Abutalebi, Jubin, 220
acquisition of language see simultaneous language acquisition; successive language acquisition; trilingual acquisition
acquisition of literacy, 198–201
bilingual advantage in the Moving Word Task, 199
importance of sharing a writing system, 201
phonological awareness abilities, 200
reading skills transfer between languages, 200–1
understanding the relation between language and print, 199–200
activation process, 15–16, 29, 34–7, 42, 53–8, 74–8, 80–3, 150, 160, 176
brain activation, 196, 220, 222, 224–5
factors affecting activation, 36–7, 58–9
in computational models, 46–8, 87–9, 91, 229, 231–2
of phonology during reading, 85–7
reducing activation of non–used language, 36
simultaneous activation of two languages, 34–6
spreading activation, 51, 74, 88
advantages of bilingualism, 193, 197, 203–4, 206, 208–9 see also dementia; executive control
age of acquisition of a second language (AoA), 147–51, 153, 164, 214, 219, 221, 223, 233
compared to proficiency, 223
neuroimaging studies of, 224
see also cognitive neuroscience; critical period hypothesis
Ameel, Eef, 183, 186
Aoyama, Katsura, 153–4
Archila-Suerte, Pilar, 153–4, 158
Ardal, Sten, 94–5
Athanasopoulos, Panos, 185–6
autobiographical memory, 171–2, 186–9
languages trigger memories from different life periods, 187
congruent vs. crossover, 188
encoding of language in memory trace, 187
Encoding Specificity Principle (ESP), 187
prediction regarding bilinguals, 187
research questions asked, 187
Barac, Raluca, 192, 197, 205
base language, 15–20, 29, 39–44, 46–50, 57, 59, 63–6, 125
effect in perception, 40–2
effect in production, 63–4
Bassetti, Benedetta, 184, 186
Bates, Elizabeth, 148, 156, 218
Beare, Sophie, 108–9
Beauvillain, Cécile, 76–8
Berko, Jean, 197–8
Bernardini, Petra, 127, 136
BIA (Bilingual Interactive Activation) and BIA+ models see computational models

Bialystok, Ellen, 53, 139, 148, 192, 194–7, 199, 201–7, 209, 235

biculuralism, 6, 21–4
and bilingualism, 22, 24
impact on the bilingual lexicon, 23–4
role played in studies on bilingualism, 22–4

biculural people, 21–4
and behavior, 22
and personality, 23
characteristics of, 22
cultural modes, 22

Bijeljac-Babic, Ranka, 83

bilingual concepts, 181–6
cross-language conceptual non-equivalence, 181
semantic accent, 181
see also object concepts

Bilingual First Language Acquisition (BFLA), 120, 122
definitions, 120

bilingual lexicon, models of, 172–81
Concept-Mediation Model, 173–5
Distributed Conceptual Feature Model, 177–80
Modified Hierarchical Model, 180–1
Revised Hierarchical Model, 175–7, 179, 189
Shared Distributed Asymmetrical Model, 178–80
Word-Association Model, 173–5

bilingual lexicon, organization of, 172–81
co-existence of different structure types, 173
canceptual and form representations, 172
distributed representations of word meaning, 177
language specific conceptual representations, 180
role of frequency on, 175
role of the increase of L2 fluency on, 175
translation asymmetry, 176
translation pairs and amount of meaning equivalence, 177
Weinreich's trichotomy, 172–3
see also bilingual lexicon, models of; translation; word association

bilingual memory, 171–89
types of, 171–2
units, 172
see also autobiographical memory;
bilingual concepts; bilingual lexicon, organization of; object concepts

bilingual speech, processing of, 39–45, 59–66

bilingualism
definition of, 5, 120
extent of, 6–7
meanings of, 5
misconceptions about, 5
reasons for, 6–7
bilinguals
characterization of, 7–9, 24
defining factors, 7–9
definition of, 5
bilinguals, types of
compound, 23, 172–3
coordinative, 23, 172–4, 177
early, 39, 65, 94–5, 129, 158, 226
late, 39, 94–5, 158, 181, 184, 187, 189, 225
passive, 120
replacive, 120
subordinative, 23, 173–4

BIMOLA (Bilingual Model of Lexical Access) see computational models

Birdsong, David, 148, 152

Borrudtsky, Lera, 183–6

borrowing, 17, 18–21, 29, 30, 33, 39–40, 42–5, 52, 56–8, 66, 133
definition of, 18
loanshift, 20
loanword, 19
reasons for, 20
types of, 19–20
see also guest words, properties of; guest words, recognition of

Bosch, Laura, 123, 129

bottom-up processing, 30, 35–7, 46, 89

brain imaging techniques see neuroimaging techniques

brain localization, 215–19, 226
based on lesion deficit model, 216
reasons to reject, 216–18
Wernicke-Geschwind neural model of language, 215–16

brain organization, 216–19, 226
implications of, 218
patterns of recovery from insult, 218
<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brysbaert, Marc</td>
<td>117</td>
</tr>
<tr>
<td>Bullock, Barbara</td>
<td>65</td>
</tr>
<tr>
<td>Caixeta, Paulo</td>
<td>57</td>
</tr>
<tr>
<td>Cantone, Katja</td>
<td>127, 135</td>
</tr>
<tr>
<td>Carlson, Stephanie</td>
<td>204–5</td>
</tr>
<tr>
<td>Chambers, Craig</td>
<td>36</td>
</tr>
<tr>
<td>Chan, Alice</td>
<td>225</td>
</tr>
<tr>
<td>Chan, Brian Hok-Shing</td>
<td>134</td>
</tr>
<tr>
<td>Chen, Hsuan-Chih</td>
<td>175</td>
</tr>
<tr>
<td>Chen, Lang</td>
<td>227–8</td>
</tr>
<tr>
<td>CHILDES database</td>
<td>128–9</td>
</tr>
<tr>
<td>Clahsen, Harald</td>
<td>163–4</td>
</tr>
</tbody>
</table>
| code-mixing             | 120–1, 124–6, 133–7, 156 |}

- and input, 133–4
- direction of, 134
- motivations for, 137
- parental strategies and, 134–5
- structural aspects of, 135–6

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>code-switching</td>
<td>17–21, 41–2, 48, 52, 57–8, 61–6, 133–4</td>
</tr>
</tbody>
</table>
- constraints that govern, 19, 61–2
- definition of, 18
- examples of, 19
- experimental studies of, 62–6
- in a monolingual mode, 20
- reasons for, 19
- role of dialogue partner in, 63

- see also code-switching, phonetics of;
  - guest words, properties of;
  - guest words, recognition of

- code-switching, phonetics of, 63–6
- segmental aspects, 63–5
- suprasegmental aspects, 65–6

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognates</td>
<td>17, 37, 55–6, 58, 76, 84–5, 91, 96, 124, 177–8, 194</td>
</tr>
</tbody>
</table>
- direction of cognate effect, 84
- in sentence context, 84
- representation of, 91

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognitive effects</td>
<td>192–210</td>
</tr>
</tbody>
</table>
- cognitive abilities studies since 2000, 193
- earlier vs. later studies, 192–3
- impact of bilingualism across the lifespan, 206–8
- reasons for different results, 192

- see also acquisition of literacy; dementia;
  - executive control; language proficiency in children; metalinguistic ability

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognitive neuroscience</td>
<td>220–8</td>
</tr>
</tbody>
</table>
- age of acquisition vs. L2 proficiency, 223–5
- brain networks (connectivity), 225–6

- cross-language overlap, 225
- distinct vs. common neural systems of languages, 223–6
- increased gray-matter density in second language learners, 222
- processing of cross-linguistically similar and dissimilar features, 227

- see also age of acquisition of a second language (AoA); Event-Related Potential (ERP) studies; neuroimaging techniques; proficiency of a second language

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colomé, Angels</td>
<td>38, 53, 55–6</td>
</tr>
<tr>
<td>Comeau, Liane</td>
<td>134</td>
</tr>
</tbody>
</table>

- Complementarity Principle, 6, 11–15, 18–20, 24
- description of, 11–12
- and language dominance, 13
- and language fluency, 12
- and language use, 12
- and memory, 13
- and translation, 13

- computational modeling, 228–35
- advantages of, 234–5
- connectionism, 87–91
- differences between computers and brains, 229
- evaluation of, 235
- treating the brain as a computing system, 229

- see also computational models;
  - computer simulation of; connectionist models

<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>computational models</td>
<td></td>
</tr>
</tbody>
</table>
- BIA (Bilingual Interactive Activation), 46, 87–91, 231–2
- BIA+, 90–1
- BIMOLA (Bilingual Model of Lexical Access), 46–7, 231
- BSN (Bilingual Single Network), 231–2
- BSRN (Bilingual Simple Recurrent Network), 232
- DevLex I & II (Developmental Lexicon Model), 233
- SOMBIP (Self-Organizing Model of Bilingual Processing), 232–3
- SOPHIA (Semantic, Orthographic and Phonological Interactive Activation), 90–1
- Zinszer and Li’s L1 lexical attrition model, 160

- see also computational modeling
Index

computer simulation of
age of acquisition effect, 233
learning lexical representations, 233
orthography-semantics mapping in
visual word recognition, 91, 231–2
predicting the next word, 232
spoken word recognition, 46–7, 231
visual word recognition, 87–91
connectionist models, 87–91, 229–31
backpropagation algorithm, 230
layers of nodes, 230
localist vs. distributed models, 229
simple recurrent network (SRN), 232
Costa, Albert, 13, 53–4, 58, 60, 155, 207–8
Craik, Fergus, 53, 204, 206–7, 209
critical period hypothesis, 39, 94, 145–50,
154, 164
early vs. late learners, 148
entrenchment hypothesis, 150
experimental studies of, 147–9
“less is more” hypothesis, 149
original formulation of, 146
other species, 147
use of other terms, 147
see also age of acquisition of a second
language (AoA); Unified Competition
Model (UCM)
cross-language interactions see successive
language acquisition, cross-language
interactions
cross-linguistic influence, 130–3
conditions for, 131
level involved, 132
see also interference/transfer
Cruz-Ferreira, Madalena, 138
de Bot, Kees, 52–4, 58
de Groot, Annette, 73, 78–80, 84–5, 91, 171,
173, 175, 177–8, 181
De Houwer, Annick, 120, 122, 123–4,
126–7, 131
dementia, 208–10
bilingualism’s contribution to cognitive
reserve, 209
cognitive reserve, 209
Deuchar, Margaret, 120, 126, 130
deviations, intra-language, 21
Díaz, Begoña, 155
Dijkstra, Ton, 17, 45, 50, 61–3, 78, 80, 82–4,
87, 89–91, 124, 137, 231
disorders, speech and language, 138–9
Domenighetti, Corinna, 41
dominant language, influence of, 37–9
Dong, Yanping, 179–80
Döpke, Susan, 123, 131
Durgunoglu, Aydin, 200
Dussias, Paola, 92–3, 162–4
Duyck, Wouter, 84–5, 177
Ellis, Nick, 162
Elman, Jeffrey, 46, 149, 218, 232
Elston-Güttler, Kerrie, 78, 81, 84, 91
Event-Related Potential (ERP) studies,
81–2, 94–5, 128, 155, 163–4, 196–7,
220–3, 226–8, 235
components in (N400, ELAN, P600),
81–2, 95, 222–3, 228
distinct ERP patterns for bilinguals and
native speakers, 95, 227
grammatical processing in bilinguals,
94–6, 226
reveal unconscious processes, 227
similar and dissimilar features processed
differently, 227
tracking developmental neural changes
when learning an L2, 227–8
usefulness of, 226–7
see also age of acquisition of a second
language (AoA); neuroimaging
techniques
executive control, 155, 202–8, 218, 220
Attentional Network Task (ANT), 207
benefits of bilingualism at different ages,
203
bilingual advantage in two attentional
components, 207–8
Dimensional Change Card Sort Task
(DCCS), 203
Embedded Figures Test, 202
“faces” task, 205
generality of bilingual effect despite other
linguistic and social variables, 205
how bilingualism affects, 202, 205
in adulthood, 206–8
main abilities involved in, 202
Simon task effects, 206
specific components of, 204
Fan, Jin, 207
Ferenz, Orna, 110
Flege, James, 151–3, 155
Flower, Linda, 102–3
Flowerdew, John, 107
Fokke, Joke, 57
Francis, Norbert, 121–2
French, Robert, 231–2
Frenck-Mestre, Cheryl, 92–3, 95
functional Magnetic Resonance Imaging (fMRI) see neuroimaging techniques
functions of languages see Complementarity Principle
Gardner-Chloros, Penelope, 19, 61
Gathercole, Virginia, 123–4
gender, processing of, 37–9, 92–3, 163, 183–5, 224
Genesee, Fred, 121, 130–2, 134–5, 139
Gentil, Guillaume, 103, 107, 112
Gollan, Tamar, 53, 61, 86
Gosden, Hugh, 109
Grainger, Jonathan, 76–8, 82–3, 87
Green, David, 16, 53, 62, 177, 219–20
Grosjean, François, 5, 12–13, 15–17, 19–23,
29, 38–47, 50–1, 54, 56–8, 63–5, 77–8,
110, 120, 125–7, 139, 158, 231
guest words, properties of, 40, 42–4, 64,
66
guest words, recognition of, 40, 42–5
effects, 43–5, 47–8
factors involved, 42, 44–5
Guillelmon, Delphine, 38–9
Gupta, Anthea, 123
Halmari, Helena, 133
Hanulová, Jana, 58, 61
Harley, Trevor, 51, 198
Hermans, Daan, 53–5, 66
Hernandez, Arturo, 147, 150–3, 219, 223–4,
233
Hickok, Gregory, 216
Hoff, Erica, 123–4
Hoffman, Charlotte, 138
homographs see interlexical homographs
homophones, 17, 36–8, 43–6, 48, 58, 64
Hu, Jim, 110
Hulk, Aafke, 120, 123–4, 131–2
hypotheses in child language development, 131, 136
Dominant Language Hypothesis, 136
interdependent development, 131
Ivy Hypothesis, 136
separate development, 131
inhibition of languages, 16, 59–60, 125,
193, 202–6, 220
in computational models, 88–9
interference/transfer, 16–17, 20–1, 52, 124,
130–2, 138, 150–2, 156, 162
cognitive transfer, 180–1, 184, 186
dynamic vs. static, 21
examples of, 20
influence of cross-language similarity, 152
transfer of skills or strategies, 101, 105,
108, 111–13, 149, 199, 200–1
types of, 21
see also cross-linguistic influence
interlanguage neighbor frequency, 44
interlanguage neighbor proximity, 42–3
interlexical homographs, 17, 21, 37, 58,
76–82, 84–5, 87, 89–91, 96
bilingual studies of, 77–82
direction of effect, 79
factors moderating the effect, 80, 82
monolingual studies of, 76–8
processing mode, 77–8, 80
simulated by the BIA model, 89
size of effect, 79
interlexical neighbors, 37, 42–4, 76–7,
82–4
bilingual studies of, 82–83
monolingual studies of, 82
simulated by the BIA model, 87–9
interlingual homophones, processing of see homophones
Jared, Debra, 80
Johnson, James, 148–9, 154, 160, 163
Ju, Min, 35
Kellogg, Ronald, 102
Kim, Karl, 224
Klein, Wolfgang, 160, 162
Kolers, Paul, 59
Kootstra, Gerrit, 50, 61–3, 67, 124, 137
Kovács, Ágnes, 203–4
Kroll, Judith, 58, 84, 158, 173, 175–7
Kuhl, Patricia, 129
La Heij, Wido, 52, 54, 58, 177
language acquisition see simultaneous
language acquisition; successive
language acquisition; trilingual
acquisition
language attrition see language
forgetting
language choice, 15, 17–18, 126
factors involved in, 17–18
Index

in children, 126–7
measures of, 126–7
language fluency, 6–10, 12–13, 21, 24, 37, 106–7, 110, 172, 175
see also language proficiency; language proficiency in children; proficiency of a second language
language forgetting, 10–11
see also lexical attrition
language history of bilinguals, 9–10, 13, 18, 24, 111, 218
language loss see language forgetting
language mode, 6, 14–17, 24, 37, 46, 50, 54, 56, 77–8, 105, 125–6, 139
activation and deactivation of languages, 14, 16
bilingual mode, 15–18
continuum of, 15–16, 54
definition of, 15
diversity among bilinguals, 15
experimental studies of, 56–8
factors influencing, 15–17
intermediary mode, 15
manipulating, 56–8
monolingual mode, 15, 20
movement along the continuum, 15–16
and processing, 16–17, 39–46
and simultaneous language acquisition, 125–6
language phonetics of word, 42–4
language processing see reading; speech perception and comprehension; speech production; writing
language proficiency, 9, 17, 57–8, 60, 154, 214, 218, 225, 231
see also language proficiency in children; proficiency of a second language
language proficiency in children, 192–5, 199
differences between monolinguals and bilinguals, 194
results by vocabulary subsets, 194
vocabulary size, 194
language switch, 219–20
part of the executive control system, 220
role of the dorsolateral prefrontal cortex (DLPFC), 220
search for neural correlates of, 219
language switching, 58, 61, 105, 108, 187
language switching cost, 51, 58–61, 66
and high language proficiency, 60
and language dominance, 59–60
and other factors, 60–1
language use, 5–8, 10, 13, 24, 89, 109, 189, 220
languages, wax and wane of, 9–11
Lanza, Elizabeth, 126–7, 133–4
learners, early vs. late, 146–9, 152–4, 162–3
Lecumberri, Maria, 32
Leki, Ilona, 104, 106
Lenneberg, Eric, 146–7, 149, 154
Leopold, Werner, 127
Levelt, Willem, 51
lexical attrition, 158–61
computational model of, 160
in L1, 158–60
lexicon see bilingual lexicon
Léwy, Nicolas, 46–7, 231
Li, Ping, 9, 44–5, 107, 134, 145, 147–8, 150–2, 160, 162, 214, 223–5, 227, 231–4
literacy see acquisition of literacy
Liu, Hua, 148–9, 162–3
loanshift see borrowing
loanword see borrowing
Mackey, William, 7, 12
Macnamara, John, 59
MacSwan, Jeff, 135
MacWhinney, Brian, 127, 150, 156, 179, 226, 231, 233
Malt, Barbara, 158–9, 182–3, 186
Manchón, Rosa, 100, 106, 109–10, 112
Maneva, Blagovesta, 130
Marian, Viorica, 13, 17, 34–6, 188–9
Marler, Peter, 147
Marslen-Wilson, William, 32
Matthews, Stephen, 120–33, 135–6
Matrix Language Frame (MLF) model, 135–6
McClelland, Jay, 46, 88
McLaughlin, Judith, 228
Mean Length of Utterance (MLU), 127
MLU differential, 127, 136
Upper Bound (UB), 127
Mechelli, Andrea, 222
Meisel, Jürgen, 131
metalinguistic ability, 193–9, 202
advantage of bilinguals on sentence judgment paradigm, 196–7
controlling attention to relevant features, 197

factors that account for performance, 197–8
meaning of, 193, 195
Vygotsky’s proposal, 195–6
what tasks depend on, 196
methodological issues, adults, 16–17, 37, 52–4, 58–9
methodological issues, children, 124–9
controls, 128–9
language choice, 126
language dominance, 126–7
language mode, 125–6
language pairs, 124–5
methods of data collection, 127–8

Meuter, Renata, 59, 94
Mishina-Mori, Satomi, 124, 131
Miyake, Akira, 155, 202
memory see bilingual memory
models, computational see computational models
Mok, Peggy, 120, 133
Montrul, Silvina, 123
Moreno, Sylvain, 196
Mu, Congjun, 107–8
Müller, Natascha, 120, 122–4, 127, 131
Myers-Scotton, Carol, 135–6

neighbors see interlexical neighbors
neuroimaging techniques, 220–3
Event-Related Potentials (ERPs), 128, 222–3
functional Magnetic Resonance Imaging (fMRI), 128, 221
how they complement each other, 223
level of analysis of, 225
Positron Emission Tomography (PET), 221
strengths and weaknesses of techniques, 223
structural Magnetic Resonance Imaging (sMRI), 222–3
task demands when using, 224–5
see also Event-Related Potential (ERP) studies
neurolinguistic computational modeling see computational modeling; computational models; computer simulation of; connectionist models
neurolinguistics, 214–20
questions asked, 214
see also brain localization; brain organization; cognitive neuroscience;
Event-Related Potential (ERP) studies; language switch; neuroimaging techniques
Newport, Elissa, 148–9, 154, 163
Nguyen, Angela-Minh'Tu, 22
Nicoladis, Elena, 132, 135
object concepts, 182–6
conceptual transfer from L1 to L2, 184
difference between L2 learners and native speakers, 183
difference between types of L2 speakers, 182
grammatical gender and, 183–5
grammatical number and, 185–6
in children, 184
merged concepts, 183, 186
O’Grady, William, 121, 127
Ojima, Shiro, 94–6
Ortega, Lourdes, 112
Pallier, Christophe, 38
Paradis, Johanne, 123, 131–2, 135, 138–9
Paradis, Michel, 218–19
Pavlenko, Aneta, 13, 120, 158–9, 177, 180–2
Peal, Elizabeth, 192–3
Pearson, Barbara Zurer, 130, 194
Petersen, Jennifer, 136
phonotactics of word, 42–4
Piaget, Jean, 196
Poplack, Shana, 19, 61
Potter, Mary, 173–5
Poulin-Dubois, Dianne, 130, 205
Price, Cathy, 215–16, 218
priming effect, 38, 45, 77–8, 83, 86
processing, spoken language see speech perception and comprehension; speech production
processing, written language see reading; writing
proficiency of a second language, 92–6, 106–10, 112, 152, 163, 175, 179, 221–4, 227, 233
compared to age of acquisition, 163
neuroimaging studies of, 94–6, 222–5, 227
see also language proficiency; language proficiency in children
Index

reading, 73–96
constituent processes in, 73–6
knowledge units in, 73
mental text representation in, 75–6
sentence processing in, 74–5
see also cognates; computational models;
interlexical homographs; interlexical
neighbors; sentence processing in the
visual modality; visual word
recognition
Rinnert, Carol, 112–13
Rumelhart, David, 46, 88, 230
Saer, David, 192
Sánchez-Casas, Rosa, 91
Schmid, Monika, 10, 158
Schrauf, Robert, 187–8
Schulpen, Béryl, 45
Schwartz, Ana, 84
Sebastián-Gallés, Nuria, 38, 123, 129, 155,
207–8
second language acquisition see successive
language acquisition
selective vs. nonselective processing, 16–17,
34–7, 52–8, 76–9, 81–5
factors affecting, 17, 37, 58–9
see also activation process
sensitive period see critical period
hypothesis
sentence processing in the visual modality,
91–6
differences between native and L2
speakers, 93
impact of level of L2 proficiency, 93–4
syntactically ambiguous sentences, 91–4
syntactically and/or semantically
anomalous sentences, 94–6
see also Event-Related Potential (ERP)
studies
Sholl, Alexandra, 176
Silva-Corvalán, Carmen, 131
simultaneous language acquisition, 119–39
failure to develop bilingualism, 122
pattern of development in bilinguals and
monolinguals, 119, 129
see also Bilingual First Language
Acquisition (BFLA); bilinguals, types
of; code-mixing; cross-linguistic
influence; disorders, speech and
language; hypotheses in child language
development; methodological issues,
children; simultaneous language
acquisition, developmental stages;
simultaneous language acquisition,
thetical issues; speech perception,
children; trilingual acquisition
simultaneous language acquisition,
developmental stages, 129–30
bilingual babbling, 130
first words, 130
see also speech perception in children
simultaneous language acquisition,
thetical issues, 121–4
balanced vs. unbalanced development, 122
input effects, 123–4
logical problem, 121–2
separate development vs. cross-linguistic
influence, 123
Sinka, Indra, 126
Snow, Catherine, 147
SOPHIA (Semantic, Orthographic and
Phonological Interactive Activation
model) see computational models
sound specificity, 44
speech learning, 151–5
and age of L2 acquisition, 154
and good vs. poor discrimination, 153,
155
and individual differences, 153–5
and L2 language proficiency, 154
differences between children and adults,
151–2
/r/ and /l/ phonemic distinction, 153
Speech Learning Model (SLM), 152, 155
speech perception and comprehension,
29–49
differences between monolingual and
bilingual, 32–3
mechanisms and strategies not acquired,
37–9
permanent influence of one language,
37–9
processing bilingual speech, 39–48
processing characteristics, 30–2
processing levels, 31–2
processing monolingual speech, 33–9
role of prior context, 44
speech perception, 38
see also base language; guest words,
recognition of; speech learning;
spoken word recognition
speech perception in children, 129–30
discrimination in infants, 129
importance of social interaction, 129–30
see also speech learning
speech production, 50–66
   as a dynamic process, 54–9
   factors to control, 58–9
   language mode studies, 56–8
   main characteristics of, 52
   models of, 52
   producing bilingual speech, 59–66
   producing monolingual speech, 52–54
   stages involved in, 51–52
   what models have to account for, 50
   see also base language; code-switching;
   language switching cost; selective vs.
   nonselective processing
Spivey, Michael, 17, 34–6
spoken word recognition, 34–6, 38–9, 41–5
   verbal model of, 46
   see also computational models
successive language acquisition, 145–64
   see also age of acquisition of a second
   language (AoA); critical period
   hypothesis; speech learning; successive
   language acquisition, cross-language
   interactions
successive language acquisition, cross-
   language interactions, 155–64
   L1-L2 & L2-L1 lexical interaction, 156–60
   L2 grammatical acquisition, 160–4
   L2 sentence processing, 162–4
   loss of access to L1 processing strategies, 163
   shallow structure hypothesis, 163
   see also age of acquisition of a second
   language (AoA); lexical attrition; tense
   and aspect in L2
tense and aspect in L2, 160–2
   blocking effects, 162
   means of encoding temporal reference, 162
Thierry, Guillaume, 58, 78, 128, 227
Thomas, Michael, 46, 90, 231–2
Tokowicz, Natasha, 177, 226
Toribio, Almeida Jacqueline, 65
top–down processing, 31, 36–7, 46
transfer see interference/transfer
translation, 13, 55, 76, 84, 86, 110, 130, 147,
   156, 172–3, 175–81, 184
Treffers-Daller, Jeanine, 19
trilingual acquisition, 137–8
   cases of, 138
   issues studied, 137–8
Tulving, Ende, 187
Unified Competition Model (UCM), 150,
   156
   risk and protective factors of L2 learning,
   150
Unsworth, Sharon, 123, 128–9
van Hell, Janet, 17, 50, 55, 57, 61–3, 66, 84,
   91, 124, 137, 177–8, 181, 226
van Heuven, Walter, 46, 84, 87, 89–91, 231
Van Leerdam, Martin, 85–6
Verhoeven, Kim, 60
visual language processing see reading
visual word recognition, 74, 76–87
   phonological activation in, 85–7
   see also cognates; interlexical
   homographs; interlexical neighbors
visual word recognition, models of see
   computational models
Vitevitch, Michael, 37
Voice Onset Time (VOT), 35, 64–5
Volterra, Virginia, 123
Vygotsky, Lev, 195
Wang, Wenyu, 106
Wang, Xiao-lei, 138
Wartenburger, Isabell, 224–5
weaker language, 57, 120, 122–3, 127, 130,
   133, 136, 145, 218
   processing of, 23, 30, 37–8, 81–2, 89,
   105
Weber-Fox, Christine, 94–5
Weil, Sonja, 57
Weinreich, Uriel, 7, 23, 172–4, 177
Werker, Janet, 129
Wölck, Wolfgang, 120
Wolffersberger, Mark, 108
word association, 177–8
   cognates vs. non-cognates, 178
   concrete vs. abstract words, 178
writing, 100–13
   approaches used in research, 100
   intra-subject vs. additional language (L2)
   studies, 100
   problem-solving during composing, 104
   product and process levels, 103–4
   transfer of knowledge and skills across
   languages, 111–13
   the writing process and its subprocesses,
   102–3
   see also writing, linguistic and cognitive
   demands; writing, processes and
   strategies
writing, linguistic and cognitive demands, 104–5
 allocation of attention, 105
 genre and language knowledges, 103–4
 use of other languages, 105
 writing, processes and strategies, 105–11
 allocation of attentional resources, 106–7
 L1 and L2 writing strategies, 108
 problem-solving strategies, 108–11

 use of L1 in writing, 109–11
 variation in problems tackled, 107
 Wu, Yanjing, 58, 78, 138, 227

 Yang, Jing, 225, 227
 Yeni-Komshian, Grace, 152
 Yip, Virginia, 119–33, 135–6

 Zelazo, Philip, 203
 Zhao, Xiaowei, 9, 150, 160, 231, 233–4
 Zinszer, Benjamin, 160