240–4
 in future, 124, 248–51, 253–64
 Teilhard de Chardin, P., 19, 160–1, 208, 261
 Thomson, J. A., 158
 Tiedemann, Friedrich, 45
 Toffler, Alvin, 7, 260
 Tournefort, Joseph de, 176
 Toynbee, Arnold, 243
 tree of life, 50, 59, 177–8, 187–9, 217, 229

- Trevelyan, G. M., 246
 Turgot, A.-R.-J., 125
 Tuveson, Ernest, 95
 Tylor, E. B., 121, 139–41, 143
- uniformitarianism, 46, 193
 Urwick, Lyndall, 163
 utilitarianism, 16, 97, 128, 131
 in biology, 176
 and social progress, 90, 120, 129, 161, 249
 utopia, 91, 119, 161, 166
 as goal of progress, 92, 116, 142, 146, 258
- Van Doren, Charles, 9
 Veblen, Thorstein, 164
 Verne, Jules, 143, 257
 Vico, Giambattista, 225
 Vinge, Vernor, 263
 Vogt, Karl, 74
 Voltaire, F.-M. de, 124–5, 129, 175
 von Baer, K. E., 43, 55, 61, 184, 186
- Wagar, W. W., 10
 Wagner, Peter, 162
 Wallace, A. R., 66–7, 157, 215
- Weber, Max, 233
 Weismann, August, 202
 Welles, Orson, 259
 Wells, H. G., 162
 on evolution, 5, 208
 on the future, 87, 117, 257–8, 261, 270
 on history, 237–41, 245, 248, 264
 on innovation, 17, 255–6
 science fiction of, 198, 215, 221, 257
 Whewell, William, 46, 229
 White, Charles, 71
 White, L. A., 166
 White, Leslie, 234
 Whitehead, A. N., 17, 223, 242–3
 Wilkins, B. T., 104–5
 Wilson, E. O., 217
 World State, 163, 241, 269
 Worsaae, J. J. A., 138
 Wright, Sewall, 204
 Wyndham, John, 270
- Young, A. P., 163
- Zamyatin, Yevgeny, 165, 269