### Index

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abu-Rabia, S.</td>
<td>338</td>
</tr>
<tr>
<td>Acquired dyslexia, 25, 34, 350, 358</td>
<td></td>
</tr>
<tr>
<td>applied to developmental dyslexia, 34–35</td>
<td></td>
</tr>
<tr>
<td>Adams, M., 31</td>
<td></td>
</tr>
<tr>
<td>Ahissar, M., 160, 162, 164</td>
<td></td>
</tr>
<tr>
<td>Amitay, S., 164</td>
<td></td>
</tr>
<tr>
<td>Attention, 307–312</td>
<td></td>
</tr>
<tr>
<td>Attention deficit disorders, 10, 33, 163, 166, 393</td>
<td></td>
</tr>
<tr>
<td>Crowding effects, 310–311</td>
<td></td>
</tr>
<tr>
<td>Letter spacing, 310</td>
<td></td>
</tr>
<tr>
<td>Frontal parietal attention network, 312</td>
<td></td>
</tr>
<tr>
<td>Orienting</td>
<td></td>
</tr>
<tr>
<td>Temporal, 311</td>
<td></td>
</tr>
<tr>
<td>Attentional blink, 311</td>
<td></td>
</tr>
<tr>
<td>Visual attention. See visual processing</td>
<td></td>
</tr>
<tr>
<td>Auditory processing</td>
<td></td>
</tr>
<tr>
<td>allophonic speech perception, 14</td>
<td></td>
</tr>
<tr>
<td>auditory attention problems, 311</td>
<td></td>
</tr>
<tr>
<td>deficits in, 82, 162, 169, 311, 351</td>
<td></td>
</tr>
<tr>
<td>in at risk children, 267–269</td>
<td></td>
</tr>
<tr>
<td>infants, as predictor of risk, 257, 448</td>
<td></td>
</tr>
<tr>
<td>Automatized naming. See rapid automatized naming</td>
<td></td>
</tr>
<tr>
<td>Baddeley, A., 241</td>
<td></td>
</tr>
<tr>
<td>Bar-On, A., 154</td>
<td></td>
</tr>
<tr>
<td>Baron, J., 396</td>
<td></td>
</tr>
<tr>
<td>Behavioral and Neurocognitive Evidence</td>
<td></td>
</tr>
<tr>
<td>Chinese, 204–214</td>
<td></td>
</tr>
<tr>
<td>Czech and Slovak, 102–109</td>
<td></td>
</tr>
<tr>
<td>Dutch, 81–85</td>
<td></td>
</tr>
<tr>
<td>English, 33–40</td>
<td></td>
</tr>
<tr>
<td>Finnish, 123–125</td>
<td></td>
</tr>
<tr>
<td>French, 54–55, 64</td>
<td></td>
</tr>
<tr>
<td>Hebrew, 160–167</td>
<td></td>
</tr>
<tr>
<td>Japanese, 185–194</td>
<td></td>
</tr>
<tr>
<td>Russian, 140–144</td>
<td></td>
</tr>
<tr>
<td>Ben-Yehuda, G., 164</td>
<td></td>
</tr>
<tr>
<td>Berent, I., 39</td>
<td></td>
</tr>
<tr>
<td>Bergen Longitudinal Dyslexia Study, 265</td>
<td></td>
</tr>
<tr>
<td>Berlin, R., 25</td>
<td></td>
</tr>
<tr>
<td>Besner, D., 179</td>
<td></td>
</tr>
<tr>
<td>Betjemann, R., 329, 402</td>
<td></td>
</tr>
<tr>
<td>Biological bases, 441–444, See also etiology and neurocognitive factors</td>
<td></td>
</tr>
<tr>
<td>Neurobiological factors, 142, 413–418</td>
<td></td>
</tr>
<tr>
<td>Cross language comparisons, 447–451</td>
<td></td>
</tr>
<tr>
<td>Gray matter, 264–265</td>
<td></td>
</tr>
<tr>
<td>Model, 242</td>
<td></td>
</tr>
<tr>
<td>Present from birth, 253</td>
<td></td>
</tr>
<tr>
<td>White matter, 266–267</td>
<td></td>
</tr>
<tr>
<td>Neurochemical processes, 292–293</td>
<td></td>
</tr>
<tr>
<td>Blackmon, K., 293</td>
<td></td>
</tr>
<tr>
<td>Blomert, L., 78, 84, 89</td>
<td></td>
</tr>
<tr>
<td>Boets, B., 81, 82, 293</td>
<td></td>
</tr>
<tr>
<td>Bogliotti, C., 61</td>
<td></td>
</tr>
<tr>
<td>Bolger, D., 451</td>
<td></td>
</tr>
<tr>
<td>Booth, J., 284, 286, 289</td>
<td></td>
</tr>
<tr>
<td>Bosman, A., 87</td>
<td></td>
</tr>
<tr>
<td>Brem, S., 130</td>
<td></td>
</tr>
<tr>
<td>Breznitz, Z., 165–166, 167</td>
<td></td>
</tr>
<tr>
<td>Burani, C., 332</td>
<td></td>
</tr>
<tr>
<td>Butterworth, B., 188–190</td>
<td></td>
</tr>
<tr>
<td>Byrne, B., 9</td>
<td></td>
</tr>
<tr>
<td>Cao, F., 210–211, 286, 290</td>
<td></td>
</tr>
<tr>
<td>Caravolas, M., 96–97, 104, 107</td>
<td></td>
</tr>
<tr>
<td>Casalix, S., 338</td>
<td></td>
</tr>
<tr>
<td>Castles, A., 34–35, 243</td>
<td></td>
</tr>
<tr>
<td>Causes and explanations of developmental dyslexia</td>
<td></td>
</tr>
<tr>
<td>Across research in different languages, 166–167</td>
<td></td>
</tr>
<tr>
<td>Czech and Slovak, 105–107</td>
<td></td>
</tr>
<tr>
<td>English, 36–38</td>
<td></td>
</tr>
<tr>
<td>Dutch, 84–85</td>
<td></td>
</tr>
<tr>
<td>Finnish, 131</td>
<td></td>
</tr>
<tr>
<td>Hebrew, 166–167</td>
<td></td>
</tr>
<tr>
<td>Japanese, 191–193</td>
<td></td>
</tr>
<tr>
<td>Russian, 140–144</td>
<td></td>
</tr>
<tr>
<td>Amplitude rise time (modulation) disorder, 40, 262, 448</td>
<td></td>
</tr>
<tr>
<td>Deeper causes, 39–40, 447–449</td>
<td></td>
</tr>
</tbody>
</table>

© in this web service Cambridge University Press

www.cambridge.org
Index

Double deficit, 14, 39, 43, 354
Language deficit, 10, 108, 111, 339, See also Specific Language Impairment
MD deficit hypothesis, 193, 205–206, 231, 311–314, 447
Procedural learning, 162–164, 242–243
Rapid Automated Naming (RAN), 38–39, 99, 106–107, 231–236, 240, 445
Rapid temporal processing disorder, 40, 43, 64, 161–162, 166, 351, 448
Multiple deficit theories, 352–354
intergenerational multiple deficit model (iMDM), 424
Multiple Deficit Model (MDM), 424
Visual attention deficit, 309
Chang, L.-Y., 384
Chinese writing
Morphosyllabic characters, 201–203
Pinyin and Zhu-Yin-Fu-Hao, 203
Christopher, M., 403
Clinical Implications, 65, 270, 343
Assessment and identification, 244–244
Dutch, 89
French, 65
Of Intergenerational research, 426–428
Of Visual attention disorders, 316
Cohen-Mimran, R., 161
Coltheart, M., 34–36, 243, 358
Co-morbidities, 33, 101, 107, 166, 194, 242, 315, 352
With ADHD, 10, 393, 398
With Dyscalculia, 169, 315
With SLI, 10
Compensatory factors, 166, 415
Decoding focus, 239–240
Orthographic factors, 240–240, 458
Semantics and morphology, 329–330, 331–332, 342, 447
Comprehension Problems, 8–9, 32, 66–67, 103–104, 254
Genetic factors, 142, 397–398
Language comparison, 374–375
Text Complexity, 103
Dahdouh, F., 423
de Groot, B., 246
de Jong, P., 75, 82
Deacon, H., 53
Decoding
Accuracy vs speed, 7, 38–39, 58, 60, 64, 76, 90, 122–123, 127, 357, See also word identification
Problems in. See phonological problems
DeFries, J., 393, 394, 395, 402
Denckla, M., 38
Developmental Dyslexia Definitions, 9, 32–33, 50, 78, 101, 253, 394, 402, 413, 414
Causes of. See Causes and Explanations
Ehri, L., 11, 327
Elbro, C., 332
Ellis, A., 30
ERP indicators, 63, 84, 254, 257–264, 295
Dyslexic children, 259
Infants at risk, 257–258
Mismatch response (MMN), 193, 259–262, 448
Nonauditory predictors, 259–261
Speech processing, 257, 448–449
Etiology
Environmental Factors, 64, 82, 214, 216, 229, 259, 394–395, 398–404, 419–421, 423–424, 452
Genetic Factors, 391–395, 406, 416–418
Across languages, 452–453
Epigenetics, 420–421
Gene studies, 417
Gene-environment interactions, 213, 214, 418–420
Heredity of dyslexia, 253, 392–394, 417
Imaging genetic studies, 418
Implications for interventions, 406
In Chinese research, 213–214
Twin studies, 391–405, 416
Co-morbidities, 398
With ADHD, 393
concordance analyses, 392–394, 416
SES factors, 395–396
shared environment vs genetic influences, 394–395
Subtypes, 396–398
Intergenerational transmission, 423–430
Language comparisons
International longitudinal study, 399–404
Limitations in inferring genetic estimates, 404–406
Index

Fawcett, A., 162–163, 242
Fletcher, J., 38, 41
Fluency, 1, 7, 39, 44, 55, 82, 83, 107, 119–121, 127–128, 136, 141, 155, 231, 233, 241, 398, 442, 446, See also RAN and decoding
Text reading speed, 136, 167, 424
Foorman, B., 38
Fostick, L., 161
Friend, A., 395–396
Frost, R., 281
Frost, S., 418
Fuller, D., 394
Furnes, B., 237
Gabay, Y., 162–163
Galaburda, A., 206, 414, 422
Georgiou, G., 234
Geschwind-Galaburda Hypothesis, 422
Glushko, R., 182
Goodman, K., 328
Gori, S., 40, 190–191, 312, 315
Gough, P., 9, 402
Grainger, J., 57
Graph Complexity, 202, 384–385
Consequences for reading, 202, 240–241, 246, 296
Traditional vs Simplified Chinese characters, 202
Harm, M., 37, 191, 355, 358, 372, 376, 379, 381–382
Hawke, J., 421
Heth, I., 165, 167
Historical and Cultural Context
Finnish, 121–123
Historical and Cultural Contexts
Chinese, 203
Czech and Slovak, 99–102
Dutch, 77
English, 30
French, 53
Hebrew, 155
Japanese, 183–184
Russian, 138–139
Ho, C., 214–215, 333, 401
Hoeft, F., 286–287
Hoover, W., 9, 402
Hu, W., 211, 291
Hulme, C., 10, 11, 102, 234
Identification and Prevalence of Dyslexia
Chinese, 204
Czech and Slovak, 100–102
Dutch, 78
English, 32
Finnish, 122
French, 54
Hebrew, 158
Japanese, 184
Russian, 139
Instruction in reading
Chinese, 201
Czech, 98
Dutch, 76
English, 29–32
Finnish, 121
Hebrew, 154
Russian, 136
International Dyslexia Association, 32
Interventions
Across languages, 453–454
In Chinese, 214–215
In Czech and Slovak, 109
In English, 40–43
In Finnish, 125–130
In French, 64–65
In Hebrew, 167
In Russian, 144–146
Breznitz reading acceleration program, 167
Challenges to, 43
Duration of effects, 88
Early interventions, 244–245
Fluency, 127–128
GraphoGame/GraphoLearn, 129, 245
In Russian, 144–146
Phonological, 125–128
Response-to-Intervention (RTI), 41–42, 214
Phonology centered, 42–43
Video Games, 310, 314–316
Visual, 128
Japanese writing systems
Hiragana and Katakana, 177
Kanji, 177
Johnston, R., 31
Jorm, A., 7
Karni, A., 163
Katriz, T., 160
Keenan, J., 329, 402
Kessler, B., 27, 29
Ketonen, 127
Kirkpatrick, R., 395
Lalaeva, R., 139
Landerl, K., 128, 187, 235
Index

Language comparisons, 191, 192, 416, See also writing system comparisons
European, 232
Orthographic Depth, 235
Genetic studies
Limitations, 243
Longitudinal, 237
More reliance on morpho-semantics in alphabetic languages
Phonological awareness and RAN, 245
Language impairments (SLI/DLD), 10, 142, 144, 166, 168, 311, 314
Language Skills, 42, 109, 111, 215, 254, 335, 374, See also Linguistic Awareness
Languages and their Writing Systems
Chinese, 200
Czech and Slovak, 97
Dutch, 73–75
English, 26
Finnish, 119–120
French, 51
Hebrew, 152–153
Japanese, 176
Russian, 133
Lavidor, M., 165–167
Learning to read, 280, 286, 365, 442
In different languages
Chinese, 200
Czech and Slovak, 97–98
Dutch, 73–75
English, 26
Finnish, 121
French, 51–52
Hebrew, 154
Japanese, 176
Russian, 133
Predictors of, 232–234, 238
Lehongre, K., 62
Lenhard, W., 244
Lexical Quality, 9, 12, 75, 245
Hypothesis, 9
Liberman, I., 204
Lim, 213
Linguistic (metalinguistic) Awareness, 4–7, 186, 441, See also morphological and phonological awareness
Linguistic Precursors, 230, 231, 246
Longitudinal studies, 38, 53, 110, 237, 257–258, 308
International Longitudinal Twin Study (ILTS), 236–237, 399–400
Jyväskylä Longitudinal study of Dyslexia (JLD), 123–124, 258, 449
Lovett, M., 42, 43, 165
Lyytinen, H., 123, 128, 234, 424
Makita, K., 183
Manis, F., 35–36
Marx, P., 244
McBride-Chang, C., 6, 217, 333, 444
McClelland, J., 37
Meng, X., 206, 214
Menghini, D., 353, 455
Models of reading processes, 2–10, 36–37, 355, 456
Dual Route Models, 355
PDP and triangle models, 355–357, 372–377
Restricted Interactive Model, 76
Simulations
Chinese compared with English, 377–385
Cross-language triangle model, 375–385
dyslexia, 355–361, 366–367, 377
reading development, 361–364
visual and phoneme deficits, 365–366
Moll, K., 6, 111, 244
Monzalvo, K., 63
Morphological factors in reading, 335
Across languages
in Abjad languages, 334
in English, 341
in Hebrew, 335
Language comparisons, 340–343
Morphological Awareness, 121, 207
in dyslexics, 331–335, 337
not a cause of dyslexia, 338
Morphological processes in reading, 8
Morris, R., 43
Nag, S., 384
Nakamura, K., 288, 290
Nation, K., 337
Neurocognitive Factors, 9–10, 13–16, 40, 63–64, 65, 89
biological unity theory of dyslexia, 192
neuroimaging studies, 287–290
Functional brain changes with reading development, 285–286
Imaging studies of pre-readers, 266–267
Neural markers of dyslexia, 285–286
Neural unity and behavioural dissociation, 192
neurocognitive models of reading, 282–283
Subcortical structures, 294
Index

Nicolson, R., 162–163, 242
Noordenbos, M., 83
Norton, E., 39, 426
Oksanen, A., 128
Olson, R., 37, 402, 421, 452
Orthographic factors, 7, 83, 443
depth, 4, 16, 28, 229, 285, 290, 316, 372–374
Lack of, in English spelling, 27–29, 44 granuality, 189
Orthographic coding skills, 397
Orthographic representations, 7–8, 83, 331, 339
Importance in Chinese, 193
precision and redundancy, 7
Orton, S., 25, 30, 449
Patterson, K., 34, 181
Paulesu, E., 55, 287
Peerenman, R., 52
Pennington, B., 423, 424
Perfetti, C., 2, 26, 76, 192, 243, 384
Phoneme discrimination, 60
as primary cause of reading problems, 331
impact over time, 239
In Chinese, 205, 215, 329–330
In Dutch, 76
In English, 38–39
In Finnish, 126–127
In Hebrew, 154, 158, 330
In Japanese, 187
In Russian, 98, 109
Phonemic awareness, 50, 60, 121, 139–141
Syllable awareness, 121, 205
Phonological deficit hypothesis. See Causes and Explanations
Phonological processing problems, 1, 238, 423, 443–445
In Chinese, 205–206
In Dutch, 81–82, 88
In French, 54–60
Phonological memory, 205, 230–239, 419, 454–455
Phonology memory, 213
Pinel, P., 419
Plaut, D., 384–386
Plomin, R., 399
Poskiparta, E., 126
Pringle-Morgan, W., 30
Psycholinguistic Grain Size Theory, 190, 280–281, 444
Pugh, K., 283
Qi, T., 212
Qian, Y., 214
Quémart, P., 59
Rack, J., 37
Ramus, F., 39, 242, 352
Randazzo-Wagner, R., 284
Rapid automatized naming (RAN), 6, 108, 141–142, 230
Rastle, K., 179
Ravid, D., 155
Reading and Spelling Problems
Across languages
Chinese, 204–214
Hebrew, 160–166
Japanese, 185–194
Russian, 140–144
nature of, 135–141
Czech and Slovak, 102–109
Finnish, 123–125
Writing system
Hypothesis of Granularity and Transparency, 194
Reading and Spelling Problems, nature of
In Dutch, 81–85
In English, 34–40
In French, 53–62
Richian, F., 283, 450
Risk factors, 84–86
Cumulative Risk and Protection Model, 424
Early detection, 40, 101, 253
Environmental risk, 416–417
Familial risk, 10, 81, 102, 109, 123–124, 217, 254, 255–259
Neural correlates, 266–267
Genetic risk, 413–415
In Chinese, 217
Prediction, 108–109, 123
Neural predictors, challenges, 255–256
Statistical models, 255
Scarborough, H., 38
Schaars, M., 81
Schatschneider, C., 38
Index

Schneps, M., 311
Segers, E., 83, 88
Seidenberg, 37
Seidenberg, M., 191, 355, 358, 372, 376, 379, 381
Sela, I., 163
Self-teaching, 13, 361–366
Semantic Processing
  Compensation for phonological deficits, 328–329
  Deficits in, 327–328, 335–337, 340, 375–377, 385
  Lack of evidence for, 343
  In Chinese, 329
  Neural correlates, 288–290
Serniclaes, W., 39, 83
Sex differences, 33, 413
Seymour, P., 29, 336
Shallice, T., 34
Shany, M., 160, 165
Share, D., 7, 13, 83, 154, 361–362
Shibahara, N., 181
Shu, H., 333
Simple View of Reading, 9, 402
Siok, W., 192, 211, 291
Snowling, M., 10–11, 37, 337
Speech perception factors, 448
  Allophonic vs Categorical perception, 14, 82–83, 89, 124
  Neural indicators. See ERPs
Spelling
  Development
    In Czech and Slovak, 98–99
    In Dutch, 77
    English spelling irregularities, 28
  Great vowel shift, 26
  Interventions, 239–240
  Problems, 104–105
Spinelli, D., 310
Sprenger-Charolles, L., 52, 54, 58–59
Stanovich, K., 328–329
Steenbeek-Planting, E., 86
Stein, J., 164
Stevenson, H., 183, 203
Subtypes of dyslexia, 10
  Across languages, 35, 58–59
  Czech and Slovak, 107–109
  English, 37, 398
  French, 58–59
  Genetic studies, 396–398
  Model simulations, 358–361
Sun, Y., 213
Tallal, P., 40, 160, 161–162, 166, 169
Tan, L., 192, 451
Tijms, J., 87
Tilanus, E., 79
Torgesen, J., 38, 42–43
Treiman, R., 27, 187
Universals across languages and writing systems, 2, 7, 16, 120, 194, 200, 234, 277
Cross-language generalizations summary, 441–444
Universal Phonological Principle, 4
Uno, A., 184–187
Ushinski, K., 146–147
van Bergen, E., 82, 424
van der Leij, A., 85–86
Vandermoten, M., 83, 426
Váryová, B., 103
Vaughn, S., 41
Verhoeven, L., 2, 75–77, 79, 83–84, 88, 243, 454
Visual processing
  demands of, in Chinese, 206, 241, 456
  Magnocellular deficits, 351
  problems in
    Magnocellular deficits, 164
    visual span deficits, 205–207, 351
  problems in Magnocellular deficits
    magnocellular-dorsal (M–D) stream, 312–313
Visual Attention Deficits, 57, 62, 65, 76, 231–232, 294, 309–312
Visual-word-form area (VWFA), 51, 63–64, 130, 265, 282, 309, 398
Vloedgraven, J., 75
Vocabulary, 9
  Genetic influence, 400
  predictor of reading problems, 233
  problems, 109
Role in word reading
  Irregular words, 360
  Kanji, 186
Wang, X., 289
What Works Clearing House, 41, 453
Index

Wolf, M., 39, 43
Word Identification
  Division of labor, 3, 15, 374, 457
  Dual Route models, 2, 44, 328, 355–358, 396
  Familiarity shift to retrieval route, 2, 40
Word-to-Text Integration, 8
World Health Organization, 350
Writing systems, 4, 441
  Dyslexia Comparisons, 441–452
  Dyslexia in English but not Japanese, 190

Specific languages. See Languages.
Transparency. See orthographic factors
Wydell, T., 184, 185, 188–191, 192
Yang, J., 289, 376
Zevin, J., 289
Zhou, A., 333
Ziegler, J., 10, 58, 62, 232–233, 244, 280, 455
Zorzi, M., 310