

Author Index

- Abrahamson, A. A., 113
 Ackerman, D., 425, 426
 Adlington, R., 511
 Agawu, V. K., 506
 Ahrens, K., 69
 Aisenman, R. A., 122, 219
 Aksnes, H., 506, 511
 Albert, J., 154
 Albert, N. M., 189
 Aleksandrov, A., 343, 346
 Alesandrini, K., 216
 Alkesslassy Levi, N., 152
 Allbritton, D. W., 151
 Alston, W. P., 276
 Alti, A., 147
 Amira, S. A., 404
 Anaki, D., 150, 186, 188
 Anderson, D., 216
 Anderson, J. R., 117
 Andreu, N., 188
 Andric, M., 166
 Angus, L. E., 403, 404, 405, 406, 407
 Ansari, R., 497
 Anthony, S., 174
 Antos, S. J., 145, 148, 153
 Appelt, D. E., 314, 332
 Arbib, M. A., 426, 437
 Aristotle, 143, 154
 Arlow, J. A., 400, 413
 Armel, K. C., 433
 Arnheim, R., 449, 453, 457
 Arvatz, S., 147
 Asch, S., 437
 Aschersleben, G., 164
 Aschkenazi, K., 144–146, 147, 151, 152
 Asher, J., 218
 Asher, N., 312
 Austin, N., 174
 Ayrey, C., 508
 Azuma, M., 222
 Babbitt, M., 509
 Babcock, M., 164
 Bach, K., 269
 Bachman, L. F., 221
 Bai, J., 452
 Bailey, M. E., 434
 Balaban, N., 152
 Baldassarri, F., 184
 Barbey, A. K., 426, 432
 Barcelona, A., 241, 249, 253, 416, 478
 Barcelos, A., 212
 Bardy, B. G., 430, 431
 Barker, P., 401, 402
 Barlow, J. M., 200, 398, 404, 405
 Barnden, J. A., 319, 320, 322, 325, 326,
 327–328, 330, 333
 Baron-Cohen, S., 433, 434, 435, 436

- Baroti, G., 184
 Barsalou, L. W., 175, 426, 429, 432, 516
 Bartelt, G., 214
 Barthes, R., 476
 Bartsch, R., 415, 417
 Bates, E., 353
 Batori, G., 154, 155, 178, 188, 191
 Bauer, A., 511
 Bauer, L., 220
 Bavelas, J. B., 163
 Baxter, L. A., 388
 Beardsley, M., 264, 265, 297
 Beattie, G., 494
 Beck, B., 426
 Beeman, M. J., 185, 186
 Bendsdorp, T., 478
 Benuzzi, F., 432, 437
 Berg, E. A., 495
 Berg, J., 274
 Bergmann, M., 262, 274, 276
 Bertolani, L., 432, 437
 Bertus, E. L., 242
 Besson, M., 69
 Bever, T. G., 148
 Bezuidenhout, A., 269, 274, 277
 Biber, D., 241
 Bihrlé, A., 178, 182, 183, 188
 Binkley, T., 264
 Binnie, C., 433
 Bisiach, E., 190
 Black, E., 240
 Black, M., 119, 273, 276, 277, 462, 464, 468,
 471, 494
 Black, T., 163
 Blank, G. D., 117
 Blasko, D. G., 69, 70, 76, 117, 124, 180, 182, 239
 Block, D., 213, 214, 215
 Boada, R., 183
 Bock, J. K., 300
 Boers, F., 217, 218, 219, 224, 226, 253, 289
 Boisson, C., 426
 Boisson, D., 190
 Bonnell, V. E., 483
 Bookheimer, S., 187, 188
 Bookin, H., 70, 112, 180
 Borbely, A., 11, 413, 418
 Borgo, D., 511
 Bornstein, M. H., 429, 432
 Boroditsky, L., 119, 168, 169, 170
 Boronat, C. B., 113, 114, 117, 129, 136, 517
 Bottini, G., 154, 187, 188
 BouJaoude, S., 216
 Bowdle, B. F., 7, 67–75, 76, 77, 81, 110, 113, 115,
 116, 117, 119, 120, 122, 129, 136, 139, 449, 458,
 517
 Bower, G. H., 163
 Bowles, A. R., 134, 135
 Boyd, R., 276
 Bozzi, P., 438, 439
 Bradshaw, J. L., 434
 Braitenberg, V., 189
 Brammer, M. J., 69, 154, 188
 Branden, J., 10
 Bredin, H., 416
 Brenner, C., 416
 Brillat-Savarin, J. A., 425
 Brisard, F., 148
 Broca, P. A., 177
 Broeckx, J. L., 506
 Bromme, R., 216
 Brooke-Rose, C., 200, 201
 Brower, C., 511
 Brown, R., 71, 200
 Brown, W., 184
 Brownell, H., 178, 182, 183, 186,
 188
 Brugger, P., 190
 Bryll, R., 497
 Buchstaller, I., 223
 Budd, M., 504, 505
 Burke, K., 414
 Burns, G. W., 402
 Burridge, R. R., 332
 Butterfield, M., 511
 Cacciari, C., 11, 117, 149, 150, 425, 430, 432,
 439
 Calbris, G., 484, 485, 488, 492
 Callan, A. M., 430
 Callan, D. E., 430
 Callejas Bretones, C., 427, 428
 Cameron, L., 8, 197, 199, 200, 201, 202, 203,
 204, 206, 213, 216, 220, 222, 227, 282, 283,
 292, 495
 Camp, E., 277
 Caplan, P. J., 409
 Caramazza, A., 437
 Carbonell, J. G., 311–312, 322, 327
 Carpenter, P. A., 188
 Carreti'e, L., 160
 Carroll, N., 464
 Carroll, P. J., 148
 Carston, R., 146, 269, 330
 Carter, R., 202, 220, 241
 Cassell, J., 485, 490
 Cavell, S., 276
 Cazeaux, C., 425
 Chafe, W., 199
 Challis, B. H., 453
 Chao, L., 189

- Charles, D., 505
 Charteris-Black, J., 223, 253, 283, 287, 288,
 290, 292, 477
 Chernicky, B., 163
 Chiappe, D. L., 121, 297, 305, 448
 Chiarello, C., 185, 186, 187
 Chochon, F., 190
 Chuck, G., 511
 Cienki, A., 11, 353, 476, 485, 486, 488, 491,
 492, 493, 494, 497
 Cirillo, L., 399, 402, 407, 410
 Clark, A., 163
 Clark, H. H., 118, 163, 171
 Clark, J. M., 122, 242
 Classen, C., 427
 Clay, A. L., 399, 402
 Clement, C. A., 110, 122
 Close, H. T., 400
 Cocude, M., 163
 Cohen, L., 190
 Cohen, M., 302, 303
 Cohen, T., 264, 265, 266, 276
 Coker, W., 509
 Coles, M., 179
 Colombo, M., 184
 Colston, H. L., 155, 351, 463, 493
 Combs, G., 400, 401
 Cone, E. T., 516
 Connine, C. M., 69, 76, 117, 124
 Conrad, S., 241
 Consoli, S., 177
 Conway, J. B., 406
 Cook, N., 478, 510, 511
 Cooke, D., 506
 Cooper, D., 207
 Corcoran, R., 154, 187, 188
 Corradini, P., 432
 Cortazzi, M., 213
 Corts, D. P., 200, 220
 Costes, N., 189
 Coulson, R., 216
 Coulson, S., 8, 65, 155, 177, 178, 181, 182, 189,
 495
 Courant, R., 344
 Cox, A. W., 511, 516
 Crider, C., 399, 402, 407, 410
 Crisp, P., 238, 239, 242
 Croft, W., 415
 Csábi, S., 217
 Cudahy, C., 434, 435, 436
 Cumming, N., 505
 Cummings, A. L., 402, 403, 405
 Cupchik, G. D., 464
 Cutler, A., 117
 Cutting, C., 69, 113
 Cutting, J., 452
 Cytowic, R. E., 428, 433, 434, 435, 436
 Dagher, Z., 216
 Damasio, A. R., 189
 Damasio, H., 189
 Dann, K. T., 302
 Danto, A. C., 276, 464
 Danziger, E., 492
 Daprati, E., 432, 437
 Dastjerdi, H., 253
 David, A. S., 69, 154
 David, S., 426
 Davidson, D., 46, 262, 263, 266, 276
 Davies, M., 276
 Davies, S., 504
 Day, S., 303, 427, 436
 de Guerrero, M. C. M., 214
 Deacon, T. W., 506
 Deane, P. D., 239
 DeBuse, C. J., 154
 Decety, J., 189
 Dechemeleer, M., 219
 Dehaene, S., 190
 Deiber, M. P., 189
 Deignan, A., 9, 201, 203, 223, 224, 225, 253,
 280, 283, 286, 287, 288, 291, 292
 Delfino, M., 312–313
 Demecheleer, M., 253, 289
 Dempster, D., 505
 Denes, G., 182
 Denham, A., 276
 Denis, M., 163
 Dennett, D., 416
 Dennis, S., 130
 Dent-Read, C., 464
 Derrig, S., 427
 Dessalegn, B., 180, 182
 Diamond, S., 186
 Dick, F., 353
 Dietrich, R., 184
 DiGiuseppi, R. A., 400
 Dillard J. P., 154
 Dirven, R., 119, 224, 249, 330, 331, 412
 Dixon, M. J., 434, 435, 436
 Dodge, E., 24, 30
 Doherty, S., 164
 Doughty, C. J., 217
 Douglas, D., 221
 Downes, W., 240
 Drew, P., 205
 Du Bois, W. J., 151, 156
 Dubiel, J., 508
 Dubois, D., 426, 429
 Duchez, M.-E., 516

- Duit, R., 216, 218
 Dumais, S. T., 130
 Duncan, S., 488, 494, 497
 Durand, J., 468
- Echard, W., 511
 Edwards, L., 348
 Eerden, B., 475
 Efron, D., 486
 Ekman, P., 486
 Elio, R., 117
 Elnatan, I., 149, 153, 154, 156
 Emanatian, M., 312–313, 392, 478
 Emmorey, K., 487
 Emmott, C., 239
 Engelhardt, Y., 477
 Erb, M., 69, 154, 188
 Erman, B., 284
 Erramouspe, R., 216
 Essegbey, J., 352
 Estes, Z., 121
 Ettinger, Y., 143
 Eubanks, P., 407, 409
 Evans, C., 205
 Evans, V., 65, 485
 Eviatar, Z., 154, 155
 Eyckmans, J., 253
- Fahnestock, J., 416
 Fainsilber, L., 312–313
 Falkenhainer, B., 111, 315
 Fass, D., 312, 317, 318, 319, 331
 Fauconnier, G., 6, 53, 57, 65, 109, 115, 181, 241, 291, 305, 327, 342, 415, 472, 495
 Faust, M., 150, 154, 186, 188
 Fein, O., 144–146, 147, 148, 149, 150, 151, 152, 153, 154, 156
 Feld, S., 510
 Feldman, J., 17, 18, 189
 Fellbaum, C., 137
 Feltovitch, P., 216
 Ferguson, D. N., 509
 Ferguson, R. W., 111, 113
 Fernandez-Duque, D., 44
 Ferretti, T., 145, 152, 155
 Fesmire, S., 44
 Fine, B., 416, 419
 Fine, H. J., 398, 405
 Finocchiaro, C., 437
 Fishelov, D., 297
 Fisher, C., 439
 Fishlov, D., 219
 Fleischman, S., 485
 Fletcher, P., 187
- Flores d'Arcais, G. B., 438
 Fodor, J., 48, 49, 50, 69, 144, 146, 147
 Fogelin, R., 266
 Forbus, K. D., 110, 111, 113, 141, 315
 Forceville, C., 11, 457, 462, 464, 466, 467, 468, 473, 474, 476, 478, 493
 Forrest, D. V., 400
 Foss, M., 296, 297, 298, 305
 Fowles, J., 240
 Frackowiak, R. S. J., 154, 187
 Fracowiak, R. S. J., 434
 Frak, V., 189
 Francozo, E., 248, 250
 Frank, R. J., 189
 Franks, H., 205
 Freedman, J., 400, 401
 Freeman, D. C., 240, 241, 305
 Freeman, M. H., 239
 French, R. M., 139
 Freriks, J., 472
 Freud, A., 414
 Freud, S., 413, 416
 Freyd, J., 164
 Friedman, R., 186
 Friesen, W., 486
 Frisson, S., 146, 148
 Frith, C. D., 154, 187, 434
 Fuller, J. W., 222–223
 Furuyama, N., 497
 Fussell, S. R., 312–313
- Gabias, P., 448
 Gadir, O., 302, 303
 Gagnon, L., 183, 184, 188, 191
 Gallese, V., 24, 164
 Gangitano, M., 432, 437
 Ganzi, J., 152
 Garcia, R. C., 216
 Gardner, H., 154, 178, 182, 183, 184, 188
 Geeraerts, D., 394
 Gentilucci, G., 432, 437
 Gentner, D., 7, 65, 67–68, 71, 75, 76, 77, 81, 109–110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 122, 129, 136, 139, 141, 168, 169, 200, 216, 296, 315, 449, 458, 517
 Gergen, K. J., 408
 Gernsbacher, M. A., 134, 147, 149, 155
 Gerrig, R. J., 122, 151, 178, 316, 460
 Gervais, R., 429
 Gevaert, C., 394
 Giampietro, V., 69, 154
 Gibbs, R., 8, 44, 69, 109, 113, 117, 119, 122, 135, 144, 145, 149, 151, 153, 155, 162, 164, 165, 166, 167, 172, 178, 205, 208, 209, 235, 241, 243,

- 247, 248, 250, 253, 272, 280, 342, 351, 412,
 413, 460, 463, 469, 478, 493, 495
 Gibbs, Tendahl, 332
 Gibbs, W. R., 161, 426
 Gibson, J. J., 439, 449, 469
 Gick, M. L., 110, 117
 Gildea, P., 70, 112, 117, 180
 Gineste, M.-D., 473
 Giora, R., 7, 69, 70, 80, 117, 143–146, 147, 148,
 149, 150, 151, 152, 153, 154, 155, 156, 178, 184,
 188, 191, 328, 448, 454, 455, 458
 Giroux, F., 183, 184, 188, 191
 Glasbey, S. R., 319, 322, 333
 Gleitman, H., 439
 Gleitman, R. L., 439
 Glenberg, A. M., 164
 Glicksohn, J., 243
 Glucksberg, S., 6, 67, 70, 74, 76, 78, 79, 80, 112,
 113, 114, 117, 119, 122, 133, 135, 136, 139, 140,
 148, 149, 150, 151, 152, 168, 180, 272, 284,
 297, 305, 413, 418, 439, 449
 Glynn, S., 216
 Goatly, A., 206, 215, 242
 Goehr, L., 505
 Goldin-Meadow, S., 352, 353, 491
 Goldstein, L. H., 433, 434, 435, 436
 Goldstone, R. L., 109
 Goldvarg, Y., 70, 148, 149
 Gomblich, E. H., 448
 Goodblatt, C., 243
 Goodman, N., 264, 272, 504
 Goodnough, A., 72
 Goossens, L., 332
 Gordon, C., 208
 Gordon, R., 164
 Gossens, L., 292
 Goswami, U., 216
 Gould, J., 166
 Goulet, P., 178, 183, 184, 188, 191
 Grabowski, T. J., 189
 Grady, J. E., 26, 41, 46, 218, 219, 248, 495
 Grafman, J., 186
 Grant, L., 220
 Graumann, C., 203
 Greenspan, S. L., 163
 Grezes, J., 189
 Grice, H. P., 67, 143, 144, 145, 153, 178,
 266
 Grodd, W., 69, 154, 188
 Grondelaers, S., 394
 Gross, L., 322
 Grossenbacher, P., 433, 434, 435,
 436
 Gruber, H. E., 109
 Guck, M. A., 509
 Guerin, B., 399, 403, 408, 409
 Gwyn, R., 205
 Hage, P., 72
 Halevy, R., 304
 Haley, J., 400
 Hall, R. P., 312
 Hallberg, E. T., 402, 403, 405
 Hallett, M., 189
 Hamilton, C., 239
 Hammeal, R. J., 432
 Hamp-Lyons, L., 218
 Hannequin, D., 178, 183
 Harding, J. L., 119, 168, 169
 Harpur, T., 458
 Harrington, C., 212
 Harrington, H. L., 214
 Harris, P., 164
 Harris, R. J., 216
 Harrison, J. E., 433, 434, 435, 436
 Hasson, U., 148, 149, 151, 152
 Hatten, R. S., 508
 Haught, C., 76, 78, 79
 Haviland, J., 492, 494
 Healey, A. F., 122
 Heasley, B., 218
 Heather, J., 434
 Hécaen, H., 177
 Hekkert, P., 468
 Helmreich, S., 319, 327–328
 Hendler, T., 154
 Hendley, R. J., 326
 Henle, P., 264
 Hersh, R., 348
 Hesse, M., 216
 Heywood, J., 208, 242
 Hichwa, R. D., 189
 Higginbotham, J., 267
 Hill, C. E., 404, 405
 Hills, D., 262, 275
 Hillyard, S. A., 179
 Hinojosa, J. A., 154
 Hintikka, J., 312
 Hiraga, M. K., 305
 Hiraka, M., 239
 Ho, D., 252
 Hobbs, J. R., 314, 315, 332
 Hofstadter, D., 65
 Holland, N., 413
 Hollet, A., 429
 Holme, R., 218
 Holt, W., 205
 Holyoak, K. J., 65, 109–110, 116, 117, 139, 141,
 216
 Holz, W., 483

- Honda, M., 189
 Hopkins, R., 459
 Hopper, P. J., 200, 201
 Horton, W. S., 284
 Howes, D., 427
 Huang, S., 394
 Hubbard, E. M., 426, 428, 431, 433, 434, 436,
 438, 440
 Hughes, T., 232
 Hummel, J. E., 124, 141
 Hwang, K., 252

 Ibanez, V., 189
 Imai, M., 119, 168, 169
 Indurkha, B., 312, 330, 473
 Ingram, J. L., 406
 Inhoff, A. W., 148
 Iverson, E., 319, 327–328
 Iverson, J., 352, 353

 Jackendoff, R., 69, 169, 416, 429, 440
 Jacquin-Courtois, S., 190
 Jankélévitch, V., 505
 Janus, R. A., 148
 Jaques, J., 353
 Jeannerod, M., 189
 Jeziorski, M., 109
 Jin, L., 213
 Joannette, Y., 178, 183, 184, 188, 191
 Johnson, A. T., 74
 Johnson, B. K., 242
 Johnson, C., 26, 219
 Johnson, K., 434
 Johnson, M. L., 6, 41, 43, 44, 48, 51, 65, 109,
 113, 115, 135, 136, 155, 162, 178, 191, 215, 235,
 247, 248, 249, 250, 253, 254, 272, 296, 319,
 326, 342, 358, 382, 412, 414, 416, 462, 463,
 464, 472, 474, 476, 478, 483, 489, 493, 496,
 498, 510, 511
 Johnson, S. R., 476, 511
 Johnson, T., 163
 Johnson-Laird, P., 69, 429, 438
 Jones, J. A., 430
 Jones, L., 296, 297, 298, 305
 Jones, L. L., 121
 Juslin, P. N., 506
 Just, M. A., 154, 155, 188

 Kacinik, N. A., 187, 188
 Kanwisher, N., 164
 Kaplan, D., 263, 268, 269, 277
 Kaplan, J., 178
 Kaplan, S. J., 464
 Kaput, J., 348
 Karbusicky, V., 507, 516

 Kaschak, M., 164
 Kashner, A., 154, 155, 178, 184, 188, 191
 Katz, A., 122, 145, 152, 155, 242, 417
 Kauffman, S., 421
 Kazmerski, V., 180, 182
 Keene, M. T., 324
 Keil, F. C., 300
 Keller, T. A., 188
 Keller-Cohen, D., 208
 Kellerman, E., 222–223
 Kelly, M. H., 300
 Kempler, D., 183, 188
 Kendon, A., 352, 353, 486
 Kennedy, J. M., 11, 119, 121, 208, 297, 305, 448,
 449, 450, 451, 452, 453, 457, 464, 468, 475,
 478
 Kennedy, P. T., 117
 Kennedy, V., 453, 464
 Kenwood, C., 163
 Kerman, J., 510
 Keysar, B., 70, 75, 80, 113, 114, 117, 119, 122, 134,
 139, 147, 149, 272, 284, 297, 305, 413, 418,
 439
 Kielian-Gilbert, M., 508, 516
 Kiesler, D. J., 406
 Kim, H., 152
 Kim, I. J., 189
 Kimmel, M., 253
 King, B., 389, 393
 King, J., 267
 Kintsch, W., 7, 119, 129, 130, 131, 132, 133, 134,
 135, 137
 Kircher, T. T. J., 69, 154, 188
 Kirmayer, L., 204
 Kirsh, D., 163
 Kirtner, J. D., 332
 Kita, S., 352, 485, 492
 Kittay, E. F., 113, 265, 272, 274, 330, 417
 Klatzky, R. L., 164
 Klein, D. E., 133
 Knuf, G., 164
 Koehler, W., 438
 Kokinov, B. N., 65, 109–116
 Koller, V., 200, 220, 222, 292
 Kolmogorov, A. N., 343, 346
 Kopp, R. R., 400, 401
 Korman, Y., 405, 406
 Kosslyn, S. M., 186, 189
 Kotler, N., 153
 Kourtzi, Z., 164
 Kövecses, Z., 10, 48, 236, 239, 244, 248, 253,
 257, 312–313, 380, 381, 382, 383, 386, 387,
 388, 389, 391, 392, 393, 394, 414, 415, 463,
 475
 Kramer, E., 347

- Krantz, S. C., 505
 Kravetz, S., 150, 186, 188
 Kress, G., 476
 Kreuz, R. J., 242, 243
 Kroger, R. O., 408
 Kronrod, A., 149, 153, 154, 156
 Kroos, C., 430
 Krouse, K., 81
 Krych, M. A., 163
 Kubovy, M., 450, 454
 Kuiken, D., 295, 304
 Kurtz, K., 111
 Kutas, M., 179, 188
 Kyle Simmons, W., 426, 432
- Labbo, L., 212, 214
 Ladavas, E., 437
 Lakoff, G., 6, 24, 30, 41, 43, 44, 48, 52, 62, 65,
 109, 113, 115, 123, 135, 136, 155, 162, 170, 178,
 190, 191, 215, 235, 236, 237, 238, 239, 244,
 247, 248, 249, 250, 253, 254, 272, 280, 281,
 290, 291, 295, 296, 305, 319, 326, 327, 339,
 340, 342, 347, 348, 349, 357, 358, 359, 382,
 383, 389, 392, 412, 413, 414, 462, 463, 464,
 472, 474, 476, 483, 487, 489, 493, 496, 498,
 510, 512,
 Landau, B., 439, 440
 Landauer, T. K., 130
 Landis, T., 186
 Langacker, R. W., 169, 414, 415, 497
 Laplanche, J., 420
 Larkey, L. B., 124
 Larson, S., 44, 478, 511
 Lascarides, A., 312
 Lau, I., 225
 Lavine, R. Z., 212
 Lavrent'ev, M. A., 343, 346
 Law, K., 110, 111, 141
 Lawson, A., 216
 Lazar, G., 226
 Le Bihan, D., 190
 Leary, T., 406
 Lee, C. J., 119
 Lee, M. G., 319, 320, 322, 328, 333
 Leech, G. N., 234, 235
 Leezenberg, M., 274, 328
 Lehrer, A., 113, 119
 Lenrow, P. B., 398
 Leon, M., 430
 Lerman, C. L., 221
 Leube, D. T., 69, 154, 188
 Levin, F., 413
 Levin, S. R., 264, 327
 Levinson, J., 276
 Levinson, S., 492
- Levitt, H., 405, 406
 Levorato, M. C., 430
 Levy, E. T., 485, 490
 Levy, G., 152
 Lewis, D., 273
 Li F-Y, T., 218
 Liddell, S. K., 487
 Lidov, D., 506, 520
 Lima, P., 248, 250
 Lima, S. D., 148
 Lindamood, T., 179
 Lindauer, M., 438
 Lindsay, M., 186
 Lindstromberg, S., 218, 224
 Littlemore, J., 216, 217, 221, 222, 226, 253
 Littman, M. L., 137, 138
 Liu, C. H., 453
 Lodge, D., 238, 239, 240, 242
 Loewald, H., 413
 Loewenberg, I., 262
 Loewenstein, J., 110, 117
 Logan, C. G., 189
 Long, M. H., 217
 Longhini, A., 212
 Lopes, D., 458
 L'opez-Mart'yn, S., 154
 Louw, B., 203
 Love, B. C., 124
 Lovelace, C. T., 433, 434, 435, 436
 Lovink, G., 476
 Low, G. D., 8, 200, 204, 212, 213, 214, 216, 220,
 224, 225, 226, 227, 253
 Lucchelli, F., 184
 Lutzenberger, W., 437
 Lyddon, W. J., 399, 402
 Lytinen, S. L., 332
- Ma, X.-F., 497
 Maalej, Z., 253, 464, 478
 MacCormac, E., 119
 MacDonald, J., 430
 MacNealy, M. S., 243
 Macy, L., 512
 Maglio, P. P., 163
 Magnani, L., 44
 Makari, G., 413
 Malgady, R. G., 296
 Manea, S., 312–313
 Manfredi, D., 74, 113, 114
 Manfredini, D. A., 133, 140
 Mangalath, P., 137
 Marangolo, P., 184
 Margalit, A., 265
 Markman, A. B., 71, 109–116, 136
 Marks, L. E., 426, 429, 431, 432, 436, 439

- Marschark, M., 122, 242
 Marsolek, C. J., 186
 Marsolek, J. C., 154
 Martin, A., 189
 Martin, J. H., 312, 315, 402, 403, 405
 Martin, J. M., 117
 Martin, P., 314, 332
 Martinez, A., 188
 Martino, G., 431, 432
 Mashal, N., 154
 Mason, Z. J., 312
 Massironi, M., 432, 438
 Matlock, T., 8, 161, 163, 169, 170, 171, 181, 189
 Matos, J. F., 348
 Matsuki, K., 389
 Matsumoto, Y., 169
 Matsunaka, Y., 478
 Matthews, R., 264
 Mattingly, J. B., 433, 434
 Maurer, D., 436
 Mayberry, R., 353
 Mbense, T., 391
 McCarthy, M., 200, 202, 220
 McClone, M. S., 140
 McCloskey, B. P., 164
 McCullough, K.-E., 497
 McDonald, I., 64
 McElree, B., 69
 McGarry, K., 183
 McGlone, M. S., 74, 113, 114, 119, 133, 168, 169
 McGuire, P. K., 188
 McGurk, H., 430
 McKeon, R., 414
 McKoon, G., 151
 McMahan, M., 409
 McMullen, L. M., 10, 397, 404, 406, 409
 McNamara, D., 130
 McNeil, D., 313
 McNeill, D., 352, 353, 476, 485, 486, 488, 489, 490, 491, 492, 494, 496, 497
 McQuarrie, E. F., 477, 478
 Medford, N. C., 69, 154
 Medin, D. L., 109
 Medina, J., 117
 Melnick, B., 413
 Mercado, F., 154
 Merikle, P. M., 434, 435, 436
 Merkas, C. E., 450, 452
 Meyer, L., 520
 Meyers, K., 200, 220
 Miall, D. S., 295, 304
 Michel, C., 190
 Michel, D., 178
 Mick, D. G., 477, 478
 Middleton, J., 216, 217
 Miller, G. A., 69, 109, 119, 429, 438
 Miller, W. R., 72
 Modell, A., 413
 Montague, R., 267
 Moon, R. E., 282, 288, 293
 Moore, B., 416, 419
 Moore, K. E., 61, 66, 485
 Moran, R., 262, 276
 Morgan, P., 248
 Morrow, D. G., 163
 Moss, M. M., 312–313
 Motz, B. A., 168, 169
 Moulin, A., 464
 Mueller, C., 11
 Muggia, S., 184
 Mukarowský, J., 233
 Müller, C., 476, 485, 486, 487, 488, 489, 490, 492, 493, 494, 495
 Munhall, K., 430
 Muran, J. C., 400
 Murphy, G. L., 123, 133, 351, 493
 Musolff, A., 329, 333
 Namy, L., 117
 Napolitano Valditara, L., 428
 Narayanan, S., 24, 26, 189, 323
 Naroditskaya, I., 511
 Nayak, N. P., 69, 113, 151
 Nelkin, N., 430
 Nersessian, N. J., 44, 109
 Newsome, M. R., 148, 149
 Niemeier, S., 218
 Nogales, P., 274
 Nordlie, J., 69
 Norris, J. M., 217, 222
 Norvig, P., 311–312, 321
 Novick, L. R., 117
 Nowottny, W., 234, 239
 Nunberg, G., 119, 438
 Núñez, R. E., 10, 44, 61, 66, 168, 169, 170, 190, 339, 340, 342, 347, 348, 349, 350, 352, 353, 357, 358, 359, 485, 492
 Oakley, T., 65, 495
 Oblinger, D., 111
 O'Brien, J. E., 117, 166
 O'Donnell, S., 511
 Ogden, T., 413
 Okrent, A., 487
 Oliveri, M., 183, 185, 188, 191, 437
 Ortega, L., 217, 222
 Ortigue, S., 190
 Ortony, A., 75, 112, 119, 135, 145, 148, 153, 227, 296, 297, 298, 305, 312–313, 315, 325, 330

- Osgood, C. E., 433
 Ota, H., 190
 Oxford, R., 212, 214, 215
 Özcaliskan, S., 253
- Paivio, A., 242
 Palmer, A. S., 221
 Panther, K., 249
 Papagno, C., 183, 184, 185, 188, 191
 Parani, D., 189
 Pascual-Leone, A., 437
 Paul, L., 184
 Paulesu, E., 154, 187, 188, 434
 Pavio, A., 122
 Pearce, S. S., 400, 401, 402
 Pearl, J., 323
 Pederson, E., 492
 Pelamatti, A., 427
 Peleg, O., 146, 147, 148, 153
 Pelligrino, J. W., 164
 Perez, E., 186
 Perlman, M., 508, 511, 516
 Perry, J., 277
 Petrov, A. A., 124
 Pexman, P. M., 145, 152, 155
 Phillips, B. J., 163, 477
 Pickering, M., 146
 Pilkington, A., 237, 241
 Pinel, P., 190
 Piquer, A. M., 223
 Plath, S., 233
 Poli, J., 69
 Pollio, H. R., 200, 221, 398, 404, 405
 Pollio, M. R., 398, 405
 Ponech, T., 469
 Pontalis, J.-B., 420
 Popova, Y., 240
 Porcher, L., 485, 488
 Pörings, R., 330, 331
 Potter, H., 182, 183, 188
 Potter, J., 408
 Powelson, J., 178
 Powers, H., 505–506
 Preissl, H., 437
 Priftis, K., 190
 Prinz, W., 164
 Procyk, E., 189
 Pulvermueller, F., 437
 Pulvermüller, F., 189
 Pynte, J., 69, 179, 180, 182
- Quek, F., 497
 Quesada, J., 137
 Quinn, N., 209, 388, 493
 Quintilianus, M. F., 486
- Radden, G., 249, 381, 387, 414, 415
 Radman, Z., 421
 Radvansky, G. A., 164
 Ramachandran, V. S., 426, 428, 431, 433, 434, 436, 438, 440
 Raman, R., 189
 Ramscar, M., 124, 169, 170
 Raphaely, D., 163
 Rapp, A. M., 69, 154, 188
 Raskin, A. H., 177
 Rasmussen, B., 403, 405, 407
 Rattermann, M. J., 110
 Récanati, F., 269
 Reddy, M. J., 264, 265, 489
 Regan, A. M., 404, 405
 Regard, M., 186
 Regier, T., 20, 24, 30
 Rehak, A., 178
 Reider, N., 413
 Reinhart, T., 273
 Rennie, D. L., 403, 404, 406, 407
 Reynolds, R. E., 145, 148, 153
 Rhodes, G., 457, 458
 Rice, S., 118
 Rich, A. N., 433, 434
 Rich, S., 217
 Richards, I. A., 498
 Richardson, D. C., 170, 171
 Ricoeur, P., 414, 421
 Rinaldi, M., 184
 Riviere, D., 190
 Rizzo, S., 184
 Rizzolatti, G., 426, 437
 Robbins, H., 344
 Roberts, R. M., 242
 Roberts, S., 81
 Robertson, R. W., 147, 149
 Robichon, F. H., 69
 Rode, G., 190
 Rodel, M., 186
 Rogers-Ramachandran, D., 437
 Rohdin, M., 464
 Rohrer, T., 417
 Romero, L., 183, 185, 188, 191
 Roncero, T., 121
 Rorty, R., 47, 266
 Rosaldo, M., 393
 Rosch, E., 412
 Rosen, V., 413
 Ross, A., 453
 Ross, B. H., 116, 117
 Rossetti, Y., 190
 Rouby, C., 426, 429
 Rozik, E., 464
 Rubio Fernandez, P., 148, 149, 150, 151

- Rugg, M. D., 179
 Ruiz de Mendoza Ibáñez, F. J., 327, 332
 Rumelhart, D. E., 113, 510
 Russell, R. L., 402
 Russell, S. W., 311–312, 321
 Ruwet, N., 505–506
- Sacks, O., 449
 Sadato, N., 189
 Sakuragi, T., 222–223
 Saleh, A., 212
 Sandra, D., 118, 148
 Sandu, G., 312
 Santa Ana, O., 282
 Sapir, E., 200
 Sarason, S. B., 214
 Saslaw, J. K., 511
 Saussure, F., 505
 Savardi, U., 427
 Sayce, R. A., 220
 Sayrs, E., 511
 Scarpa, P., 154, 187, 188
 Scart, V., 473
 Schaal, B., 426, 429
 Schab, F., 426
 Schallert, D. L., 145, 148, 153
 Scheffler, I., 274
 Scheindlin, R., 272
 Schenone, P., 154, 187, 188
 Schieffer, B., 184
 Schmidt, G. L., 154
 Schmitt, N., 227
 Scholem, G., 428
 Schön, D. A., 212, 213
 Schram, D. H., 242, 243
 Schuurman, D., 464
 Schwartz, D. L., 163
 Scribner, S., 214
 Scruton, R., 504, 505
 Searle, J., 45, 46, 67–68, 75, 135, 143, 144, 145, 153, 178, 266
 Seger, C. J., 154
 Semino, E., 208, 237, 240, 242, 289
 Senft, G., 492
 Sereno, M. I., 188
 Shalev, H., 298
 Shallice, T., 187
 Shapiro, K., 430, 437
 Shapiro, T., 413
 Sharpe, E., 413
 Shavit, A., 143, 144
 Shen, Y., 9, 119, 149, 242, 284, 296, 297, 298, 299, 300, 301, 302, 303, 428
 Shengold, E., 413
 Shinohara, K., 478, 485
- Shklovsky, V., 295
 Shore, B., 478, 493
 Short, M. H., 208, 234, 242
 Shovelton, H., 494
 Shuval, N., 149, 153, 154, 156
 Siegelman, E. Y., 400, 401, 402
 Silver, J., 453
 Simmons, G. F., 347
 Simner, K., 435
 Simon-Vandenberg, A. M., 240
 Simons, J., 464, 474
 Simpkinson, C., 398
 Simpson, T., 182, 183, 188
 Sinclair, J., 282–283, 284, 285, 288
 Skehan, P., 221
 Skorzynska, H., 288
 Slobin, D., 494
 Sloboda, J. A., 506
 Smilek, D., 434, 435, 436
 Smith, M. K., 221
 Smolensky, P., 416
 Smykowski, T., 448
 Smyth, R., 121
 Sobolev, D., 239
 Solie, R. A., 510
 Sopory, P., 154
 Soriano, C., 253
 Soroker, N., 154, 155, 178, 184, 188, 191
 Sotillo, M., 154
 Sparks, C. L., 399, 402
 Sperber, D., 7, 146, 155, 237, 266, 269, 330, 469
 Spiro, R. T., 216
 Spitzer, M., 511
 Spivey-Knowlton, M., 166
 Squire, L. R., 186
 Srinivasan, M., 170
 St. George, M., 188
 Stahl, E., 216
 Stalnaker, R., 267, 273
 Stanfield, R. A., 432
 Stanley, J., 267, 269
 Steen, G. J., 109, 220, 223, 241, 242, 243, 304, 495
 Stein, G. C., 319, 327–328
 Stelma, J., 199, 200, 203, 213, 220, 222
 Stern, J., 9, 262, 263, 265, 267, 272, 273, 275, 276, 277, 328, 329, 333
 Sternberg, R. J., 113, 296, 318, 331
 Sterzi, R., 154, 187, 188
 Stevick, E. W., 227
 Stewart, I., 347
 Stickel, M. E., 314, 332
 Stoffregen, T. A., 430, 431
 Strauss, C., 493

- Stressler, J., 220
 Stringaris, A. K., 69, 154
 Strom, L., 166
 Stroop, J. R., 69
 Stuart, J. J., 405, 406
 Stubbs, M., 225
 Sun, S., 469, 478
 Sunderland, C. C., 402
 Sundermeier, A. B., 154
 Sutton, C., 216
 Swan, J., 236, 238
 Sweetser, E., 66, 119, 178, 296, 342, 352, 353, 358, 415, 438, 485, 491, 492
 Swindlehurst, K., 240
 Swinney, D. A., 117, 147
 Szabo, Z., 267
 Szoklolsky, A., 464
- Tabossi, P., 117, 184
 Talebinejad, M., 253
 Talmy, L., 20, 169, 342, 350, 383
 Tamim, R., 216
 Tan, E., 468
 Tapia, M., 154
 Taub, S., 248, 496
 Taylor, J., 391, 415, 418
 Taylor, L., 164
 Tebbe, M. R., 216
 Teng, N. Y., 469, 478
 Teuscher, U., 168, 169
 Thagard, P., 124, 139, 216
 Thelen, E., 352, 353
 Thomas, O., 312–313
 Thompson, A., 272
 Thompson, J. O., 272
 Thompson, L., 110, 117
 Thompson, S. A., 200, 201
 Thompson, W. L., 189
 Thomson, E., 412
 Tilley, C., 402
 Tilo, T. J., 69
 Tirrell, L., 119, 272
 Tognini-Bonelli, E., 282
 Tomasello, M., 469, 520
 Tomlinson, S., 212
 Tompkins, C., 183
 Toupin, C., 216
 Tourangeau, R., 113, 296, 318, 331
 Trager, G. L., 72
 Tranel, D., 189
 Traugott, E. C., 118, 485
 Travis, C., 269
 Treitler, L., 505
 Truscott, J., 217, 222
 Tsur, R., 234, 235, 236, 237, 239, 302, 305
- Tuggy, D., 417
 Turner, M., 6, 53, 57, 62, 65, 109, 115, 155, 178, 181, 191, 235, 236, 237, 238, 239, 241, 244, 272, 291, 295, 305, 327, 342, 472, 489, 495, 514
 Turney, P. D., 137, 138
 Tversky, A., 71, 296
 Tversky, B., 163, 477
- Ullmann, S., 302, 427, 428
 Umilta, C., 190
- Vallar, G., 184, 190
 Vallee-Tourangeau, F., 174
 van de Moortele, P., 190
 van den Broek, P., 154
 van Dijk, T. A., 327, 333
 van Genabith, J., 312
 Van Lancker D., 188
 Van Leeuwen, T., 476
 Van Luncker-Sidtis, D. R., 184
 Van Petten, C., 155, 181, 182
 Van Rompay, T., 468, 476
 Van Sant, G., 457
 Van Teeffelen, T., 280
 VanLacker, D., 183
 Varela, F., 412
 Vatikiotis-Bateson, E., 430
 Veale, T., 324
 Verbrugge, R. R., 510
 Vergeer, A., 478
 Vervaeke, J., 208, 448
 Vicari, P., 454, 455, 456
 Vicente, B., 237
 Victor, P., 478
 Villamil, O. S., 214
 Virtue, S., 154
 Vivona, J. M., 400
 Vogel, C., 312
 Vondruska, R., 296, 297, 298, 305
 Vosniadou, S., 119
 Vuilleumier, P., 190
- Walker, M. E., 511
 Wallington, A. M., 319, 322, 333
 Walser, R., 511
 Walsh, C., 239
 Walsh, J. P., 511
 Wang, J., 320
 Ward, J., 435
 Warren, B., 284
 Watson, J. D. G., 434
 Way, E. C., 311–312
 Webb, R., 485
 Weber, S. H., 311–312

- Wechsler, D., 71
 Weiner, J., 311–312
 Weisper, S., 186, 188
 Wells, P., 478
 Werner, H., 438
 Werner, N. K., 147, 149
 Wernicke, C., 177
 Werth, P., 240
 Westendorp, P., 477
 White, R. M., 264, 272
 Whittock, T., 464, 468, 469
 Wilcox, P. P., 313, 496
 Wilcox, S., 313
 Wilkins, D., 492
 Wilks, Y., 311–312, 317, 320
 Williams, J., 118, 150, 151, 426, 427, 428
 Williams, S., 188
 Willig, C., 408
 Wilson, C. D., 426, 432
 Wilson, D., 7, 146, 155, 237, 266, 269, 330, 469
 Wilson, N., 167
 Winner, E., 154, 178, 182, 183, 184, 188, 223
 Winston, P. H., 312
 Winter, S., 10, 44, 363
 Wittrock, M., 216
 Wolff, P., 71, 110, 112, 113, 116, 117, 122, 129, 136,
 517
 Woll, B., 313
 Wong, E., 216
 Wood, F. B., 433
 Wood, L. A., 408
 Wray, A., 225, 284
 Wright, H. G., 44
 Wright, K. J. T., 400
 Wundt, W., 485
 Wurmser, L., 413
 Wyke, M. A., 433, 435, 436

 Yan, J., 111
 Yarlatt, D., 124
 Yelland, G., 434
 Yu, N., 9, 223, 250, 253, 256, 257, 258, 303,
 305, 312–313, 393, 478, 485

 Zaidel, E., 154, 155, 178, 184, 188, 191
 Zalazinska, A., 492
 Zampetti, P., 184
 Zanten, W., 516
 Zbikowski, L. M., 12, 502, 503, 511, 512,
 516
 Zelizer, V. A., 409
 Zhang, L., 326
 Zharikov, S., 121, 122
 Zon, B., 510
 Zorzi, M., 190
 Zur, A., 149, 153, 154, 156
 Zwaan, R. A., 164, 243, 432

Subject Index

- A IS B metaphor format, 215–216, 217–218
 abstract concepts, 39–40, 45
 NTL and, 33–34
 activation and inhibition, in NTL, 19
 AD. *See* Alzheimer's disease
 aesthetics, 5, 153–154, 156
 Affection is Warmth, 46
 agency, time and, 61–62
 AI. *See* artificial intelligence
 Aleksandrov, A. N., 343
 Alzheimer's disease (AD), 184
 ambiguity, in law, 364–365, 367
American Psycho, 471
 American Sign Language, 487
 analogy, 139–140, 325. *See also* disanalogies
 AI and, 314, 315
 discover mapping and, 314, 315
 metaphor and, 109–115, 136–139
 metaphor *vs.*, 123
 reasons for, 213
 sample problems, 137
 analysis, metaphoric blends, NTL and,
 32–33
 analytical philosophy, meaning, truth and,
 47
 anger and love, 381
 aptness, 110, 135, 262
 relationality and, 110, 121–122
 Aristotle, 48, 67
 art, 11. *See also* pictorial metaphors
 artistic symbols, 504
 awkward metaphors in, 455–457
 edge depiction, universal impressions in,
 451–453
 Emblematica movement in, 454–455
 euphemisms in, 457
 form geometries *vs.* objects in, 454–455
 form symbolism dependencies in, 453–454
 hendiadys in, 457
 hyperbole in, 457
 irony in, 458
 lines, contours in, 450–451
 literal picture realism in, 449–450
 metaphor limits in, 447
 metaphoric pictures, 459–460
 motion in, 448–449, 452–453
 natural law standards in, 450–451
 personification in, 457–458
 realism as apparent naturalism in, 457
 realism violations in, 448–449
 shortcomings of, 457
 successful metaphors in, 460
 synecdoche in, 457
 tropes, 457–458, 478
 artificial intelligence (AI), 10
 aims of, 312–314
 analogy-finding and, 325
 attitude transfer, value judgments and, 333

- artificial intelligence (AI) (*cont.*)
 ATT-Meta approach to, 319–323, 333–334
 Barnden work on, 319–323
 belief reasoning and, 333
 cognition and, 312
 computer science and, 313–314, 334
 context/extent and, 328–329
 domain distinctions and, 322–323, 330–331
 engineering aim of, 312–313, 334
 Fass work on, 317–319
 general/philosophical aim of, 312
 goal-directed reasoning and, 321
 gradedness and, 330
 Hobbs work on, 314–315
 literal meaning and, 332
 mapping details and, 326–327
 mapping discovery by analogy and, 314, 315
 mappings, inference transfer and, 314
 map-transcendence, pretense and, 319–323
 Martin work on, 315–317
 meta5 and, 317–319, 332
 Metallel and, 319
 metaphor research and, 311–312, 314–334
 metaphorical transfers, overall processing and, 328
 metonymy and, 331–332
 MIDAS and, 315–316, 317
 mundaneness and, 326
 Narayanan work on, 323–324
 non-assertional metaphor and, 326
 parallelism, disanalogies and, 327–328
 psychological aim of, 312
 recent work, 314–326
 research products, 313, 334
 reversed transfers and, 333–334
 Sapper system, 324–326
 source-domain, pretense reasoning and, 327
 source-domain representation, 323–324
 source/target overrides and, 329–330
 structure-mapping and, 325
 TACITUS system and, 314–315
 uncertainty and, 329
 unmodified-property usage, 314–315
 useful artifacts, 312
 Veal work on, 324–326
 VNMAAs and, 322
- attitude transfer/value judgments
 AI and, 333
 ATT-Meta and, 333
- ATT-Meta, 319–323
 AI and, 319–323, 333–334
 attitude transfer, value judgments and, 333
 belief reasoning and, 333
 domain distinctions and, 322–323, 330–331
- IQ of, 322
 reversed transfers and, 333–334
 source-domain, pretense reasoning and, 327
 source/target overrides and, 329–330
 VNMAAs aspect of, 322
- attributive category theory, 124
 automaticity, literal *vs.* metaphorical meaning, 70
- Bach, J. S., 502
 Barnden, John, 10, 319–323
 being, 48
 belief reasoning, AI and, 333
 best-fit systems, NTL and, 23–24
 blended cyclical day (C), 57, 58
 blending. *See also* concept blending
 integration, 31–32
 metaphors and, 30–31, 32–33
 metonymic tightening and, 31–32
 in NTL, 30, 31–32
 topology, 31
 unpacking, 31
 web, 31
- body, emerging metaphors, 249–253
 Borbely, Antal, 11
 Bowdle, Brian, 7
 brain physiology. *See also* event-related brain potentials; neurological correlates
 brain hemisphere evidence, 183–184
 extension neural circuits, 23
 gestalt neural circuits, 21
 language deficits and, 178
 metaphor comprehension and, 177–179, 182–187, 188
 mirror neurons, 19
 neural circuit mapping, 22–23
 patient studies, 182–184
- brain shaping, 18
 Bunyan, John, 236
- C. *See* blended cyclical day
 Cacciari, Cristina, 11
 Cameron, Lynne, 8
 Canale/Swain/Bachman communication competence model, 222
 career of metaphor hypothesis, 7, 115–119, 122–123
 categorization, 119
 category membership, 139–140
 comparison process and, 6–7
 comparison *vs.*, 79–80, 123
 theory of, 74–75
 causal path metaphor, 42–43
 causation, 39, 41–42, 44
 Chomskian linguistics, 352

- Cienki, Alan, 11–12
 cinematic metaphor, 468
 class-inclusions, 119
 CMT. *See* conceptual metaphor theory
 cobbling and sculpting, 53–54, 63–64
 cognition
 AI and, 312
 efficiency, relevance and, 88, 89
 embodied simulations in, 8
 embodied theories of, 426
 literature as text *vs.*, 241–243
 metaphor, gesture and, 352–356, 495–496
 cognitive linguistics, 40, 48
 mathematics and, 342–343
 Cognitive Metaphor Theory, 235–236, 239, 244
 cognitive science, music, metaphor and, 510–511
 Cognitive Science of Mathematics, 341
Cognitive Science of Mathematics (Lakoff, Núñez), 340
 cognitive theory, law and, 375–376
The Collector (Fowles), 240
 color of law, 363, 370–371
 color of office metaphor, 365–374
 Supreme Court and, 372
 communication
 Canale/Swain/Bachman model, 222
 code model view of, 85
 inferential, 87
 language and, 85–87
 relevance principle of, 89–90
 comparison, 67–68, 69, 70–74, 110
 categorization *vs.*, 79–80, 123
 dual reference and, 71–73, 74
 outcome, psychotherapy, 404
 theory of, 74–75
 understanding, 70–71
 compatible/clashing expressions, 296–297
 complex metaphors, 247–249
 comprehension, 129
 inferential, 87–88, 90
 of metaphor *vs.* simile, 74–81, 119–120
 neural substrates of, 188–191
 real-time, 179–182
 relevance and, 87–88, 90
 of similes, 298–299
 of synaesthetic metaphors, 303
 of zeugma, 301
 compression, 53, 54
 computational models, LSA, 130–131
 computational theory of metaphor, 7
 computer science, AI and, 313–314, 334
 concept blending. *See also* blending
 in music, 517, 518–519
 in NTL, 23
 theory of, 6
 concepts, 45
 sensorimotor grounding of, 189–190
 conceptual integration, 54
 conceptual mappings, 53–54. *See also*
 source-to-target mappings; time-space
 conceptual mapping
 conceptual metaphor theory (CMT),
 shortcoming of, 463
 conceptual metaphors, 5, 236
 abstract thought and, 45
 decomposition account of, 248, 257–258,
 259–260
 empirical research on, 45, 248
 force dynamics and, 383–384
 individual minds and, 209
 labeling of, 497
 mathematics and, 349–351, 356
 in NTL, 28–29
 psychological reality of, 351
 talk and, 207–209
 constraint-based satisfaction model, 145
Contact (Sagan), 339
The Contemporary Theory of Metaphor (Lakoff),
 25
 context, 7, 9, 10–11, 140, 244, 266, 268–274,
 287–288, 407–409
 AI and, 328–329
 of homonyms, 74
 inappropriate properties inhibition, 148–149
 incompatible properties retention, 151–153
 incompatible properties suppression,
 149–150
 strength of, 98–100
 context effects
 direct access view, 145
 inhibition/suppression/retention, 147–148
 temporal priority of, 145
 context-dependent hypothesis, 180
 contextual metaphor, pictorial metaphor and,
 464–465
 contrastive metaphors, 152
 conventional metaphors, without literal
 referent, 77
 conventionalization, 123
 naturalistic evidence of, 121
 Cooke, Deryck, 506
 corpus linguistics, 280–282, 283–284, 293
 concordances, intuition based-description,
 284
 experimental work linguistic data, 284–287
 FEIs, 282
 introduction to, 280–282
 research, 9, 282–284
 Coulson, Seana, 8
 Courant, R., 344

- Course in General Linguistics* (Saussure), 505
 cross-domain mappings. *See also*
 domain-mapping; source domains
 gestures and, 485–486
 mental number line, 190–191
 culture, 247, 289. *See also* language and culture
 emerging metaphors filter of, 253–256
 emotional concepts and, 388–392, 393–394
 language acquisition and, 225–226
 music and, 516, 519
 shared metaphors and, 259
- Davidson, Donald, 45, 46
 Deignan, Alice, 9
 depth psychology theorists, 401
 directional asymmetry, 115
 directional inference process, 113
 directionality principle (DR), 296–297
 compatible, clashing expressions and,
 296–297
 disanalogies, AI and, 327–328
 discourse coherence, 153
 domain distinctions
 AI and, 322–323, 330–331
 ATT-Meta and, 322–323, 330–331
 domain-mapping
 AI and, 326–327
 hypothesis, 114
 DP. *See* directionality principle
 dual reference
 comparison and, 71–73, 74
 implications of, 73–74
 metaphor understanding and, 71–73
 duals, 60–61, 65–66
- economic policy, metaphoric statements about,
 323–324
 education, 9
 educational change, 213–214
 models, metonymy role in, 215
 EFL. *See* English as a foreign language
 ego, time and, 62
 Elliot, T. S., 272
 embedded multimodal metaphors, 474–476
 Emblematica art movement, 454–455
 embodied cognition theory, 426
 Embodied Construction Grammar, 36–37
 embodied metaphor, pictorial metaphor and,
 468
 embodied simulation, 8, 162–165, 173–175
 fictive motion and, 169–171
 in NTL, 18–19
 emergence, in NTL, 32
 emergent structure, 54, 55
 emerging metaphors
 body as source for, 249–253
 culture filter for, 253–256
 emotion
 emergence of, 385
 figurative language of, 380
 force of, 385
 master metaphor for, 382–385
 musical meaning and, 506
 as natural force, 384
 as opponent, 383–384
 parts of, 380
 as physical force, 384–385
 emotion concepts
 cultural models of, 388–392, 393–394
 historical change and, 394–395
 metaphors, cognitive construction of,
 388–392
 universality of, 392–395
 emotion metaphors, 10, 380
 mentonymies/related concepts, 380–382
 relationship metaphors *vs.*, 387–388
 uniqueness of, 385–387
 universality of, 392–395
 empirical studies, 12–13, 248
 English as a foreign language (EFL), 214
 Erickson, Milton, 401
 ERPs. *See* event-related brain potentials
 Event Structure Metaphor, 33
 event-related brain potentials (ERPs), 179
 events, 39
 E/X/M blends, 56–61, 62–63
 E/X/M/R/S blends, 62–63
 explicit metaphors, implicit *vs.*, 469
 expression content *vs.* character, 268
 extension neural circuits, 23
- Fass, Dan, 317–319
 Fauconnier, Gilles, 6, 57
 FEIs. *See* fixed expressions and idioms
 Feldman, Jerome, 17, 18
 fictive motion
 embodied simulation and, 169–171
 mathematics and, 349–351, 356
 figurative language
 defined, 416
 of emotion, 380
 interpretation of, 7–8, 184, 363–364
 law and, 363–364
 literal *vs.*, 69
 neurotic defenses *vs.*, 414
 in poetic discourse, 305
 psycholinguistic study of, 305
 psychotherapy and, 398
The Figure in the Carpet (James), 240
 fixed expressions and idioms (FEIs), 282

- fMRI. *See* functional magnetic resonance imaging
- Fodor, Jerry, 48–50
- force-dynamics of language, 383–384
- Forceville, Charles, 11
- form geometries *vs.* objects, in art, 454–455
- form symbolism dependencies, in art, 453–454
- Formal Language metaphor, 50
- formal mathematics, 340, 356, 358–359. *See also* mathematics
- forward metaphors, 112
- Foster, E. M., 240
- Fowles, John, 240
- Freeman, Donald, 240
- From Molecule to Metaphor* (Feldman), 17
- functional magnetic resonance imaging (fMRI), 187–188
- functions
 graph of, 344, 348, 349
 limits, continuity of, 343–351
- Generative Metaphor, 213–214
 criticism of, 8–9
- generic force metaphors, 395
- genitive (noun–noun) structures, interpretation
 generation of, 303–304
- genre, 288–289
- Gentner, Dedre, 7
- gestalt neural circuits, 21
- Gestalt psychology, perception and, 438–439
- Gesture*, 496
- gesture, metaphor and thought, study of, 493–497
- gestures, 11–12
 abstract metaphorical thinking and, 353
 as cognition, 352–356, 495–496
 co-verbal, 486
 cross-domain mapping and, 485–486
 defined, 485–487
 in different cultures, 492–493
 iconic, 485
 interlocutors and, 353
 language, thought and, 486
 Lenin statue and, 483
 parameters of, 353, 355–356
 phases of, 353
 of pointing ahead, 483–484, 485
 sign language and, 486–487
 speech and, 487–493
 speech-gesture co-processing, 353
 speech-gesture complementarity, 353
 speech-gesture development, 353
 speech-gesture synchronicity, 352
 studies of, 352–356
 study relevance of, 484, 497–498
 unconscious production of, 352
 universality of, 352
- Gibbs, Raymond, 8, 136
- Giora, Rachel, 7–8
- Glucksberg, Sam, 6–7
- goal-directed reasoning, in AI, 321
- The Gold Rush*, 462
- Goodman, Nelson, 504
- Gracious Curves*, 473
- graded salience hypothesis, 146–147, 153
- gradedness, AI and, 330
- Grady, Joe, 26, 46
- grammar, 35, 264
 concordance, 119
 form preferences, 120
- grasp, grasping concepts, 6
- Grice, Paul, 87
- Hand and Mind: What Gestures Reveal about Thought* (McNeil), 486
- hemineglect, 190
- hendiadys, in art, 457
- Hobbs, J. R., 314–315
- homonyms, 132
 in context, 74
- hybrid metaphor, pictorial metaphor and, 465–466
- hyperbole, 94
 in art, 457
- hypothetical vehicle properties, 73
- idiolects, personal world views, 239–240
 metaphors and, 239–240
- idioms. *See* fixed expressions and idioms
- image metaphors, 238–239
- image schemas
 and cogs in NTL, 24
 preservation in NTL of, 30
- implicit metaphors
 construal interpretation of, 469
 explicit metaphors *vs.*, 469
- individual studies, 12–13
- inference, 48, 54, 413
 about mental states, 87
 AI and, 314
 directional, 113
 in NTL, 19, 29
 relevance and, 87–88, 90
 steps of, 95–98
 transfer, mappings of, 314
- inferential communication, 87
- inhibition. *See* activation and inhibition
- inhibition/suppression/retention, context effects, 147–148

- initial target-domain query (IQ), of ATT-Meta, 322
- input spaces, intermediate blends, 56–61
- integration networks, 53
 compression in, 53, 54
 emergent structure and, 54, 55
 E/X/M blends, 59, 62–63
 time as space, 65–66
- intelligence, 312. *See also* artificial intelligence
- intent, 374
- interdisciplinary studies, 4
- interlocutors, gesture and, 353
- intermediate blends. *See* input spaces, intermediate blends
- International Computer Science Institute, 17
- IQ. *See* initial target-domain query
- irony, in art, 458
- James, Henry, 240
- Japanese haiku, 100
- Jha, Radhika, 425
- Johnson, Christopher, 26, 43, 48, 247
- Johnson, Mark, 6, 24, 34
- justice, 39
- Kennedy, John, 11
- Kesey, Ken, 240
- Kijk*, 470
- King Lear* (Shakespeare), 241
- Kintsch Construction-Integration model, 131–132
- Kintsch Prediction Model, 131, 133–136
- Kintsch, Walter, 7
- knowledge, 39, 45
 mathematical, 340
 music and, 504–505
- Kolmogorov, A., 343
- Kövecses, Zoltán, 10
- La Strada*, 471
- La Zizanie/The Roman Agent*, 474
- Lakoff, George, 6, 24, 25, 33, 34, 43, 48, 62, 136, 247, 339, 340, 342
- language, 206–207, 439. *See also* corpus linguistics; sensory language
 action, sensory integration and, 437
 American Sign Language, 487
 coding, decoding of, 85
 communication and, 85–87
 contemporary philosophy of, 44–48
 creativity of, 140–141
 determinative power of, 402
 EFL, 214
 force-dynamics of, 383–384
 gestures and, 486
 human *vs.* animal, 85
 literal use of, 100
 of mathematics, 339, 344–345
 music and, 12, 502–503, 520
 naturalistic patterns of, 9, 47
 NTL, 189
 ostensive stimuli and, 86–87
 poetic effects and, 100–103
 psychotherapy and, 402
 semantics of, 47
 technical, 206–207
 thought, communication and, 4, 5, 11–12
- language acquisition, 212
 culture importance in, 225–226
 EFL, 214
 receptive *vs.* productive skills in, 221–222
 teaching strategies, issues, 219–220
- language and culture, metaphor in, 8–10, 11–12
- language conventionality
 motivation and, 437–439
 Takete, Maluma, 438
- language metaphor, thought as, 49–50
- Language of Art* (Goodman), 504
- The Language of Music* (Cooke), 506
- Language of Thought metaphor, 48–50
- Latent Semantic Analysis (LSA), 7, 130–131
- Kintsch Construction-Integration model, 131–132
- Kintsch Prediction Model and, 131, 133–136
- semantic representation by, 131
- word senses within, 7
- Lavrent'ev, M. A., 343
- law, legal theory
 ambiguity in, 364–365, 367
 authority and, 365
 Cognitive Theory of Metaphor and, 375–376
 color of law and, 370–371
 color of office metaphor and, 365–374
 figurative language and, 363–364
 intent and, 374
Monroe v. Pape, 371
 objective criteria and, 365
 objectivist epistemology of, 363
 state action and, 364–365
 Supreme Court, 372
 ultra vires doctrine, 372–373
- Lawyer and Shark, cross-categorization of, 71
- legal metaphor, 364, 365
- Legal Realists, 363
- legal reasoning, 10
- Lenin, Vladimir, 483
- lexical meanings

- graded salience hypothesis, 146–147, 153
 standard pragmatic model, 145–146
 temporal priority of, 145–147
 underspecification model, 146
- lines/contours, in art, 450–451
- linguistic metaphors
 conventionalized, deliberate, 202
 talk and, 207
 tuning of, 202–204
 vehicle development, systematicity of, 201–202
- linguistic synaesthesia, 427
- linguistics. *See also* corpus linguistics
 Chomskian, 352
 constraints, 275–276
 context, 287–288
 conventions, 9–10
- literal meaning, 143–144. *See also* priority of the literal
 AI and, 332
 automaticity of, 70
 figurative *vs.*, 69
 noun–noun combinations and, 70
 priority of, 68, 69–70, 80, 145–146
 processing of, 68, 69, 70
- literal picture realism, 449–450
- literalist philosophy. *See* objectivist/literalist philosophy
- literal-loose-metaphorical continuum, 93–95
- literature
 Anglo-American stylists, 233–234
 formalistic view of, 233–234
 metaphor in, 233–238, 241–243
 metaphor uses/functions in, 238–241, 243–244
- location-event structure metaphor, 41, 43
- logical contradictions, 234
- love
 anger and, 381
 metaphors of, 47–48
- The Love Song of J. Alfred Prufrock* (Eliot), 272
- Lovink, Geert, 476
- Low, Graham, 8–9
- LSA. *See* Latent Semantic Analysis; latent semantic analysis
- M1. *See* primary motor cortex
- Macbeth* (Shakespeare), 240
- mapping gaps, in NTL, 29–30
- Martin, J. H., 315–317
- Mary Poppins*, 463
- Matematika, ee soderzhanie metody i znachenie* (Aleksandrov, Komogorov, Lavern'tev), 343
- Mathematical Idea Analysis, 343
- mathematics, 10, 341–343
 cognitive linguistics and, 342–343
 cognitive science of, 341
 conceptual metaphor, fictive motion and, 349–351, 356
 constant sequence in, 353–354
 dead metaphors and, 351–357
 dynamic language of, 344–345
 formal, 340, 356, 358–359
 functions, limits/continuity of, 343–344, 348, 349–351
 human embodied view of, 359–360
 knowledge and, 340
 language of, 339, 344–345
 nature of, 357
 number oscillation in, 353–354
 ontology, truth and, 357–358
 perception and, 341–342
 philosophical implications of, 357–360
 pure mathematics, numbers, 345–349
 romance of, 340–341
 social conventions and, 357
 source-path-goal schema, 348
 teaching of, 341
 truth in, 357–358
 universal language of, 339
- Matlock, Teenie, 8
- McMullen, Linda, 10–11
- McNeil, D., 486
- meaning, 10, 45, 47. *See also* literal meaning; metaphorical meaning
 construction of, 90–93
 figurative *vs.* literal, 69, 121
 literal *vs.* nonliteral, 6
 mental stimulation and, 19
 nonliteral, 67–68
 ostensive stimuli and, 86–87
 salient-nonsalient continuum of, 7–8
- mental number line. *See* cross-domain mappings, mental number line
- mental reenactments, 173
- mental spaces, in NTL, 30
- mental states
 inference about, 87
 Language of Thought metaphor and, 48–49
- mental stimulation, meaning and, 19
- MES. *See* Metaphor Extension System
- meta
 AI and, 317–319, 332
 metonymy and, 318–319
- Metallel, 319

- metaphor(s). *See also* causal path metaphor; cinematic metaphor; Cognitive Metaphor Theory; color of office metaphor; complex metaphors; conceptual metaphors; contextual metaphor; contrastive metaphors; conventional metaphors; embedded multimodal metaphors; embodied metaphor; emotion metaphors; Event Structure Metaphor; Formal Language metaphor; Generative Metaphor; generic force metaphors; hybrid metaphor; image metaphors; language metaphor; legal metaphor; location-event structure metaphor; metaphor understanding; metaphor-referent metaphors; monomodal metaphors; multimodal metaphors; natural force metaphor; negative metaphors; nominal metaphors; novel metaphors; object-event-structure metaphor; pictorial metaphors; poetic metaphors; pressurized container metaphor; primary metaphors; relationship metaphors; reverse metaphors; synaesthetic metaphors; systematic metaphors; teaching/learning metaphor; verbal metaphor
- in abstract concepts, 33–34
- aesthetics and, 5, 153–154, 156
- affective impact of, 203–204
- AI and, 10
- AI research on, 311–312, 313, 314–334
- analogy and, 109–115, 123, 136–139
- analysis methods, 5, 36–37
- aptness of, 110, 121–122, 135, 262
- in art, 11
- from art objects, 447
- asymmetry of, 140
- vs.* blends, 30–31
- body, culture and, 9
- as bridges, 426
- categorization, comparison process, 6–7
- category-based approaches to, 119
- Chinese/English, 250–253, 257
- classes of, 129
- class-inclusions and, 119
- clustering of, 200, 214
- cognitive significance of, 276–277
- cognitive theories of, 9, 10
- computational theory of, 7
- conceptual blending theory and, 6
- consistent expressions and, 114–115, 214
- contextual approach to, 407–409
- contextual meanings of, 7
- in co-occurring speech, 488
- in corpus linguistics research, 9
- cosanguinity of, 429
- directionality of, 112–113, 115
- discourse coherence and, 153
- dual reference and, 71–73
- as dynamic embodied cognition, 11–12
- as dynamic interactions product, 291–293
- education and, 8–9
- emotion and, 10
- emotion concepts, cognitive construction, 388–392
- empirical studies of, 3, 12–13, 397–398
- explicit training in, 216
- expressive, communicative functions of, 398
- extended mappings of, 113–114
- as falsehood, 363
- forward, reverse, 112
- as general cognitive principle, 493
- gesture, embodied cognition and, 352–356, 495–496
- in gesture/language, 491–492
- grammar and, 35
- grammatical deviance of, 264
- historical change and, 394–395
- as ideological, 290–291
- idiolects, personal world views and, 239–240
- implicit *vs.* explicit, 469
- in individual plays, 240
- individual studies of, 12
- inside/outside literature continuity of, 235–238
- inside/outside literature discontinuity of, 233–235
- interdisciplinary study of, 4, 5
- iterative, 223
- in language and culture, 8–10, 289
- language, thought, communication and, 4, 5, 11–12
- Legal Realists and, 363
- legal reasoning and, 10
- linguistic, conceptual, mental levels of, 416–417
- literary studies of, 241, 243–244
- in literature, 233–235, 238–241, 243–244
- in literature as text *vs.* cognition, 241–243
- living/dead, 119, 235, 351–357
- logical contradictions in, 234
- LSA and, 7
- metonymy and, 8–9, 10, 21–22, 31–32, 215, 223, 238, 292–293, 314, 380–382
- multimodal, 11
- neural theory of, 6, 8, 17, 426
- nonlinguistic, 11
- non-semantic theory of, 46
- in nonverbal expression, 11–12

- overidentification of, 212
- paradox of, 5
- perceptual experience and, 425
- poetic appeal of, 100–103
- poetic figures and, 9–10
- power of, 398–403
- problem description, resolution and, 398–399
- processing of, 110–111
- psychoanalysis, defense and, 417
- psychotherapy and, 398
- real-time processes, 112
- in reasoning and feeling, 10–11
- relevance theory perspective on, 7
- in religious concepts, 455
- research limits, 403–409
- research on, 12–13, 283, 293, 496–497
- roots of, 6–7
- salient-nonsalient meaning continuum and, 7–8
- scholarship on, 3–4
- semantic theory of, 9
- semantics *vs.* pragmatics of, 267–269
- as shared discourse space, 205
- simile and, 7, 67–69, 74–81, 119–123
- speech-act perspective of, 45
- in speech/gesture, 487–488, 491
- state-of-the-art, 3–6, 12
- study scope, 4
- successful, 460
- syntactical criteria for, 413
- teaching, learning and, 8–9
- as textual/social phenomenon, 287–291
- theoretical approaches to, 312
- thought systems, NTL and, 34
- total time constraint of, 316
- traditional interest in, 4
- transference and, 419–420, 427–428
- truth-conditions of, 262–263, 268–269, 276
- ubiquity of, 4–5, 12–13
- understanding, 7–8, 71–73
- uniqueness of, 144–145, 156
- verbal *vs.* pictorial, 11
- Metaphor and Thought* (Ortony), 3
- metaphor comprehension, 68–69, 80, 129
 - brain hemisphere role in, 182–187, 188
 - brain physiology and, 177–179
 - impaired, 184
 - neural substrate of, 188–191
 - underspecification model of, 146
- Metaphor Extension System (MES), 315–316
- metaphor, imagination, simulation. *See also* embodied simulation
 - bodily imagination, time, 168–169, 171–173
 - fictive motion, embodied simulation, 169–173
 - imagining impossible actions, 165–167, 171–173
 - psycholinguistic evidence, 161–162
 - real/imagined bodily movement and, 171–173
 - studies on, 165–173
 - metaphor interference effect (MIE), 180
 - Metaphor Interpretation, Denotation, and Acquisition System (MIDAS), 315–317
 - domain divisions in, 317
 - MES and, 315–316
 - metaphor mapping, 139–140
 - on-line processing and, 493–494
 - metaphor negotiating/appropriating, in talk, 205–206
 - metaphor processing, models of, 145
 - metaphoric competence, 220–222, 223
 - measuring, 222
 - metaphoric language
 - cross-sensory similarities in, 429–430
 - NTL and, 34–36
 - metaphoric processes, primary/secondary, 420–421
 - metaphorical inferences, in NTL, 19, 29
 - metaphorical meaning, 274–276
 - automaticity of, 70
 - processing speed of, 70
 - temporal priority of, 70
 - metaphorical sentences, DP effect on, 300–301
 - metaphorical transfers, AI and, 328
 - metaphoricity
 - defined, 417
 - dynamic, gradable, 495
 - trauma as loss of, 417–418
 - metaphor-referent metaphors, 78
 - Metaphors We Live By* (Johnson, Lakoff), 24, 247
 - metaphysics, 45
 - metonymy, 8–9, 10, 215, 223, 238, 292–293, 314, 380–382
 - AI and, 331–332
 - blending and, 31–32
 - in educational models, 215
 - emotional, 381–382
 - linguistic, conceptual, mental levels of, 416–417
 - linking neural circuits and, 21–22
 - meta5 and, 318–319
 - negative defense and, 418–419
 - psychoanalysis and, 418–419
 - transference and, 419–420
 - MIDAS. *See* Metaphor Interpretation, Denotation, and Acquisition System
 - MIE. *See* metaphor interference effect
 - mind, 39
 - conceptual metaphor and, 209
 - Language of Thought metaphor for, 48–50

- mirror neurons, 19
- monomodal metaphors, multimodal metaphors
and, 477–478
- Monroe v. Pape*, 371
- More than Cool Reason* (Lakoff, Turner), 62
- “Morning Song” (Plath), 237
- motion, in art, 448–449, 452–453
- Müller, Cornelia, 11–12
- multimodal metaphors, 11, 469–474
dimensions of, 476, 477
monomodal metaphors and, 477–478
uptake of, 477
verbal metaphor *vs.*, 477
- mundaneness, 326
- music, 12
analysis of, 512–519
concept blending in, 517, 518–519
culture and, 516, 519
function of, 520
human experience and, 508–510
knowledge and, 504–505
language and, 12, 502–503, 520
mappings within, 516–517
meaning, emotion and, 506
metaphor, cognitive science and,
510–511
musical semiotics, 505–508
philosophical writings about, 505
research on, 504–511
scholars of, 503–504
structure of, 510–511
text painting in, 512–515
vocabulary of, 506
- mutual inhibition, in NTL, 19
- Narayanan, Srini, 26, 323–324
- natural force metaphor, 384
- natural language, 47
- natural law, in art, 450–451
- naturalistic language patterns, 9
- negative metaphors, 144
- networks, 61–63
cobbling, sculpting, 53–54, 63–64
integration networks, 53
- neural bindings. *See also* brain physiology
nonce neural, 20
in NTL, 20
permanent obligatory, 20
permanent-ready-but-conditional, 20
- neural choreography, in NTL, 20–21
- neural circuits, 21–23
extension, 23
gestalt, 21
linking, 21–22
two-way linking, 22
winner-take-all, 21
X-schemas, 23
- neural connections, 18
- neural maps, in NTL, 20
- neural substrates
cross-domain mappings, mental number line,
190–191
of metaphor comprehension, 188–191
sensorimotor concept grounding, 189–190
- Neural Theory of Language (NTL), 189
abstract concepts, metaphor and, 33–34
activation and inhibition in, 19
analysis, metaphoric blends and, 32–33
asymmetry in, 28
best-fit systems and, 23–24
blending in, 30, 31–32
brain shaping and, 18
conceptual blends in, 23
conceptual metaphor use in, 28–29
embodiment, simulation semantics in, 18–19
emergence in, 32
image schema preservation in, 30
inferences in, 19, 29
introduction to, 18–37
mapping gaps in, 29–30
mental spaces in, 30
metaphor analysts and, 36–37
metaphorical language and, 34–36
metaphors *vs.* blends in, 30–31
mutual inhibition in, 19
neural binding in, 20
neural choreography in, 20–21
neural circuit types, 21–23
neural maps in, 20
neuron activation spreading in, 19–20
neuronal groups and, 18
old theory of, 24–26
primary metaphors and, 26–28
processing prediction in, 27–28
structural prediction in, 27
thought systems, metaphor and, 34
- neural theory of metaphor, 6, 8, 17
- neuroimaging, 187–188
- neurological correlates. *See also* brain
physiology
fMRI, 187–188
hemineglect, 190
LHD damage, 178
N₄₀₀ amplitudes, 180–182
PET, 187–188
processing mechanisms and, 154–155
SOA, 183
of synaesthetic perception, 436
visual half-field priming, 185–187
- neuron activation spreading, in NTL, 19–20

- neuronal groups
 NTL and, 18
 structured connectionism in, 18
- neurotic defenses, figurative language *vs.*, 414
- Nietzsche, Friedrich, 39
- 1984 (Orwell), 240
- nominal metaphors, 67
- non-assertional metaphor, 326
- nonce neural bindings, 20
- nonliteral meanings, 67–68
 processing priority of, 68
- non-semantic theory, 46
- nonverbal expression, 11–12
- noun–adjective constructions, interpretation
 generation of, 303
- noun–noun combinations, interpretation of, 70
- novel metaphors
 without literal referent, 78
 as simile, 76
- NTL. *See* Neural Theory of Language
- numbers, in pure mathematics, 345–349
- “Nun komm der Heiden Heiland,” 502
- Núñez, R., 34, 339, 340, 342
- O, 474
- object-event-structure metaphor, 42, 44
- objectivist/literalist philosophy, 39, 44–45, 51
- objects *vs.* form symmetries, in art, 454–455
- Once Upon a Time in the West*, 472
- One Flew Over the Cuckoo's Nest* (Kesey), 240
- on-line metaphoric thought, flexibility of, 494–495
- Optimal Innovation Hypothesis, 154
- Ortony, Andrew, 3
- Orwell, George, 240
- ostensive stimuli, 86–87
 meaning and, 87
- ousia*, 48
- parallelism, AI and, 327–328
- A Passage to India* (Forster), 240
- perception, 425
 Gestalt psychologists and, 438–439
 mathematics and, 341–342
 neurology of, 426
 veridical pageIds for, 426
- perceptual metaphors, senses directionality of, 435–436
- Perfume* (Süskind), 240
- permanent obligatory neural bindings, 20
- permanent-ready-but-conditional neural bindings, 20
- personal world views. *See* idiolects, personal world views
- personification, in art, 457–458
- PET. *See* positron magnetic resonance imaging
- philosophy, 40–44
 history of, 39
 of language, 44–48
 mathematics and, 357–360
 metaphor and, 6, 48–51
 metaphorical analysis of, 44
 objectivist/literalist, 39, 44–45, 51
 perennial questions of, 40
- Philosophy in the Flesh* (Johnson, Lakoff), 34, 43, 48
- pictorial metaphor, in pictures, multimodal representations, 464–469
- pictorial metaphors, 464–469. *See also* art contextual metaphor and, 464–465
 embodied metaphor and, 468
 hybrid metaphor and, 465–466
 pictorial simile and, 466–467
 target, source pageIding in, 464
 textual genre and, 478
 types, 464–468
 verbal *vs.*, 11, 463
- pictorial simile, pictorial metaphor and, 466–467
- pictures, multimodal representations
 cinematic metaphor and, 468
 embedded multimodal metaphors and, 474–476
 further research avenues, 476–478
 multimodal metaphors and, 469–474
 pictorial metaphor in, 464–469
- The Pilgrim's Progress* (Bunyan), 236
- Plath, Sylvia, 232–233, 234, 235, 236, 237–238
- plays, 240
- poetic discourse, 295
 cognitive constraints of, 297–298
 figurative expressions in, 305
 simile distribution in, 297
- poetic effects, 100–103, 232–233, 237
- poetic figures, 9–10, 295
- poetic metaphors, 35, 232–233
- poetic structures, cognitive principles and, 305
- “Portrait of an Unknown Young Man,” 454
- positron magnetic resonance imaging (PET), 187–188
- pressurized container metaphor, 386
- pretense cocoons, 320–321
- pretense reasoning, 327
- primary metaphors, 46, 247–249
 NTL and, 26–28
- primary motor cortex (M1), 20
- priming techniques, 352
- Principle of Relevance, 237

- processing predictions, metaphor hypothesis
 career, 120–121
- psychoanalysis. *See also* psychotherapy
 as clinical modality, 412–413
 defense, figurativity and, 414–416
 hedging equation, 414, 417
 history of, 413–414
 inference/transference, 413
 metaphor, defense and, 417
 metaphor in, 11
 metaphor theory and, 422
 metonymy, negative defense and, 418–419
 primary/secondary metaphoric processes
 and, 420–421
 terminology of, 412
 trauma, loss of metaphoricity and, 417–418
- psychoanalytical schools, metaphor languages of,
 421–422
- psychodynamics, 416–417
- psycholinguistic evidence, 305
 of metaphor, imagination and simulation,
 161–162
- psychology
 AI and, 312
 computational models of, 129–130
 priming techniques in, 352
- Psychosemantics* (Fodor), 50
- psychotherapy, 398
 depth psychology theorists and, 401
 developmental change processes and, 399
 Ericksonian tradition, 401
 figurative language and, 398
 language and, 402
 metaphor in, 10–11, 405
 outcome comparisons, 404
 therapy-relevant metaphors, 406
- pure mathematics. *See also* mathematics
 numbers in, 345–349
- query-directed reasoning, in AI, 321
- realism, in art, 448–449
- real-time comprehension, 179–182
- real-time processes, 112
- reason, 39
- reasoning, 48
 feeling and, 10–11
- recall, of simile, 299
- Recall/Space (R/S), 62–63
- red herring, 277
- relationship metaphors, emotion metaphors *vs.*,
 387–388
- relevance
 cognitive effects and, 88
 cognitive principle of, 89
 communicative principle of, 89–90
 context and, 98–100
 degrees of, 88
 implications and, 98–100
 inferential comprehension and, 87–90
 poetic effects and, 100–103
 processing effort and, 88
 relevance theory, 7, 84–85, 237
 inferential comprehension and, 87–88
 religious concepts, metaphor in, 455
 repetitive transcranial magnetic stimulation
 (rTMS), 178, 184–185
Requiem for a Dream, 462
 retention hypothesis, 151
 reverse metaphors, 112
 reversed transfers, AI and, 333–334
- Robbins, H., 344
 “The Romance of Mathematics” (Lakoff,
 Núñez), 339
- Romeo and Juliet* (Shakespeare), 241
- Rorty, Richard, 45, 46–47
- rTMS. *See* repetitive transcranial magnetic
 stimulation
- Ruwet, Nicholas, 505
- Sagan, Carl, 339
- salience
 salient-nonsalient meaning continuum, 7–8
 sentence structure and, 300
- Sapper system, 324–326
- Saussure, Ferdinand de, 505
- Scrouton, Roger, 504–505
- Searle, John, 45
- semantic relations, 130, 137–138
- semantic theory, 9, 262–264
 pre-history of, 264–267
 skeptical challenges to, 263
- sense differentiation
 activating mechanism criterion of, 430
 belief criterion of, 430
 experiential criterion of, 430, 431
 property criterion of, 430
 sense organ criterion of, 430
- senses, 11
 five separate, 430–431
 metaphorical mapping across, 427–436
- sensory language, metaphorical use of, 425–426
- sensory metaphors, psychological dimensions of,
 427
- sentence structure, salience and, 300
- Shakespeare, William, 240, 241
- shared discourse space, 205
- Shen, Yeshaayahu, 9–10
- The Showdown*, 472
- similarity models, 140

- simile, 7, 67–69, 297–300. *See also* pictorial simile
 comprehension of, 298–299
 interpretation generation of, 299–300
 metaphor and, 74–81, 119–120, 123
 novel metaphor as, 76
 in poetic discourse, 297
 recall of, 299
- simulations, 8
- SMA. *See* supplementary motor area
- SME. *See* Structure-mapping Engine
- Smell* (Jha), 425
- SOA. *see* stimulus onset asynchrony
- source domains, 11, 49–50, 327, 381
 in emotion metaphors, 10
 pretense reasoning, ATT-Meta and, 327
- source-path-goal schema, 348
- source/target overrides
 AI and, 329–330
 ATT-Meta and, 329–330
- source-to-target mappings, 41, 42–43, 47, 49–50, 291–292, 462
 counter-examples, 155–156
- space, time as, 54–60, 65–66, 485
- speech, 487–488
- speech-gesture, 487–493
 complementarity, 353
 co-processing, 353
 development, 353
 synchronicity, 352
- speed, time and, 55
- Sperber, Dan, 7
- Standard Pragmatic Model, 145–146, 153
- Stern, Joseph, 9
- stimulus onset asynchrony (SOA), 183
- Stroop interference effect, 69–70
- Structure-mapping Engine (SME)
 appeal of, 112
 cascade algorithm, 112
 greedy merge algorithm, 110–111
 stages, 110–111
- structure-mapping theory, 109, 124
- supplementary motor area (SMA), 20–21
- Süskind, Patrick, 240
- symmetric alignment process, 113
- synaesthetic metaphors, 11, 302–306, 427
 beyond, 436–437
 compatible *vs.* clashing, 302
 comprehension of, 303
 congruence effect and, 431–432
 cross-modal associations in, 431–432
 directionality and, 428
 distribution of, 302–303
 genitive (noun–noun) structures,
 interpretation generation, 303–304
- linguistic description/perceptual experience
 and, 431–432
 noun–adjective constructions, interpretation
 generation, 303
- synaesthetic perception, 432–436
 age and, 434
 automaticity of, 434
 concurrent stimuli of, 435
 development of, 433
 diffuse forms of, 433
 experimental evidence, 433
 familiarity and, 434
 gender and, 434
 genetics and, 434
 inducers of, 435
 medical references, 433
 neural-cognitive basis of, 436
 in neuroscience literature, 434
 origin of, 434
 prevalence of, 434
 realism of, 434
 specificity of, 434
 types of, 435
 unidirectional, 434
- synecdoche, in art, 457
- systematic metaphors, talk and, 207–209
- systematicity preference, 110
- TACITUS system, AI and, 314–315
- Takete, Maluma, 438
- talk, 8
 implicit topics, 201
 linguistic, conceptual metaphor and, 207
 management of, 204–205
 metaphor and, 197–198
 metaphor distribution in, 200
 metaphor frequency in, 198–200
 metaphor grammar in, 200–201
 metaphor negotiating/appropriating in,
 205–206
 metaphor shape in, 198
 metaphor use in, 203
 research agenda, 209
 systematic, conceptual metaphors and,
 207–209
- teaching/learning metaphor, 8–9, 215–219
 basic meaning instruction and, 224–225
 classroom/learning management and, 224
 culture importance in, 225–226
 descriptive *vs.* procedural model, 214–215
 EFL and, 214
 explicit training, 216
 future research directions, 226–227
 A IS B metaphor format, 215–216, 217–218
 methodological problems, 214–215

- teaching/learning metaphor (*cont.*)
 receptive *vs.* productive skills, 221–222
 strategies, issues, 220–223
 TPR learning, 218
- technical language, 206–207
- The Texas Chainsaw Massacre*, 473
- text painting, music and, 512–515
- textual/social phenomenon, 287–291
- Theory and Practice*, 511
- Thomas, Dylan, 239
- thought, 39
 gestures and, 486
 as language metaphor, 49–50
 Language of Thought metaphor and,
 48–50
- thought systems and metaphor, NTL and,
 34
- time, 54–60
 agency and, 61–62
 duration of, 64
 ego and, 62
 as money, 53
 as space, 54–60, 65–66, 485
 speed and, 55
 subjective experience of, 64
- TIME IS SPACE, 6
- time-space conceptual mapping, 54–60
- Total Physical Response (TPR) learning, 218
- TPR. *See* Total Physical Response learning
- transference, 419–420
- Trope Form, 76
- tropes, in art, 457–458, 478
- truth
 analytical philosophy, meaning and, 47
 conditions, 262–263, 268–269, 276
 in mathematics, 357–358
- “Tulips” (Plath), 232–233, 236
- Turner, Mark, 6, 57, 62
- two-way linking neural circuits, 22
- ultra vires doctrine, 372–373
- uncertainty, AI and, 329
- underspecification model, 146
- unmodified property usage, AI and, 314
- Veal, Tony, 324–326
- verbal communication, study of, 84–85
- verbal metaphor
 multimodal metaphors *vs.*, 477
 pictorial *vs.*, 11, 463
- view-neutral mapping adjuncts (VNMA)s, of
 ATT-Meta, 322
- visual half-field priming, 185–187
- VNMA)s. *See* view-neutral mapping adjuncts
- The Way We Think* (Fauconnier, Turner), 57
- What Is Mathematics* (Courant, Robbins), 344
- Where Mathematics Comes From* (Lakoff,
 Núñez), 34
- Where Mathematics Comes From* (Lakoff,
 Núñez), 339, 340, 342
- Whose Freedom?* (Lakoff), 33
- will, 39
- Wilson, Deirdre, 7
- winner-take-all neural circuits, 21
- Winters, Steven, 10
- Wolf, Virginia, 239
- words, LSA and, 7
- word senses, literal, metaphorical, 131–133
- Wundt, Wilhelm, 485
- X-schemas, 23
- Yu, Ning, 9
- Zbikowski, Lawrence, 12
- zeugma, 300–301
 comprehension of, 301
 distribution of, 300–301