

# Index



## A

- A-B case, 263-265
- Abnormal discourse: analogy to double-loop learning, 79, 86; definition of, 33. *See also* Frame experiments, conflicting frames during
- Action Maps. *See* Maps
- Action science methods: aims of, 237; as a collaborative process of critical inquiry, 237; for data analysis, 247-257; for data collection, 239-243; for hypothesis testing, 257-265; learning as a core purpose of, 36-37, 237, 239, 253, 247, 260; role playing as a kind of, 67-68, 326-329. *See also* Data collection; experimentation; Ladder of inference; Maps; Public testing; Rules of action science
- Action scientists: control exerted by, 239-241, 321-325; facts sought by, 203-204; as members of a community of inquiry, 225; questions asked by, 204, 226-228; solutions of, 198-200, 204-205, 228-231
- Adorno, T. W., 6
- Analytic philosophy: analysis of action, 23-24; approach to epistemology, 9-10; hermeneutics and, 21
- Anger at mistakes: chain reaction of, 431-433; described, 429-430, 439-440; exploring, 436-439; mapping, 439-444; as a response to helplessness, 441-443
- Anscombe, G. E. M., 48, 451
- Apel, K.-O., 28, 451
- Applied researchers: facts sought by, 208-210; questions asked by, 208-210; in relation to action science, 231; in relation to basic researchers, 191, 208-209, 215-217; in relation to practitioners, 211-212, 218-220; the setting of ends by, 211-215, 219-220; solutions of, 210-212. *See also* Applied science
- Applied science: contrast to basic

- science, 5; mainstream view of, 18, 46, 201, 211; as rationalization for ignoring usefulness, 43. *See also* Applied researchers
- Argyris, C., 2, 6, 7, 19, 35, 42, 44, 61, 80, 81, 84, 88, 89, 92, 93, 98, 143, 147, 148, 175, 185, 227, 228, 231, 232-233, 235, 257, 263, 270-272, 305, 373, 451, 463
- Aristotle, 46, 48
- Asch, S. E., 105, 452
- Aspiration levels: conceptual model of, 8, 290-292; consultants', 154; moderating students', 360, 366, 411; norms as, 325-326; obstacles to setting realistic, 291; in relation to frames, 291-292; students' unrealistic, 288, 330, 356. *See also* Brittleness
- Assessment models: in applied research, 209; assumptions of, 140-142; development of job diagnostic survey as an example of, 209-210; gaps in, 141-143, 147, 149, 150-151, 152; and notions of effectiveness, 209
- Au, H.-P., 159, 183, 452
- Austin, J. L., 10, 57, 239, 452
- B**
- Bacon, F., 14, 20
- Barker, R., 140, 452
- Barnard, C., 45, 452
- Barnes, R. D., 257, 456
- Basic researchers: and division of labor model, 201, 211; problem frames of, 201-202; questions asked by, 192-194, 206-207; in relation to action science, 231; in relation to applied researchers, 191, 208-209, 215-217; solutions of, 194-197, 206-207. *See also* Mainstream account of science
- Beavin, J. H., 87, 464
- Behavior modification, Model I theory-in-use of, 183
- Behavioral world: concept of, 44-45; described by Model O-I, 62, 92-96; described by Model O-II, 102; impact on valid information, 35, 69, 77; interdependence of values in, 75, 77; map of, 66; models of theories-in-use and, 85
- Behaviorism, 23
- Benne, K. D., 7, 8, 452, 453
- Bennis, W. G., 7, 452, 463, 464
- Berger, P. L., 45, 113, 452
- Bernstein, R. J., 10, 11, 12, 16, 21, 22, 23, 26, 29, 31, 33, 46, 71-72, 74, 452, 453
- Bickman, L., 217, 453, 462
- Birdwhistell, R., 160, 453
- Blake, R., 7, 453
- Boggs, S., 180, 464
- Bowditch, J. L., 140, 453
- Bradford, L., 7, 453
- Brittleness, 155-156. *See also* Aspiration levels
- Brodtrick, O., 142
- Brown, P., 294, 453
- Buchanan, B., 49, 454
- Buono, A., 140, 453
- Burrell, G., 10, 453
- C**
- Campbell, D. T., 12, 16, 61, 191, 394-395, 453, 454
- Caplan, N., 191, 453
- Carlsmith, J. M., 398, 455
- Carlston, D., 257, 453
- Carnap, R., 23
- Case format, 147, 239-241, 340. *See also* X-Y case
- Case teams, 144, 372-393
- Cassell, J., 112, 191, 453
- Causal explanation: conversations as window on, 340; covering-law model of, 13, 38-40; embedded in action, 40, 44; ethnographic research and, 163-164, 173; interventions as test of, 63-64; mainstream testing and, 13-16, 18; Models I and O-I as, 96; in

- pragmatic explanations, 38-40; theory-in-use propositions as, 353; in theories of action, 81; theories of causal responsibility, 55-56, 81; using action maps to test, 56. *See also* Basic researchers; Applied researchers
- Cazden, C. B., 159, 161, 176-178, 453
- Cicourel, A., 26, 453
- Client-centered approach: as fostering dependency, 387; inconsistencies in practice, 245, 248-249; reinforcing unawareness of incompetence, 383-386
- Client relationship, 36-37, 56, 62-63, 68
- Cognitive limits, 19, 36, 43, 68, 81, 256-257
- Community of inquiry: in action science, 34; in counterview, 22; in critical theory, 74-75, 77; examples of in normal science, 103-104, 190-192; in mainstream account of science, 2, 11, 12-13, 71; norms and rules that limit, 104, 190-192, 197, 205, 212-218, 219-221; in postempiricism, 29. *See also* Ideal speech situation; Science and community
- Community of inquiry in a community of practice: in action science, 12, 34-35, 36, 76, 78, 79; in critical theory, 35, 74-75; dynamic aspects of, 51-52, 64; example of enacting a, 237, 239, 265, 274, 320-321; obstacles to enacting a, 265, 320, 329-330, 394-395. *See also* Norms of action science
- Community of practice: basis of standards for knowledge, 11-12, 29, 66; as behavioral world, 44, 51-52; coming to agreement in, 24-25, 28; common sense understandings in, 11, 22, 25, 51, 56
- Competence: as context-dependent, 180; focus on, 323-324, 363, 365; for managing learning environment, 316, 393; as motive for learning, 172, 379; reasoning that underlies, 346, 349-350, 369, 372; as value in action science, 42, 76-77. *See also* Skill
- Consulting firms, research in, 143-157, 373-374
- Context: as condition for rule-governed behavior, 170, 352; of discovery and justification, 14, 68-69, 79; ethnographic attention to, 169, 177; as learning environment, 179, 180, 181, 183; and pragmatic explanations, 40-41, 340
- Context analysis in ethnography, 160
- Contextual cue, 244, 249, 352; as initial conditions, 256. *See also* Theory-in-use proposition
- Cook, T. D., 12, 16, 454
- Counseling organization, case of, 347-348, 360-361, 369
- Counselors: reasoning about cultural differences, 160-161; unrealistic advice implied by research on, 173; untested inferences in research on, 165-169. *See also* Client-centered approach
- Counterview: contrast to covering-law model, 5, 10, 44, 196-197; description of, 21-28; focus on situated meaning, 20; implications for epistemology of practice, 51-52; implications for testing in action science, 54; refraining from intervention, 63; relation between science and community in, 11, 21-22; as understood in critical theory, 71-72; value neutrality in, 70. *See also* Hermeneutics
- Covering-law model of explanation, 13-14, 17, 38-41, 43-44, 78
- Critical theory, 6, 35, 69-75, 79, 232. *See also* Internal criticism, principle of
- Cronen, V. E., 45, 461

- Cultural match: approach in ethnography of schooling, 158, 159, 171; gaps in advice implied by, 175, 182; mismatch as cause of school failure, 159-160, 170, 180-182; mismatch as inadequate explanation of school failure, 162, 170; successful intervention based on, 178
- Cyert, R., 62, 68, 97, 454
- D
- Dallmyr, F., 21, 24, 451, 454, 462, 464
- Darley, J., 105, 398, 459
- Data collection in action science: features of, 239-242; increasing the reliability of, 57-60, 239-241, 243-247; methods of, 239-241, 283; rules of inquiry for, 243-247; threats to validity in, 61, 237-239, 240-241. *See also* Data, talk as
- Data, talk as, 56-59; as basis for inferring rules, 59, 239; increasing reliability of, 57-60, 239-241, 243-247; as self-report, 242-243; threats to validity in using, 61, 237-239, 240-241. *See also* Data collection; Directly observable data; Ladder of inference
- Data, traditional views on: in counterinterview, 22-24; in mainstream science, 2, 12, 15, 23
- Davidson, D., 27, 55, 454
- Davis, R., 49, 454
- Decision theory, 52
- Deep structures: as defenses that maintain our social world, 111; uncovering, 111, 127-130, 134, 149-150, 316-318, 317, 404, 419, 422. *See also* Defenses; Protective strategies
- Defense, kinds of: distancing, 108, 120-121, 170, 175, 198-199, 292-294, 315, 429-430; evoked by the learning process, 238, 269, 279; face-saving as a defense, 294-295; fancy footwork as a defense, 130, 306-308; that inhibit learning, 349, 351, 358, 382-383; protective support as a defense, 309-312; reducing, 131-133, 134, 274, 319, 330, 394-396, 402. *See also* Defensive routines; Protective strategies; Self-censoring; Withdrawal
- Defensive routines, 46, 61, 149-150
- Dembo, T., 140, 452
- Dependence, 268-269, 282, 309-310, 329, 387, 394, 415-416, 430-431
- "Deprecate self" strategy, 55, 67, 81, 352-354
- Dewey, J., 6-7, 454
- Diamond, M., 277, 454
- Dilemmas: as basis for empathy, 380-382, 388, 393; of learning Model II, 276, 277, 280-281, 303-304, 392, 409-410, 424-427, 448; managed poorly, 304-305, 309-311; managed well, 312-313, 410-414, 427-429, 443-445, 448
- Dilthey, W., 21
- Directly observable data: absent from Model I strategies, 295-296, 358, 362, 370; to evaluate ethnographic inferences, 182-183; misuse of, 378; in Model II strategies, 297-298, 326-329, 342-346, 350, 371-372; norm in learning environment, 326-329, 365; as rule of action science, 258-259. *See also* Data, talk as; Ladder of inference; Rules of action science
- Dispositional attribution, 55-56, 81, 96
- Dissonance: generating an optimal sense of, 398-399, 408; as motivation for learning, 379; in normal and action science, 398-399; optimal sense of defined, 399. *See also* Frame experiments; Puzzle intervention
- Distancing: and anger at mistakes, 429-430, 439-440; different kinds of, 429-430, 439-440;

- from emotions, 429, 433, 439-440; from personal responsibility, 61-62, 120-121, 170, 198-199, 292-294, 315; underdistancing and, 418-419. *See also* Personal responsibility
- Doherty, M., 257, 259, 461
- Double-loop learning: compared to family systems theory, 87-88; cues for identifying need for, 86-87; distinguished from single-loop learning, 85-86, 376; facilitated by Model II theory-in-use, 102; features facilitating, 187; as focus of action science, 79; inhibited by Model I theory-in-use, 89, 93, 339; not achieved in ethnography, 178-179, 182-184; reframing as, 53-54, 180; required for genuine organizational change, 153; threat and, 86-87, 92, 97, 98. *See also* Abnormal discourse; Frame experiments
- Douglas, J., 20, 454
- Drake, W. D., 44, 463
- Durkheim, E., 16-20, 320, 454
- E**
- Easing-in: concept used in Model II interventions, 344-345, 355-356; persistence of, 337, 366, 386-387; script of, 251; by teachers, 184-185; theory-in-use description of, 83, 351-353; unintended consequences of, 85, 358, 375, 386-387
- Edgley, R., 76, 454
- Effectiveness: action science concept of, 139, 218-219; prevailing concept of, 139, 140, 209, 212-213
- Efron, D., 174, 195, 454
- Einhorn, H. J., 96, 454
- Einstein, A., 395
- Emotional reactions: elicited by rules of inquiry, 246-247; empathizing with, 333-337, 359, 411; encouraging and sustaining inquiry into, 331-337, 436-438; evoked by learning process, 238, 269, 272, 330-331, 337-338, 430-433; expressed as barriers to learning, 305-306, 332; importance of, 246-247, 306, 332, 399-400; that can inhibit learning, 270, 290, 330-331; to one's own errors, 154-156; triggered by frame-breaking, 398-399, 408; used as clues in learning, 300-302, 306, 401; working through automatic negative reactions by reframing, 443-445. *See also* Anger at mistakes
- Empathic understanding, method of, 24
- Empathy: expressed by the action scientist, 333-337, 359, 411; lack of, 370-371, 380; models as a cognitive basis of, 335; optimal distance necessary for, 419; and reframing, 334-337; requirements for genuine, 335-336; in the service of learning, 334, 419; steps in developing, 381-383, 392-393; underdistancing as an obstacle to, 418-419. *See also* Power, reactions to people with
- Empirical testing. *See* Experimentation, action science; Experimentation, normal science; Mainstream account of science, testing in; Public testing
- Energy for work, 154, 290
- Epistemology: epistemic principles in everyday life, 73-74, 75, 79; of practice, 45-54, 70, 78; relation to social practices, 11, 22, 26, 29, 33; two approaches to, 9-10
- Ericcson, K. A., 242, 454
- Erickson, F., 158, 159, 160-161, 162, 163, 165-169, 171, 172, 173-175, 176, 181, 194, 195, 200-202, 221, 454
- Error: correctable and uncorrectable, 93; creates opportunity to deepen learning, 346, 369, 390,

- 392; critical theory and possibility of, 74; leads to single- or double-loop learning, 86, 87; motivation to correct, 172; motivation to discover, 66; productive confrontation of, 370-371, 383; reasoning that produces, 61-62, 89, 96; and recognition of competent performance, 25, 50; and scientific progress, 13, 16, 32. *See also* Distancing; Emotional reactions; Norms, action science; Protective strategies; Reflective strategies
- Espoused theory: definition of, 81-82; as distinguished from theories-in-use, 81-82, 243, 245; inaccuracies in, 68; inconsistencies with theory-in-use, 89-92, 98, 102, 184, 186, 349, 392-393; may reinforce unawareness, 156, 353, 386; policies as, 150; questionnaires focus on, 147; questions that elicit, 243; variance in, 88
- Exemplar, 282-283, 341, 345. *See also* Prototype
- Experimentation, action science: action as, 6-7, 40, 51, 63-67; action experiments as a form of, 118, 240-241; control in, 239-241, 321-325; criteria for assessing, 133, 135-136, 300; frame experiments as a form of, 396, 445-449; impromptu experiments initiated by participants as a form of, 298-300, 326-329; purposes of, 118, 133-134, 135, 396, 430, 446; reflective, 273, 319, 329-330, 396; roleplaying as, 67-68, 326-329. *See also* Frame experiments; Passivity experiment; Public testing; Rules of action science
- Experimentation, normal science: generalizability of laboratory experiments, 111; laboratory rules for, 110-115; limits of, 107, 111-117, 197-198, 206-207; precision, 42; role of values in, 113-114; simplicity in, 111-112; unilateral control in, 42, 112-113; view of, 16. *See also* Basic researchers
- Expertise, 49, 338, 339-340, 369. *See also* Competence; Prototype; Skill
- Explanation. *See* Causal explanation; Covering-law model; Pragmatic explanation
- F
- Face-saving, 61, 89, 97, 294-295
- Falsifiability: in action science, 66-67, 225, 232-233; mainstream conception of, 15-16, 32-33; obstacles to in action, 65-66, 96. *See also* Experimentation; Public testing
- Family systems theory, 87-88, 419
- Fancy footwork, 130, 306-308
- Fanshel, D., 26, 50, 57, 458
- Ferry, D. L., 139, 464
- Festinger, L., 7, 398, 455
- Fisch, R., 87-88, 465
- Fit, 140-143, 146, 147, 153. *See also* Assessment models; Cultural match
- Florio, S., 177, 455
- Forgas, J. P., 345, 455
- Frame experiments: conflicting frames of interventionist and participant during, 411-413, 414-415, 421-422, 424-426, 446, 449; dilemmas raised by, 409-410, 424-427, 448; emotional impact of, 398-399, 408; evidence of learning in, 413-414, 416, 424, 439-440, 441-442, 443; frame-breaking in, 407-408, 447-448; generating dissonance in, 398-399, 408, 438-439; generating frame-conflict in, 402-409, 422-427; generating a rich description in, 399-402, 406, 439-440, 447; identifying inconsistencies in, 398-399, 402-403,

- 447; interrupting the obvious in, 397-399, 417-418, 434-435, 437-439, 442, 447; obstacles in, 408, 414, 429-430, 436; purpose of, 396, 430, 446; renegotiating role of interventionist and participant during, 414, 424, 430-431, 439; role of paradox, puzzles, and surprise in, 397-398, 417-418, 420-421, 437-439, 447; structure of, 445-449; surfacing the illogic of logic in, 404, 406, 419, 422, 437-439; testing out new frames during, 408-409, 411-413, 449; working through dilemmas during, 410-414, 427-429, 443-445, 448. *See also* Double-loop learning; Reframing
- Frames, learning: defined, 282-283; effect of action strategies on, 293, 296, 302, 312, 313; for errors, 260, 287-289, 335-336, 403, 406; impact on emotional experiences, 291-292; implications for learning of, 283, 286, 287, 289-290, 292, 296, 298, 304; for the learner's role, 283-287, 403, 406; and personal responsibility, 283-287; process of inferring, 283. *See also* Frame experiments; Framing; Reframing
- Framing: impact on inquiry of, 58, 69; inquiry into and double-loop learning, 53, 79, 86, 180-182; as problem-setting, 47, 49-53, 58, 69; reflection on, 51, 53, 69; tacit knowing and, 49. *See also* Frames, learning; Frame experiments; Reframing
- Frankfurt School, 6, 35, 70. *See also* Critical theory
- Friedrichs, R. W., 191, 455
- G
- Gadamer, H. G., 21
- Garfinkel, A., 418, 455
- Geertz, C., 22, 24, 28, 455
- Gergen, K., 26, 44, 455
- Geuss, R., 35, 71, 72-75, 79, 201, 215, 235, 455
- Gibb, J., 7, 453
- Gimmick, 152, 331
- Glass, A. L., 339, 345, 455
- Goffman, E., 27, 62, 96-97, 294, 455
- Goldman, S., 158, 460
- Goleman, D., 339, 455
- Gospodinoff, H., 158, 159, 160, 163-165, 169, 171-173, 175-176, 193, 195-196, 202, 460
- Gouldner, A., 19, 455
- Governing variables: defined, 84-85; of Model I, 89; of Model II, 98, 371; of opposite Model I, 92; related to single- and double-loop learning, 86-87, 152; in theory-in-use propositions, 351-352. *See also* Values in action science
- Grabbe, P., 8, 459
- Gronn, P. C., 57, 63, 239, 456
- H
- Habermas, J., 6, 35, 57, 70, 71, 74-75, 77, 456
- Hackman, J. R., 8, 139, 141, 143, 144, 209, 211, 215-216, 219, 231, 456
- Harmon, M., 113, 198-200, 227, 456
- Harré, R., 26, 29, 44, 242, 456
- Harris, B., 257, 456
- Harvey, J. H., 257, 456, 459
- Hayek, F. A., 93, 456
- Heath, S. B., 158, 159, 178, 179-180, 181, 184-188, 208-209, 210-211, 213-214, 216, 217, 228, 231, 457
- Heider, F., 35, 76, 457
- Hempel, C., 12, 13, 14, 15, 24, 38, 55, 65, 457
- Hermeneutics, 21, 28, 38, 71-72. *See also* Counterview
- Hirschhorn, L., 278, 457
- Hobbes, T., 10
- Hogarth, R. M., 96, 454

Hollingworth, H. L., 46, 457  
 Holyoak, K. J., 339, 345, 455  
 Homans, G. C., 320, 326, 457  
 Hopkins, J., 26, 457  
 Hoppe, F., 290, 457  
 Horkheimer, M., 6  
 Howard, R. J., 21, 24, 457  
 Hume, D., 10, 13, 44  
 Hybrid, 316, 341, 356-366, 368, 416, 422, 424  
 Hymes, D., 213, 463

## I

Ideal speech situations, 35, 74-75, 77  
 Implementation, 19, 77  
 Incompetence: espoused theory as cover up for, 386; interpreted as a sign of nasty motives, 152, 348. *See also* Anger at mistakes  
 Internal commitment: to action science research, 63; and implementation, 77, 152, 188; and personal responsibility, 170, 188; as value in action science, 77, 98, 371-372  
 Internal criticism, principle of, 6, 73-76, 79, 114-115, 234-236  
 Interpretation: contrasted to explanation, 5; difficulties in reaching agreement on, 26-28, 57-58; and hermeneutic methods, 21, 28; multiple levels of, 22, 28; multiple possibilities for, 26, 28, 50, 57-58, 64; as obstacle to empirical testing, 10, 22, 26-28, 54, 64. *See also* Action science methods; Counterview; Rules of action science

## J

Jackson, D., 87, 464  
 James, W., 45, 457  
 Janis, I. L., 56, 457  
 Jaques, E., 7, 457  
 Job design, 139-140, 142, 209-210, 211

Joiner, B. B., 8, 458  
 Jones, E., 256, 257, 458  
 Jordan, C., 158, 159, 180, 181-182, 183, 208-209, 210-211, 217, 219, 228, 231, 452, 458  
 Justice: as espoused theory, 150, 156; internal criticism of theories of, 235; in organizational life, 141-142, 150-153; as relevant to assessment research, 141-142, 150-153, 156-157; as value in action science, 42, 76-77, 227

## K

Kahnemann, D., 201, 256, 257, 458, 464  
 Kamehameha Early Education Program (KEEP), 178, 180, 181-182, 183-184, 210, 217, 219, 228  
 Kant, I., 46  
 Keeley, M., 213, 215, 219, 220, 458  
 Kelley, H., 35, 76, 458  
 Kelly, G. A., 35, 76, 213, 283, 408, 458  
 Kleinfeld, J., 159, 162, 176, 178, 458  
 Kuhn, T., 11, 29-33, 53, 69, 190, 215, 458

## L

Labov, W., 26, 50, 57, 458  
 Ladder of inference: as an aid to retrieving reasoning processes, 246; as an analytic tool, 247-248; description of, 57-58, 342; as a method of testing interpretations, 57-60, 237-238, 342-343; use of in learning process, 341, 342-345, 346, 355-356. *See also* Experimentation in action science; Public testing; Norms of action science; Rules of action science  
 Lakatos, I., 31, 32-33, 458, 460  
 Landy, F. J., 140, 141, 458  
 Langer, E., 257, 459



- Latané, B., 105, 398, 459  
 Lawler, E. E., 209, 215, 456, 459  
 Learning environment. *See* Norms of action science  
 Learning process, overview, 270-275  
 Learning strategies, 278; continuum of, 277-278, 280-281, 292; cultures created and maintained by, 315-316, 320; first- and second-order, 292, 304-305; implications of, 296, 302, 311-312, 315-316, 320; oscillation between, 308; protective, 292-296, 305-311, 394-395; reflective, 296-302, 312-315  
 Left-hand column, 340-341  
 Lepper, M. R., 257, 460  
 Levinson, S., 294, 453  
 Lewin, K., 1, 6, 7-9, 19, 35, 42, 43, 45, 140, 209, 215, 270, 326, 452, 459; conceptual maps, 8; views on action research, 8-9  
 Likert, R., 7, 459  
 Lippett, R., 8, 459  
 Lord, C. G., 257, 460  
 Luckmann, T., 45, 113, 452  
 Lyman, S. M., 399, 463
- M
- McCarthy, T., 21, 24, 451, 454, 462, 464  
 McDermott, R., 158, 159, 160, 163-165, 169, 171-173, 175-176, 193, 195-196, 202, 460  
 McGregor, D., 7, 460  
 Mainstream account of science, 12-18; contrasted to action science, 18-20, 40-44, 52-54, 60-61, 63-69; contrasted to counterview, 10, 22, 27, 43-44, 196-197; core features of, 2, 5, 11, 12-13, 54; epistemology of practice of, 45-46, 52-54; explanation in, 2, 13-14, 38, 41; illustrated in social science, 16-18; self-limiting conditions in, 40-42, 141, 199-200, 221; testing in, 14-16, 22-23, 30-32, 60-61; value judgments in, 6, 31-32, 33, 41-42, 70. *See also* Applied science; Basic researchers; Causal explanation; Community of inquiry; Context of justification and discovery; Covering-law model of explanation; Data, traditional views on; Experimentation; Public testing; Science and community  
 Manicas, P., 29, 44, 460  
 Maps: as an aid to reflection, 251, 254, 256-257, 366, 405-406; as an analytic tool, 171, 247-248; constructed on-line, 399-402, 405-407, 439-444; as diagrammatic representations, 250-253; at different levels of analysis, 248-250, 255; examples of, 251, 271, 280-281, 407, 444; features of, 247-257; generalizability of, 250, 256; and the human mind, 256-257; as mid-range representations, 248, 250; as representations of invisible or deep social structures, 56, 316-317; scripts as, 251, 254; testing of, 56, 66, 255-256  
 March, J., 62, 68, 97, 454, 460  
 Marrow, A., 8, 460  
 Marxism, 70-71, 73, 74  
 Masterman, M., 30, 460  
 Mead, G. H., 320, 460  
 Meaning-invention-production-evaluation, 341, 354-356, 366  
 Merton, R., 12, 16-20, 460  
 Methods. *See* Action science methods  
 Milgram, S., 105-117, 122, 125, 127, 135, 176, 192-193, 194, 197-198, 202, 210, 221, 227, 398, 460  
 Mill, J. S., 10, 13, 21, 39, 45  
 Miller, R. I., 44, 463  
 Mills, C. W., 191, 460  
 Minuchin, S., 419, 460  
 Model I: assessment research consistent with, 156; as causal the-

- ory, 62, 78; consequences of, 89, 93, 151-152, 170; description of, 88-92; ethnographic interventions remain within, 183-184; as obstacle to learning Model II, 102, 338; pervasiveness of, 151, 175, 263; relation of to other theories, 96-98, 170-172; responsibility for, 151; unfreezing skills of, 270-272; validity of evidence for, 261-265. *See also* Hybrid; Opposite Model I; Theories-in-use
- Model II: brittleness as barrier to learning, 153-156; description of, 98-102; desire for not enough to produce, 142; learning requires engaging defensive routines, 149; as normative theory, 62, 70; predicted impact of, 66
- Model O-I, 62, 78, 92-96, 97-98, 152
- Model O-II, 62, 98, 100-102, 153
- Mohr, L. B., 209, 212, 213, 219, 220, 460
- Morgan, G., 10, 453, 461, 464
- Mouton, J., 7, 453
- Musgrave, A., 31, 458, 460
- Mynatt, C., 257, 259, 460
- N**
- Nagel, E., 12, 14, 461
- Neisser, U., 339
- Nelson, S. D., 191, 453
- Neurath, O., 24
- Nisbett, R., 7, 41, 49, 62-63, 76, 96, 243, 256, 257, 399, 458, 461
- Norms for social action: adopted as external constraints, 320-321; internalized as moral prescriptions, 320-321; process of establishing, 320-321, 325-326; protectionist and reflective, 320
- Norms of action science, 323-324, 362-363, 365; dilemmas in establishing, 321, 325-326; established through a process of critical reflection, 321-325; interventionist's role in establishing, 321, 324-325, 326-329; inviting inquiry into, 322-323; obstacles to, 61-62, 265, 320, 329-330, 392-393, 394-395; rules of inquiry as, 265, 320; used to keep the inquiry moving, 326-329. *See also* Action science rules; Norms
- O**
- Obedience to authority, 105; action science experiment in, 117-138; alternatives to, 127, 131-132, 134-135, 198-200; dilemmas embedded in, 107, 110, 117, 198-199; disobedience as an alternative to, 116; insight as inoculation against, 115; Milgram's experiment on, 107-110, 192-194, 197-198, 202; resolving dilemmas of, 127, 131-132, 134-135, 198-200
- Observation, guided by theory, 14, 30, 31, 193
- Ogbu, J., 158, 461
- O'Keefe, D., 26, 461
- Oldham, G. R., 139, 141, 143, 144, 209, 211, 215-216, 219, 456
- Opposite Model I, 92, 98
- Orientations toward learning: as a continuum, 278; movement over time, 316, 449; oscillation between, 308; protective, 277-278; reflective, 278, 316
- Outhwaite, W., 29, 461
- P**
- Paradigm, 30, 53, 69, 86
- Passivity experiment: as an alternative to Milgram's experiment, 117-138; assessing the results of, 130-131, 134-138; criteria used for assessing, 133, 135-136; as frame-breaking, 396-414; hypotheses in, 135; purposes of, 118, 133, 135; questions of validity in, 135-137, 138

- Pearce, W. B., 45, 461  
 Peirce, C. S., 11, 12-13, 71, 74-75, 321, 461  
 Personal responsibility: disconfirmation as increasing sense of, 379; focus on in action science, 69, 202-205, 351; for Model I actions, 151, 383; as value in action science, 77, 156. *See also* Distancing; Frames; Learning  
 Peters, M., 8, 461  
 Pfeffer, J., 140, 213, 461  
 Phillips, S., 158, 159-160, 162, 169-171, 172, 174-175, 176, 181, 461; as a basic researcher, 193, 194, 195, 200, 201, 202, 205, 209, 213, 216, 221  
 Piaget, J., 320-321, 325, 461  
 Poffenberger, A. T., 46, 457  
 Polanyi, M., 49, 462  
 Policy, gap between formulation and implementation, 19, 150-151, 152  
 Popper, K., 9, 11, 12, 13, 14, 15-16, 23, 32, 41-42, 462  
 Postempiricism, 29-34  
 Power, reactions to people with, 120, 370-371, 373, 378-383, 393. *See also* Obedience to authority  
 Practical knowledge: action science view of, 47, 50; contrasted to scientific knowledge, 20; counterintuitive and, 22; mainstream view of, 46; pragmatic explanation and, 40-41, 45. *See also* Epistemology; Practical reasoning  
 Practical reasoning, 46, 48-49, 69-70, 76  
 Practical syllogism, 48-49  
 Practitioners: problem-solving requirements of, 200-201, 218-219; questions asked by, 218-219  
 Pragmatic explanation, 37-45, 51  
 Praxis, 46  
 Precision, 41-43, 64  
 Pressman, J., 19, 462  
 Problem setting, 47-49, 53, 69  
 Protective strategies: described, 62, 97, 292-296, 305-311, 363, 403, 415-416; defined, 292; impact of, 296, 311-312, 315-316, 320; in traditional research, 394-395. *See also* Defenses; Face saving; Fancy footwork; Self-censoring; Support; Withdrawal  
 Prototype, 341, 345-349, 356, 366, 377, 379. *See also* Exemplar  
 Psychoanalytic theory, 15, 27, 71, 73, 74  
 Psychological success. *See* Aspiration level  
 Public testing: absence of in ethnography, 163-169; action science approach to, 34-35, 56-69; action science rules for, 357-365; examples of in action science, 343-345, 349-351, 353-358, 360, 365, 375-376; critical theory approach to, 73-75; mainstream account of, 12-13, 15-16. *See also* Community of inquiry; Experimentation; Ideal speech situation; Ladder of inference; Maps; Role playing  
 Purpose: explanations conditioned by, 39-40, 43, 45; knowledge for forming, 36, 47-49, 234-236; values and, 37, 46, 212-215, 218-220  
 Putnam, H., 21, 462  
 Puzzle intervention, 341, 349-351, 379-380, 382. *See also* Frame experiments
- ## R
- Raz, J., 46, 454, 462, 465  
 Reasoning processes: enhancing retrieval of, 238, 243-247; and the ladder of inference, 57-60, 246, 247, 286, 342-345; making public as a strategy, 297-298; threats to inferential accuracy in, 96, 242-243, 257. *See also* Data,

- talk as; Epistemology; Interpretation; Ladder of inference; Practical knowledge; Reflection; Tacit knowing; Theories-in-use
- Reducing threats to validity: in data collection, 57-60, 239, 240-241, 243-247; learning as an aid in, 62-63, 237, 238, 239, 243-244, 247, 260, 336-337; in testing hypotheses, 66, 257-261. *See also* Client relationships; Threats to validity
- Reeducation, 9, 149, 150
- Reflection: and action, 50-54, 59-60; as method of action science, 34, 35, 60, 78; as method of critical theory, 71, 74; theory-in-use for, 82-83. *See also* Epistemology; Reflective experimentation; Reflective strategies
- Reflective experimentation, 273, 319, 329-330, 396
- Reflective strategies: definition of, 292; description and illustration of, 296-302, 312-315, 362-363, 365, 370-371, 376-378, 382-383, 391-393; impact of, 302-303, 316
- Reframing: attributions of motives, 348-349; criteria for, 53; dilemmas as cue for, 378-383; and empathy, 333-337, 359-360; errors, 290, 313, 412, 428-429; examples of by action scientist, 313, 333-337, 348-349, 359-360, 412, 428-429, 434-436; in family therapy, 87; as paradigm shift, 53-54, 69, 86; reflection may lead to, 51; roles, 434-436. *See also* Frame experiments; Frames, learning; Framing
- Reich, J. W., 191, 462
- Ricoeur, P., 21, 60, 462
- Robinson, V., 8, 461
- Rogers, C. R., 335, 462
- Role playing as experimentation, 67-68, 326-329. *See also* Action science methods; Experimentation in action science; Public testing
- Rorty, R., 9, 33, 53, 79, 86, 462
- Ross, E. A., 320, 462
- Ross, L., 7, 41, 49, 62, 76, 96, 257, 460, 461
- Rules: action as governed by, 25-26, 49, 59, 113; altering action governed by, 113, 128-130, 134-135, 181-182, 187, 368; as dispositions, 55; as a form of explanation, 38; of inquiry created during interaction, 52; learning by inquiring into conflict among, 368-369, 371-372, 376-378, 379-380, 382, 391-392; mismatch among cultural, 159-160, 170, 179-180; for Model II action, 346, 356, 370; as policies or espoused theories, 151-152; public reflection on, 128, 187; reconstructing or inferring, 239, 242-244; research approaches focusing on, 25-26, 49, 158; tacit knowledge of, 25-26, 50, 68; tacit rules that inhibit inquiry, 320; and theory choice in science, 31-33; as theory-in-use propositions, 55, 169-170, 341; using tacit understandings of to create tests, 25-26, 67-68. *See also* Deep structures; Norms of action science; Rules of action science; Theories-in-use
- Rules of action science, 236-237; aims of, 237-239, 243, 247, 260; for data collection, 60, 243-247; establishing as norms, 319-331; function as a microscope, 317-318; learning as skills, 266, 267-270, 276-277; for testing, 58, 258-263. *See also* Community of inquiry in a community of practice; Ladder of inference; Norms of action science; Skills
- Ryan, W., 191, 462
- Ryle, G., 10, 24-25, 28, 55, 462

## S

- Santa, J. L., 330, 345, 455
- Schafer, R., 26, 335, 419, 430, 462

- Scheffler, I., 12, 13, 15, 30, 31-32, 33, 38, 39-40, 41, 75, 462
- Schein, E., 8, 463
- Scholte, B., 193, 463
- Schön, D. A., 2, 6, 44, 46, 47, 50-51, 52, 53, 64-66, 80, 81, 88, 93, 201, 203-205, 219, 226-227, 229-231, 234, 257, 282-283, 325, 452, 463
- Schutz, A., 11, 21, 22, 35, 70, 76, 418, 463
- Science and community, 10-12, 21-22, 29, 34-35. *See also* Community of inquiry
- Scollon, R., 158, 463
- Scollon, S., 158, 463
- Scott, M. B., 399, 463
- Screen, 341, 366
- Searle, J., 57, 239, 463
- Secord, P. F., 26, 29, 44, 242, 456, 460
- Self-censoring, 26, 61-62, 340-341, 353, 364-365. *See also* Protective strategies; Threats to validity
- Self-report. *See* Data, talk as
- Shortliffe, E., 49, 454
- Simon, H. A., 19, 68, 81, 242, 339, 454, 460, 463
- Single-loop learning, 53-54, 85-88, 102, 376
- Situational appreciation, 48-49
- Skill: learning for action science, 267-270, 276-277; obstacles to learning, 156, 173-174, 257; performance as, 50; unawareness of gaps in, 142-143. *See also* Expertise; Rules; Theory-in-use; Unawareness
- Sloat, K., 183, 463
- Smith, D. M., 252-253, 463
- Spindler, G., 191, 457, 463
- Spradley, J., 158, 191, 463
- Stanley, J. C., 12, 16, 61, 191, 394-395, 453
- Statistics, 20
- Status quo, meaning of fundamental change in, 161-163, 170
- Strawson, P. F., 10
- Stuckness: defined, 319; impact of, 317-318; interventionist's facilitating of, 317-318; as a result of reflective experimentation, 329-330
- Suicide, theoretical analysis of, 16-20
- Sullivan, H. S., 277, 464
- Sumner, W. G., 320, 464
- Support, protective notion of, 309-312, 415-416; causal reasoning in, 310-311, 426-427; Model II notion of, 402, 419-421
- Susman, G., 7, 464
- Suttle, J. L., 8, 456

## T

- Tacit knowing, 49-52, 59-60, 68
- Talk. *See* Data, talk as
- Talk-story, 180, 183
- Taylor, C., 21, 23-24, 28, 464
- Theory-in-use, 81-85; behavioral world created by, 93, 152; data for inferring, 59, 147, 239-247, 340; distinguishing from espoused theory, 81-82, 186, 242-243, 383-384, 393; models of, 83-85. *See also* Model I; Model II; Rules; Skill; Theory-in-use proposition
- Theory-in-use proposition, 351-354; examples of, 55, 169-171, 245, 248-249, 352, 391-392; form of, 81, 351-352; tacit rule as, 55, 81, 169-170, 341, 368. *See also* Rules; Theory-in-use
- Threats to validity: in an action context, 237-239, 257-258; caused by inferential errors, 257; created by defenses and defensive routines, 61-62, 296, 315-316, 320; in using talk or self-report, 61, 237-239, 240-241. *See also* Protective strategies; Reducing threats to validity; Self-censoring
- Tolman, E. C., 209, 215, 464
- Trist, E., 7, 464
- Tversky, A., 201, 256, 257, 458, 464
- Tweney, R., 257, 259, 461

## U

- Umbarger, C. G., 419, 464  
 Unawareness: designed, 149; espoused theory as reinforcing, 156, 386; in everyday life, 26-27, 50, 62; interrupting, 338, 353; as Model I response, 62, 96, 151-152, 170. *See also* Tacit knowing; Theory-in-use; Unfreezing  
 Undiscussability, 62, 87, 93, 102, 183, 187, 386, 390  
 Unfreezing: description of, 270-272; emotional reactions to, 156, 271-272, 279, 337-338, 383; interrupting unawareness by, 270, 279, 337; iterations of, 390; Lewin's concept of, 8, 270; using puzzle interventions for, 349-351, 379, 383. *See also* Frame experiments; Reframing  
 Unilateral control: in experimentation, 42, 64, 112-113; as Model I behavioral strategy, 47, 89, 183  
 Usable knowledge, 2, 4, 5, 7-9, 18-20, 42, 161, 177, 233-234

## V

- Values in action science: central values in, 7-8, 41-43, 75-78, 98-102, 227; rational criticism of, 6, 53-54, 69-70, 73-75, 114-115, 234-236, 322-325; and social practice, 20, 37, 46, 48-49, 191, 200-201, 218-220; view of, 5-6, 53-54, 225, 227-228, 230, 232, 234. *See also* Governing variables; Internal criticism  
 Values in normal science: avoidance of, 5-6, 20, 46, 197, 200, 205,

212-214, 219-221; presence of, 31-33, 41-43, 211, 228; unintended consequences of avoidance of, 192, 199-200, 201, 218-221

- Van de Ven, A., 139, 464  
 Van Maanen, J., 26, 464  
 Varenne, H., 158, 460  
 von Wright, G. H., 21, 25, 40, 44, 464

## W

- Walsh, M., 177, 455  
 Watson-Gegeo, K., 180, 464  
 Watzlawick, P., 87-88, 464, 465  
 Weakland, J., 87-88, 465  
 Whewell, W., 14  
 White, R. K., 8, 459  
 Wiggins, D., 48-49, 465  
 Wildavsky, A., 19, 462  
 Wilson, T., 62-63, 243, 399, 461  
 Winch, P., 22  
 Withdrawal: described, 279, 288, 292-293, 326, 338, 396, 407; frame of error underlying, 293, 406; interrupting, 118-120, 131, 396-399; moving beyond, 409-414; understanding and mapping, 406-407  
 Wittgenstein, L., 10, 21, 23

## X

- X-Y case, 147, 261-263, 270, 349, 379, 382

## Z

- Zimbardo, P. G., 105, 465  
 Zuniga, R. B., 113, 191, 465