

# Name Index

- Albert, D., 121
- Aldrich, V., 216
- Alston, W., 43
- Anaxagoras, 99, 101
- Anscombe, G. E. M., 15, 83
- Anselm of Canterbury, 21
- Anttila, R., 287
- Apel, K.-O., xiv, 61n3, 64n4, 65, 66, 66n5, 69n7, 196n16, 214
- Aquinas, Thomas of, 93, 105
- Aristotle, 2, 5, 22, 32, 93, 98, 100, 104, 105, 106, 124, 136, 149, 164, 167n8, 201, 204, 321, 326, 335
- Armstrong, D., 291
- Arnold, M., 307
- Augustine, 21, 23, 34, 161
- Austin, J. L., 214n2, 242, 260
- Ayala, F., 141
- Ayer, A. J., 325n3, 331
- Bacon, F., 318, 329
- Baker, V., xivn3
- Beckner, S., 140
- Bense, M., 237n2
- Bergman, M., xv, 187
- Berkeley, G., 197, 306
- Bernard, C., 106n15
- Bernstein, R., 51, 312, 314, 320
- Bohr, N., 337n11
- Boler, J., 79n10, 139n
- Boltzmann, L., 121
- Boorse, C., 142
- Bosanquet, B., 323
- Boyd, R., 197
- Bradley, F. H., 323
- Braithwaite, R. B., 140, 141n14, 299
- Brandon, R., xii, 142, 143, 299
- Brentano, F., 6, 11
- Brock, J., xv, 243, 245n6
- Bunge, M., 106n15
- Burch, R., 74
- Burger, R., 107n16
- Burks, A., 115n20, 136n10, 237, 241
- Cantor, G., 35n7
- Carnap, R., 280
- Carnot, S., 128
- Cassirer, E., 262
- Charlton, W., 106n14
- Chisholm, R., 10, 11
- Churchland, Paul, 291
- Cicero, 326
- Colapietro, V., 46n10, 313, 314
- Comte, A., 62
- Copleston, F., 105n13
- Cornford, F. M., 106n14
- Cratylus, 22
- Cummings, R., 205n20
- Darwin, C., 117
- Dauben, J., 36n7, 331n7
- De Morgan, A., 2
- Delaney, C. F., 325n3, 337
- Deledalle, G., xiv, 18
- Democritus, 101
- Dennett, D., xi, 125n5, 292, 295, 300, 301

- Derrida, J., xvi, 45, 308  
 Descartes, R., 21, 33, 71, 139, 318  
 Dijksterhuis, E. J., 98n4  
 Dilthey, W., 139  
 Diogenes Laërtius, 23  
 Donellan, K., 264  
 Dray, W., 139  
 Dretske, F., xi, 297, 300  
 Duns Scotus, 2, 50, 78
- Eco, U., xvi, 24, 45, 228  
 Ehrenfest, P., 121n3  
 Ehrenfest, T., 121n3  
 Eisele, C., 331n7  
 Emmeche, C., xvi, 177  
 Evans, G., 277n9
- Fetzer, J., 115n20, 306  
 Feyerabend, P., xii, 2, 275, 284, 335  
 Fisch, M., xv, 28n2, 50n16, 199  
 Fisher, R. A., 132  
 Fitzgerald, J., xv  
 Fodor, J., xi, 280, 281, 297, 298, 300, 301  
 Fraassen, B. van, 342  
 Frede, M., 106n14  
 Frege, G., 48, 246, 277, 280, 281
- Gadamer, H.-G., 139  
 Galileo Galilei, 326, 335  
 Gallie, W. B., 138n12  
 Gentry, G., 43  
 Ghiselin, M., 129n6  
 Gibbs, W., 121  
 Girel, M., 81n12  
 Gombrich, E. H., 228  
 Goodman, N., 197, 200, 214, 261, 307, 345  
 Greenlee, D., xv  
 Grice, H. P., 213, 305  
 Grünbaum, A., 104n12
- Haack, S., 86n15, 199n18, 279n10, 337n12  
 Habermas, J., xv, 214  
 Hacking, I., 83n13, 284, 285  
 Hare, R. M., 248n9  
 Harré, R., 83  
 Hartshorne, C., 79n10, 237, 240  
 Hegel, G. W. F., 60, 139, 323  
 Hempel, C., 112, 113, 125n4  
 Heraclitus, 22
- Herzberger, H., 74  
 Hilpinen, R., 223n6, 245n6, 274n5, 281n11  
 Hintikka, J., 223n6, 265, 266n1  
 Hippocrates, 21  
 Hobbes, T., 104n11, 140  
 Hoffmeyer, J., xvi, 177  
 Hollinger, H., 119  
 Hookway, C., 245n6, 246n7, 268n3, 325n3, 331  
 Horwich, P., 332n10  
 Houser, N., 50n16, 245n6  
 Housman, C., 313  
 Hull, D., 95  
 Hume, D., 66, 77, 83, 108, 326  
 Husserl, E., 2, 8, 10, 60, 70, 71
- Jakobson, R., 226, 227, 287  
 James, W., 81n12, 83  
 Jeffrey, R., 113  
 Jeffreys, H., 112n17  
 Jesus of Nazareth, 20  
 Johansen, J. D., xv, 229
- Kant, I., 2, 4, 27, 31, 60, 61, 64, 81, 107, 180, 196, 214, 292, 306, 312, 326, 346  
 Kent, B., 62  
 Kerr-Lawson, A., 74  
 Kierkegaard, S., 308  
 Kim, J., 293  
 Kraus, O., 11  
 Krausser, P., 28n2, 61n2  
 Kripke, S., xii, 88, 225, 264, 276, 278  
 Kruse, F., 90n17, 205n20, 231  
 Kuhn, T., xii, 2, 200n19, 321, 322, 323, 331n8, 335, 341
- Lakatos, I., 336  
 Lambert, J. H., 60  
 Lane, R., 274n5  
 Langer, S., 262  
 Latour, B., 323  
 Leibniz, G. W., 326  
 Lennox, J., 103n10  
 Lewis, D., 88  
 Lieb, I. C., 237, 242  
 Lincoln, A., 94  
 Liszka, J. J., xiv, 168n9, 181n1  
 Locke, J., 2, 21, 66, 77

- Lucretius, 140  
 Lycan, W., 15n4  
  
 Madden, E., 83  
 Malthus, T., 124  
 Markus, R. A., 23, 24  
 Maxwell, J., 118, 121, 125  
 Mayr, E., 141  
 Meinong, A., 175  
 Mendelssohn, F., 204  
 Meyers, R., 168n9  
 Migotti, M., 325n3, 332  
 Mill, J. S., 125n4  
 Millikan, R. G., xii, 262, 297, 300, 303, 309  
 Misak, C., 263, 325n3, 332n10  
 Mises, R. von, 112n17  
 Mitchell, O. H., 48  
 Monod, J., 141  
 Morris, C., xv, 19n6, 262, 306  
 Müller, R., 237  
 Murphey, M., 36n7, 48n13, 50n15, 50n16, 65, 66, 330  
  
 Nagel, E., 125  
 Neurath, O., 324  
 Newton, I., 99n5  
 Niiniluoto, I., 118n1  
 Nute, D., 115n20  
  
 Ockham, William of, 2  
 Oehler, K., xv  
 Owen, G. E. L., 106n14  
  
 Pape, H., xvi, 177  
 Papineau, D., 297, 299, 300, 309  
 Parmenides, 175  
 Parmentier, R., xv  
 Peirce, B., 1  
 Place, U. T., 291  
 Plantinga, A., 88  
 Plato, 21, 34, 93, 94, 99, 101, 105, 106, 175, 224, 323  
 Plato, J. von, 121n3  
 Popper, K., xii, 2, 115n20, 128, 324, 336  
 Potter, V., 36n7, 136n10  
 Prigogine, I., 134, 294  
 Putnam, H., xi, xii, 36n7, 118n1, 198n17, 199, 264, 278, 279, 285, 292, 294n3, 304, 306, 341  
  
 Quine, W. V. O., 13, 175, 263, 266, 293, 320, 320n2, 325n3, 328  
  
 Railton, P., 112, 114, 125  
 Ransdell, J., xv, 43n9, 50n15, 50n16, 168n9, 186n5  
 Reichenbach, H., xii, 2, 104n12  
 Rescher, N., 331n8, 337n12, 343n15  
 Reynolds, A., 118n1, 138n12  
 Roberts, D., 266, 266n2, 276n7  
 Robin, R., 345  
 Rorty, R., 86n15, 307  
 Ruse, M., 105  
 Russell, B., 2, 175  
  
 Salmon, W., 113  
 Sanders, G., 237  
 Santaella, L., xvi, 177  
 Saussure, F. de, 16, 27  
 Savan, D., xiv, 206, 237, 238n3, 345  
 Scheffler, I., 141, 141n14, 299, 323  
 Schelling, F. W. J. von, xii  
 Schröder, E., 2  
 Schrödinger, E., 118, 122  
 Schweber, S., 132n8  
 Searle, J., xi, 10n2, 243, 293, 294  
 Sebeok, T., xvi, 21, 177  
 Sellars, W., 292  
 Sextus Empiricus, 23  
 Shapiro, M., 287  
 Shields, P., 36n7  
 Skagestad, P., 325n3  
 Sklar, L., 121n3  
 Smyth, R., 331n9  
 Soames, S., xiin2, 332n10  
 Sober, E., 125n5, 128, 297  
 Socrates, 99, 101  
 Spiegelberg, H., 61n2, 61n3  
 Stalnaker, R., 88  
 Stern, P., 103n9, 107n16  
 Stitch, S., 292  
 Strawson, P. F., 175  
 Suppes, P., 115n20  
  
 Taylor, C., 139  
 Taylor, R., 140  
 Theophrastus, 106  
 Toulmin, S., 2, 321  
 Turley, P., 139n

Vlastos, G., 103n9, 106, 106n14	Winch, P., 139
Wallace, W., 106n15	Wittgenstein, L., 11, 86n14, 139, 263, 292, 308
Walther, E., 237n2	Wolff, C., 4, 98
Weiss, P., 237, 240, 241	Woodfield, A., 104n11, 140
Whewell, W., 327	Woodward, J., 114
Whitehead, A. N., 2	Wright, C., 333
Wicksteed, P. H., 106n14	Wright, G. von, 139
Wiener, N., 140	Wright, L., xii, 141, 299
Wiggins, D., 104n11, 106n14, 278	Zeno of Elea, 36
Wimsatt, W., xii, 141, 299	Zenzen, M., 119

## Subject Index

- abduction, 319
- abstraction, *see* hypostatic abstraction; prescinding
- actuality (existence), distinguished from reality, 86–87; *see also* 2ndness
- adicity, 71
- antifoundationalism: 318; its sources, 318–322, 323–324; raises question of subjectivism, 323
- architectonic, Peirce's: compared with Kant's, 61–62; principles of, 62; ordering of the sciences, 62–63; does not prescribe a temporal order, 63; essentially teleological, 64; inspired by problem of phenomenological description, 64
- argument: Peirce's inconsistent use of the term, 248; as distinct from its expression, not a sign, 248; as expression, named 'delome', 248; *see also* rheme/dicisign/argument; seme/pheme/delome
- art: judgment of vs. emotional interpretation of, 205; Goodman's comparison of to science and the comparison implicit in Peirce's semeiotic, 261; works of art are semes but may be composed of phemes, 253–254; *see also* music
- artificial intelligence, Fetzer's Peircean critique of, 306
- assertion: a subtype of replication of dicent symbols, 247–248; Peirce's analysis compared with Austin's, 243; contrary to Peirce's sometimes denial, is significant, 246–247; *see also* propositions; statements
- categories, Peirce's system of: as formal acquire phaneroscopic meaning, 86; as phaneroscopic, 74; no proof a priori of their completeness, 74; as metaphysical (also modal or ontological), 74–75, 86–87; sometimes treated ordinarily, 74n8, 238n3; *see also* 1stness; phaneroscopy; 2ndness; 3rdness
- causation, final vs. efficient (mechanical): 136; attributions of either type of cause are always hypothetical and empirical, 152–153; 'ideal' causation neither one nor the other, 139n; final causation is not so-called reverse causation, 104; cybernetic devices are mechanical, 140; *see also* teleology
- causation, mechanical (efficient): experience of can be direct yet still fallible, 82–83; Peirce's analysis of compared with Hume's, 83; probabilistic, 115n20; idea of 'bottom-up' causation (Searle) criticized, 294–295; causal laws are always mechanistic, 108
- 'cause': etymology of, 106; in philosophical usage, 107; as correct translation of *aitia*, 105–106; breadth of the

- 'cause' (*cont.*)  
     conception, as objective factor responsible for an effect, 108  
 causes, final: as types for which selection is made, 137–138; never particular, 97; can be agentless, 102; entail value, 153–154; vs. formal causes, 102–103; in Aristotle's philosophy, 100–101; Peirce's concept of differs from Aristotle's by making chance essential, 137; *see also* purpose  
 chance, used here as in chaos theory, 137n11  
 collateral experience (collateral observation): interpretation of diverse signs of same object, requiring indices, 192–193; implicated in correction, 193–194; not restricted to individual objects, 194–195; Peirce's inconsistent use of the term, 193n11  
 common sense: exists not in minds but in speech, 272; imports inspecific assumptions, 275; refutable in principle but relatively immune to change, 335–336; *see also* critical common-sensism  
 concepts: preceded by speech, 273–274; not psychological and therefore may incorporate social and external determinants of meaning, 280–281; reference to the actual built into some, 281–283; as grasped transcend the grasping, 282–283; in Peirce's semeiotic, 282–283  
 conditionals, counterfactual and subjunctive: truth of, 87; Stalnaker-Lewis theory criticized, 88–89; Peirce's theory of is a phaneroscopic analysis of experience, not a logical analysis of concepts, 89; *see also* law; 3rdness  
 consciousness: as feeling, 311; as feelings involved in self-control, 311–312; self-control requires signs, which thus become the stuff of consciousness, 312; *see also* inwardness; mind; self  
 continuity: concept of, 357n7; experience of combines sensation and thought, 80–82; experience of continuity is itself continuous, 82; thought's role sometimes analytic, sometimes synthetic, 85  
 convergence of opinion: Peirce's concept of, 339, distinguished from Putnam's, 341; Kuhn's argument against, 341; its continuance not guaranteed, 343–344; *see also* truth  
 critical common-sensism, 275–276; *see also* common sense  
 cosmology, Peirce's, 138n12  
 counterfactuals, *see* conditionals  
 degenerate, vs. genuine, 89–90  
 delome, *see* seme/pheme/delome; *see also* argument  
 determine: as meaning to limit (objects determine signs, and signs interpretants, in this sense), 167; Peirce's struggle to determine its meaning, 165–168  
 dicisign, *see* rheme/dicisign/argument  
 economics of research, 343n15  
 ellipticity, 72  
*entia rationis*: introduced by hypostatic abstraction, 267; in empirical science, 268; sometimes real, 269  
 'exists', often used broadly, 87; for narrow use, *see* actuality; 2ndness  
 explanation: fundamental division is into mechanistic and anisotropic, 116; the principles of explanation form an emergent hierarchy, 144–145; always of aspects (Hempel), 125  
 explanation, forms of: anisotropic, 115; mechanistic always invokes laws relating particulars to particulars, 96–97; nomological, 97; probabilistic, 115; *see also* explanation, statistical; explanation, teleological; natural selection  
 explanation, statistical: standard models, 112–113; Salmon's models, 113–114; Railton's model, 114–115; mechanistic and anisotropic forms of distinguished, 115; anisotropic statistical explanation in statistical mechanics contrasted to teleological explanation, 123–124; *see also* statistical mechanics  
 explanation, teleological: explanation by final causes, a form of anisotropic statistical explanation, 138; Wright's analysis, 142–143; Brandon's analysis,

- 143–144; *see also* causation, final vs. efficient; cause, final; teleology  
 ‘external’, Peirce’s early uses of, 38n8
- facts, concept of presupposes acquaintance with assertion, 247
- fictions, not unactualized possibilities, 269–270
- final cause, *see* cause, final
- ‘finious’, designates irreversibility less accurately than does ‘anisotropic’, 117–118
- 1stness: as monadicity and as quality of feeling, 75–76; of complexes, 76; 1sts are possibilities, 76, not reducible to their occurrences, 76, yet fully determinate, 78–79
- foundationalism: 318; weak foundationalism attributed to Peirce wrongly, 337–338
- foundherentism (Haack), 337n12
- freedom: Enlightenment ideal of as autonomy, adopted by Peirce, 346; depends on possibility of objective inquiry, 347; requires faith, 347; always imperfect, 347
- functionalism, *see* mind, contemporary theories of
- fuzziness, *see* vagueness
- generality: Peirce’s use of ‘general’, xviii; positive (3rdness) vs. negative (1stness), 79; positive generality is the indeterminate, the continuous, and entails law, 79; in individual existence, 80
- genuine vs. degenerate, 89–90
- ground of significance (prior relation of a sign to its object): 162; distinguished from significance, 53; requires reality of potentiality, 53, and final causation, 54; fallibility of, 160–161
- haecceity*, 50, 77–78; *see also* 2ndness
- hypoicons: a subset of iconic sinsigns, 216; images, diagrams, metaphors, 218
- hyposemes (or subindices): indexical legisigns, 220; includes pronouns, 223, and proper names, 224–225
- hypostatic abstraction: a tool of thought, 265; in second-order logic, 265–266; distinguished from prescise
- abstraction, 266–267; in mathematics and empirical science contrasted, 267; does not always introduce *entia rationis*, 267–268; in empirical science, a limiting case of abduction, 268; varieties of, 269
- hypostatic abstractions, scholastic (SHAs): 269; introduce actualities or fictions, never unactualized possibilities, 270; the warp of thought, 270; sometimes abstracted from other SHAs, 271; normally unformulated, 271–272; use of in intellectual history, 272; found in common sense, 272, abstracted from verbal practices, 273; inspecific, 274; designate rigidly, 279
- icon/index/symbol, division based on grounds of significance, 214; *see also* icon; index; symbol
- icon: sign that signifies by its own qualities, 215; pure cannot be likenesses, 215–216; impure are likenesses, samples, examples, 218; pure (e.g., music), a limiting case of sign, 205; icons as embodied 1sts vs. icons as the 1stnesses of 2nds and 3rds, 217–218; each 2nd or 3rd is many icons, 217; iconic legisigns (diagrams), 223; iconic qualisigns, 217; iconicity defended from Goodman’s arguments, 215n3; some complex cases in the arts, 216–217
- idealism, *see* realism
- incommensurability: problem of, 322–323; its assumption of ‘basic’ theories undercut by recognition of SHAs, 333–334
- index: introduction of, 47–49; a component of knowledge, 49; discovery of led to phaneroscopy and the category of 2ndness, 49–50; inadequate concept of in the ‘New List’, 48n13; not necessarily compulsive, but always in existential relation to another existent, 219; pure and impure, 219–220; role of in a symbol’s growth in meaning, 286
- indexicals, 222–223
- individuals: Peirce’s early theory of as general, 38–40; the ‘absolute’ individual is not general but also not

- individuals (*cont.*)  
   real, 38–39; early theory criticized, 39;  
   Peirce's later theory of, in which  
   individuals are reconceived in terms  
   of haecceity, 50–51, and as  
   law-governed continua of 2nds, 87;  
   includes genotypes (Ghiselin), 129n6
- inspecificity: a variety of vagueness distinct  
   from fuzziness, 274; inspecific  
   concepts are often indefinitely  
   applicable without being fuzzy,  
   consistent with each of many mutually  
   inconsistent theories of the same  
   thing, and less open to doubt than  
   more specific concepts of the same  
   thing, 274–275
- intentionality: 6–7; intentional inexistence,  
   7; Brentano's two theses, that  
   intentionality is the mark of the  
   mental, 7–8, and that the mental is  
   inexplicable, 9–11; nonpsychical  
   phenomena that seem to possess  
   intentionality, 9–11; formal mode  
   criteria of, 11–15, 16, 174; Chisholm's  
   project analyzed, 12–13; Quine on  
   intentional idioms, 13; intentional  
   verbs, 14–15; formal mode criteria  
   applied dialectically, 14; not  
   dependent on thought, 175; explained  
   by purposeful action, 175–177;  
   Putnam's argument against  
   evolutionary explanations of  
   intentionality not germane to Peirce's  
   view, 309–310
- interpretant: distinguished from  
   interpretation, 18; equivalence of  
   distinct interpretants relative to  
   interest, 18n5; Peirce's introduction of  
   the term, 29–30; extended to include  
   actions and feelings, 52; infinite  
   progression of interpretants  
   eliminated, 56; may be mistaken in  
   either of two ways, 159–160; may be of  
   any category except the impossible,  
   163–164; always has a purpose, which  
   is the interpreter's, 171–172
- interpretants, divisions of: reasons for,  
   178–179; two trichotomies of are  
   frequently presented in the same  
   passages as distinct, 180–181; modal  
   argument for conflating the two  
   trichotomies rebutted, 179
- interpretants, emotional/energetic/logical  
   emotional: 204–206; idea of teleological  
   and realistic, 205; thus, emotions are  
   cognitive as such, and not as  
   judgments, 206  
   energetic: 201–204; idea of teleological  
   and realistic, 203–204  
   logical, 57  
   ultimate: a subdivision of logical, 57; as  
   changes in habit, 58–59, 173; necessity  
   for, 172–174; distinct from final  
   interpretant in definition even when  
   same in fact, 178–179; *see also*  
   pragmatism
- interpretants, immediate/dynamic/final  
   immediate: 54–56, 187–188; changes in  
   conception of, 181–182; determined  
   by grounds of significance, 18g;  
   distinguished from final by different  
   types of mistake in interpretation,  
   183–184  
   dynamic: 183, differs from final in  
   definition even when identical in fact,  
   188  
   final: 182–183, as that to which other  
   signs are relevant, 190; changes in  
   conception of, 182–183; distinguished  
   from ultimate, 57–58; 'final' not  
   always the best term for, 190n7; may  
   be more than one per sign (contrary  
   to Peirce), 190, not all of which  
   cohere, 190; despite Peirce's tendency  
   to identify with 'the final opinion',  
   never the whole truth, 190; sometimes  
   called 'normal', 183; relation to  
   dynamic object varies, 202
- interpretation: two senses of, 156–157;  
   problem of arbitrariness of, 43; that  
   problem solved, 56; as translation,  
   error of exclusive attention to, 156;  
   can be mistaken, 157; mistaken types  
   distinguished, 18g; entails intentional  
   inexistence, 174; not always  
   intellectual, 201; rules of are not  
   interpretants, 221; variety of relations  
   that justify, 161; relative to purpose yet  
   can be shared by different, even  
   antagonistic purposes, 189
- interpreter, extended to include other  
   animals as well as humans, 52–53
- interprets, 'R interprets X as a sign of O'  
   defined, 157–159



- inwardness: as voluntary inhibition,  
 observable in self-control, 314–315; *see also* consciousness; self
- kinds: real vs. nominal, 87; artifactual  
 (Wiggins), 278; natural are designated  
 rigidly, 278, but contrary to Kripke et  
 al., there is for each an SHA true of  
 exactly it, 279
- law: can be apprehended only in a symbol,  
 85; not reducible to regularity, 87; *see also*  
 conditionals; continuity; reality;  
 3rdness
- legisign: a law established to signify  
 (Peirce's usual and our stipulated use;  
 cf. legisign(G)), 210; defined by  
 formation rules subordinately to rules  
 of interpretation, 212–213; excludes  
 causal laws, 211; and Augustine's *signa*  
*data*, 26, 211–212; many not  
 conventional, 211; not all are symbols,  
 222–223; significance of consists in  
 their existing for the purpose of  
 signifying, 210; *see also*  
 qualisign/sinsign/legisign; replicas
- legisign(G): any law that is a sign, 210;  
 term introduced to resolve ambiguity  
 of Peirce's broader and narrower use  
 of 'legisign', 210
- lekton, Stoics' concept of, 23
- 'matter', changes in meaning of, 95–96
- meaning: meanings of, 162, 263; in  
 semeiotic, the meaning of a sign is its  
 immediate interpretant, 263; contrary  
 to many, the translation theory is not a  
 theory of meaning, 44; Grice's division  
 of meanings restated in Peirce's terms,  
 213–214; grows with use, as a function  
 of knowledge, 264; 'the' meaning of a  
 term – a dubious concept, 283;  
 Putnam's argument that 'meanings  
 are not in the head' examined, 279;  
*see also* pragmatism; pragmatic maxim
- mechanicalism, 98; *see also* physicalism
- mechanics: changes in conception of, 95;  
 science of, 95–96
- mechanistic: 96; excludes the teleological  
 95, 97
- mind, contemporary theories of: as 'inner  
 representation' – a lingering Cartesian  
 error Peirce long ago exposed,  
 301–302; neural-identity (Place,  
 Armstrong, et al.), 291–292;  
 eliminative materialism (Churchland  
 et al.), 292; Dennett's theory,  
 292–293; Kim on supervenience, 293;  
 Searle's theory, 293; functionalism  
 (Putnam, Fodor, et al.), 292, its  
 computer analogy, 292, and its  
 problem with content, 295–297;  
 teleological functionalism (Papineau,  
 Millikan, et al.), 297–298, attempts to  
 square it with mechanicalism,  
 299–300, requires Peirce's concept of  
 final causation, 301; Fodor's critique of  
 teleological functionalism  
 criticized, 298–299, as it succeeds only  
 against timid versions, 300; Dennett's  
 response to Fodor's critique fails,  
 300–301
- mind, Peirce on: his broad usage of 'mind'  
 and 'mental', 290; writings on  
 distinguished from implications of his  
 semeiotic, 290–291; his 1892–3 theory  
 of, 291n1; mind as observable, 295;  
 mind as semeiosis of a higher order,  
 302; 'inner representations' required  
 only when not acting is an option,  
 303; *see also* consciousness;  
 intentionality; inwardness; thought;  
 self
- modality, *see* categories; conditionals
- morality: application of semeiotic to moral  
 discourse runs counter to the  
 subjectivism of modern thought,  
 206; extension of analysis of  
 commands to analysis of moral duty,  
 204; moral realism a corollary of  
 treating moral feelings as emotional  
 interpretants, 205–206, 214;  
 'discourse ethics' (Habermas),  
 255n15; *see also* value
- music: as iconic, 204; as feeling  
 contemplated, 204; dynamic and final  
 emotional interpretants of, 204–205;  
 emotional interpretant of identical to  
 the feeling embodied in the sound,  
 204; its immediate and dynamic  
 objects are identical, 205; logical  
 interpretants of are deficient and  
 inessential but useful, 204; reality of  
 what it represents, 205; *see also* art

- natural kinds, *see* kinds
- natural selection: Peirce on central idea of, 128; 'selection of' and 'selection for' (Sober), 130; anisotropic, not mechanistic, 130–132; fundamental theorem of (Fisher), 132; tautology in, 124; consists of mechanical events, 132; no mechanism of, 132–133; improbability of types selected-for, 133–134; without purpose or direction, 145; nor do species or their members have a purpose, 145–146; controversy over reveals misunderstanding of dynamic nature of science, 327n4
- naturalized epistemology (Quine): scants normative questions, 320–321; anticipated by Peirce (without scanting normative questions), 320n2
- nonbeing: problem of the nonexistent object in Peirce's early theory, 42, 46; how to speak of what is not, 175–176
- nonequilibrium thermodynamics (Prigogine), 134–135
- object, breadth of the conception, 162–163
- objectivity: the word's change in meaning and its new application to inquiry, 324; defined, 324–325; evolution of methods and aim poses problem for the defense of, 344; *see also* theory evaluation; value, objectivity of
- objects, division of: immediate vs. dynamic, 191; immediate corresponds to immediate interpretant, dynamic to final interpretant, 191; distinguished in terms of process of interpretation, 191–192; commands have both objects, 201–203
- objects, dynamic: explains difference between success and failure of interpretants, 191; Pierce conceived of as the object of the final opinion (qua complete knowledge), 195; contrary to Peirce, defined as that which can be signified by diverse signs and which explains differences between final and immediate interpretants, 195–196; no sign lacks one, 196; cannot be misrepresented by pure icons and pure indices but cannot be represented by them completely, 196; doctrine of embodies Peirce's realism, 199
- objects, immediate: the Stoics' *lekton*, 179–180, 191; the immediate object is the dynamic object as represented, 196; need not obtain, 159; specified but not perfectly specific, 159
- observation, generality of, 124–125; *see also* perceptual judgments
- observation, justification of: agreement of observations is a logical relation among judgments, 68n6; distinction between justifying observations and justifying relying on observations, 338; convergence of opinion certifies reliability of observation, 339; observations are relied on without justification, 339, and that reliance is then justified by theories that explain observations and their agreement, 339; sources of erroneous view that there are warrants for individual observations, 338n13
- percept and percipuum, 319n1
- perceptual judgments: as 'first judgments' of what is before one's senses, 51; fallible, 51–52; contains general ideas and introduces assumptions, 318–319; an extreme case of abduction, 319–320; occurs uncontrollably but can be corrected later, 320; occurs without warrant, 337–338; semeiotic analysis of, 339–340
- phaneron, the: vs. Lockean ideas, 66–68; does not exclude thinking, 81; its observation, 68, and description, 70
- phaneroscopy: and phenomenology, 60–61; depends on algebra of relations, 64–66; presuppositions of, 70; not a form of intuitive knowledge, 61n3; to understand, reader must repeat observations himself, 70–71, 76; *see also* phaneron; phenomenology
- pHEME, *see* seme/pHEME/delome
- phenomenology: Continental, 8–9; problem of phenomenological description in Husserl and Peirce, 61; *see also* phaneron; phaneroscopy

- physicalism: ambiguity of, 294; the physical not necessarily mechanical, 294
- pragmatic maxim: 263; correctly entails inexhaustibility of meaning, 58, that the list of verification conditions continues to grow, 288
- pragmatism, *see* pragmatism
- pragmatism (pragmaticism): not a general theory of meaning, 57; contrasted to logical positivism, 84; not a theory of how reference is fixed, nor a verifiability theory of meaning, 287–288; makes practice to be for the sake of theory, 173; reformulated in 1907 as the doctrine of ultimate interpretants, 56; *see also* pragmatic maxim
- prescinding, 71–72
- prior relation of sign to its object, *see* ground of significance
- probabilistic causation, *see* causation
- propositions: Peirce and Austin on, 243–244; Peirce's inconsistent use of the term, 244–245; as distinct from its expression, not a sign, 245–246; reality of questioned, 246n8; *see also* assertion; statements
- 'purpose', ordinary usage of: 108–110; survives Darwin's theory, 109; 'having a purpose', 110; 'acting purposefully'/'acting for a purpose'/'purposeful action', 111; 'used for a purpose', 112; 'serving a purpose', 111, 'existing for a purpose', 111
- purpose: as type, 92–93; not psychological, but objective, 93; defined, as type of outcome for which an agent acts or for which something is selected as a means, 110; not every final cause is a purpose, 135; does not have to be conscious, 110; can be irrational, 149, or absurd, 164; cannot be described without use of intentional idioms, 174–175; *see also* cause, final
- purposeful actions, bases of, 155
- purposefulness, evolution of: 146–150; emancipation of purpose from biology, 148–150; how some purposes come to be valued over others and endure or prevail, 148–150
- qualisign/sinsign/legisign: division based on what a sign is in itself, which may be of any category, 209; qualisigns are mere possibilities, 209; sinsigns are single things or events, 209; legisigns, *see* legisign; legisign (G)
- realism, and idealism: thing-in-itself vs. reality in Peirce's early, idealistic theory, 37, 38; Peirce relinquished his early form of idealism, 46–47; his subsequent use of the terms 'conditional idealism' and 'objective idealism', 47n12; idealism a root of his theory of inquiry, 324; typical arguments for subjective idealism, 196–197; Goodman's argument for semiotic idealism, 197; limitations of Putnam's defense of realism against Goodman's argument, 307n6; central argument for subjective idealism refuted, 198–199
- realism, internal vs. metaphysical (Putnam): 199–200; Kuhn's 'post-Darwinian Kantianism' an example of metaphysical realism, 342
- realism, Peirce's: defined, 199; embraces but is distinguished from scientific realism, 199; Fisch on, 199; required both by purpose and by semeiosis, 200; neither internal nor metaphysical, 342–343; *see also* law; reality; 3rdness
- realism, scientific: 197–198; argument for not internal to science, 340
- realism vs. nominalism: xvii; Peirce's early discussions of, 40–42; his idiosyncratic definitions of these two doctrines, 40; his characterization of their 'theories of reality', 40–41; his failed attempts to reconcile those theories, 41–42
- reality: 'real' defined, 41; as 3rdness, 86; no reality without actuality, 87; of processes and events, 87; *see also* law; 3rdness
- reference: 'reference' refers to different things, 263; in semeiotic, the referent is the dynamic object, 263; fixed independently of meaning, 264, which depends on indexical signification, 266; 'traditional' theory of, 267; 'new'

- reference (*cont.*)  
 or 'causal' theory of anticipated by Peirce, 267; causal theory clarified (reference fixed existentially, not always causally), 277–278; irreducible to psychology, 282–283
- relations: analysis of, 72–73; reduction of, 73; some are irreducible (indecomposable), 73; external structure of, 73–74
- replicas (instances of legisigns): can be produced only for purpose of replicating, 212; signify legisigns iconically and indexically, 212; indexical legisigns signify through their replicas, 213, yet the immediate interpretants of the two differ, 223–224; legisigns and their replicas do not entail two layers of significance, 223–224, posing a problem for Peirce's semeiotic taxonomy, 225
- representamen, 55n18
- reverse causation, *see* causation, final vs. efficient
- rheme/dicisign/argument: a generalization of term/proposition/argument, 231–232; variant designations, 232; distinguished not by differences in compositional complexity but by mode of influence on interpreters, 233–234; *see also* argument; seme/pheme/delome
- rigid designation (Kripke): 276–277; untoward consequences of its divorce from conception, 283–285
- science as inquiry: developed in modern period, 326–327; in modern science, the purpose of theory is to advance inquiry, 327; Peirce defined science by its 'spirit' rather than by its method, 328; breadth of Peirce's conception, 328; scientific methods vary in objectivity, 328–329; aim of modern science remains intellectual, despite claims of many, 329; dynamic nature of modern science, 329–330; its evolution in methods and social forms, 329–330
- scientism: Putnam's critique of and Peirce's avoidance of compared, 306–309
- 2ndness: as dyadicity and as two-sided experience of effort and resistance, 76–78; irreducibly dyadic, it is a fact of complexity, not a complex of facts, 77; contrasted to Locke's idea of solidity, 77; pervasive in experience, 77; contrary to what Hume implied, 77; additional to 1stness in the occurrence of a 1st, 78; as actuality, 78
- self, the: a hypothesis introduced to explain ignorance and error, 312; self-control an observable process of which the self is not the agent but a product, 312–313; as 'teleological harmony of ideas' and semeiotic process, 313–314; as an *ens rationis* abstracted hypostatistically from facts about control, on which higher grades of control depend, 314–316; an *ens rationis* consequential and therefore real 316; *see also* consciousness; inwardness; mind, Peirce on
- seme/pheme/delome: 232; reason preferable to rheme/dicisign/argument, 248
- semeiosis: as sign's 'action', 172; purpose a fourth element in, 158; the purpose essential to it is that of an interpreter, 171–172
- semeiotic (Peirce's theory of signs): a science, 151; overextension limits its explanatory power, xvi, 177; development toward naturalism, 53; provides a naturalistic theory of mind, 290; not behavioristic, 289, nor reductive, 290; does not make signs in general to have a function, 309–310
- semeiotic taxonomy, principles of: 235; can only be justified a posteriori, 207–208; each sign must be of one division of each trichotomy, 232; no sign may be of more than one division of any trichotomy, 231; other forbidden combinations, 235–236; need to explain the striking pattern of adicities, 237–242; order of components in the sign relation, 238–242; relative simplicity, 239; determination, 240; the ten classes of 1903, 236–237; the ten trichotomies of 1908 criticized, 259–260

- semiology (Saussure): 16; assumption that a sign is a two-part entity 16–17; assumption of arbitrariness, 17; relation of thought to language, 17–18
- semiology vs. Peirce's semeiotic: danger of their conflation, xv–xvi; dyadic vs. triadic, 18; compositional vs. relational, 18–19; difference in breadth, 19–20; each aims to be a science, 20; absurd consequences of failure to see their fundamental opposition, 20–21; Eco's conflation of Saussure's semiology with Peirce's semeiotic criticized, 228–230
- semitic: non-Peircean sign theories derived from Saussure's semiology, xin1
- SHA, *see* hypostatic abstraction, scholastic
- sign: a technical term, 20, 151; Peirce's unchanging conception of, as one part of a triad, 30; extended to include natural effects and resemblances, 52; defined, 160; Peirce's definitions of, 164–165; as defined here agrees with Peirce's tendencies, 168; breadth of Peirce's conception, 185–186; signs need only be interpreted potentially, 161; not always produced purposefully, 186; how counted, 161, 188–189; may be of any category, 163, 209; reference to can be either opaque or transparent, 188; ambiguity of 'false sign', 160n4; false or misleading signs correspond to a type of mistaken interpretation, 189; genuine vs. degenerate, 230–231; compound, 161–162; 'sign to' a deceptive location, 227; suppositions that icons and indices require a symbolic component (Eco) or that signs 'blend' (Jakobson) or that there is a 'perfect' or 'complete' sign (Peirce) refuted, 225–227
- sign, other theories of: ancient Greeks, 21; Plato, 21–22; Aristotle, 22; Stoics, 23 (*see also* *lekton*); Epicureans, 23; Augustine, 23–26 (*see also* *signa data*); Locke, 2–4; Millikan, 303–306; Morris, xv, 19n6, 306; for Saussure, *see* semiology
- signa data* (Augustine): vs. *signa naturalia*, 24–26; term usually mistranslated, 24–25
- significance: Peirce's early failure to explain, 43–44; not dependent on actual interpretation, 53; defined as grounded interpretability, 53, 162; still triadic because distinct from its ground, 214–215; a form of intentionality, 174; derivative from interpretation's purpose, 172–174; not dependent on 'inner representation', 301
- space and time: perception of, 81n12; not presupposed by indices but apprehended by coordinating indices successfully, 192n9; spatio-temporal location, 97n2
- statements, distinguished from sentences, 242–244; *see also* assertion
- statistical inference, 103n8
- statistical mechanics: reasoning in, 113, 118–123; ergodicity and ensembles, 121; quantum mechanics in, 121–122; explanation in is not by forces, and therefore not mechanistic, 122–123; introduces a new way of looking, 124; not *faute de mieux*, 125–127; Second Law, though explained statistically, is mechanistic, 127–128; *see also* explanation, statistical
- statistical phenomena: reality of, 128; potency of, 133
- symbols: legisigns whose objects are assigned by rules of interpretation, 220–221; signify types, 222; replicas of are not symbols, 221, yet may signify types through symbols replicated, 224; their replicas, being sinsigns, may signify individuals, 222; growth of, 285–288; as purpose, 287–288; their 'essences' are SHAs, 287
- teleology: etymology of, 98; Aristotle's philosophy its *locus classicus*, 98; a sophisticated doctrine, 98–100; introduced to explain the emergence of order from chaos, 99; misunderstood because of mechanist assumptions, 100; Plato's teleology, 99–100, 101–102, 103, 103n8; theistic versions, 103–104; Peirce's sheriff

- teleology (*cont.*)  
     analogy not theistic, 139n; Aquinas' versus Aristotle's, 105; contrasted to vitalism, 104; Kant's, 107; attempted mechanistic reductions of, 104; influence of the ideal on the actual, 94; *see also* cause, final; explanaton, teleological
- teleonomy (Mayr et al.), 141
- theorematic vs. corollarial reasoning, 265–266
- theory evaluation: growth more important than surviving tests, 336; role of research programs (Lakatos) and relevance of inspecificity to, 336–337; tests by observations presupposing SHAs, 275, 334; crucial experiments, 334–335; Kuhn's view of theory choice, 342
- 3rdness: triadic, as in combination, 84; continuity 'the perfection of', 84; the whole of a 3rd is irreducible to its parts, 84–85; *see also* causation, mechanical; conditionals; continuity, experience of; law; reality
- thought: as internalized discourse, 4–5; the 1868–9 doctrine of thought signs, 34, and its problem accounting for individual thoughts, 36
- transcendental argumentation, Peirce's rejection of, 66
- truth: its definition seen as evolving, 331–332; its definition as impersonal is a cultural development, 333; defined as that toward which objective inquiry progresses, 325–326, which definition is not a theory of truth in the contemporary sense, 332, but is rather an ideal that Peirce recommended, 333; does not depend on actual convergence, 326; no guarantee a priori that truth in this sense exists, 331–332; Peirce anticipated the deflationary theory, 332–333; 'truth in' a treacherous locution, 88n16; *see also* convergence of opinion
- type/token distinction, same as legisign/replica, 209
- universals and particulars, xvi–xviii
- vagueness, as fuzziness, 274; as lacking specificity, *see* inspecificity
- value: some dimensions of implicit in significance, 154–156; objectivity of, 154, 344–346; *see also* art; morality; music; objectivity; teleology; theory evaluation; truth