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Research Timeline

Cross-linguistic transfer in second language reading

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Research on reading skills transfer has taken shape in two major disciplines: second language (L2) acquisition and reading. Inevitably, its evolution reflects major conceptual shifts in their respective research sub-fields. In L2 research, as a case in point, transfer was initially viewed as interference stemming from first language (L1) structural properties. This view, however, was significantly altered by the subsequent postulation that the language proficiency underlying cognitively demanding tasks, such as literacy and academic learning, is largely shared across languages, and therefore, once acquired in one language, it promotes literacy development in another (Cummins 1979). Reflecting the latter view, the current conceptualizations of transfer uniformly underscore the facilitative nature of previously learned competencies as resources available to L2 learners (e.g. Genesee et al. 2007; Koda 2008).

Reading transfer research has also been influenced by the shifting views of reading. Although reading was once seen as an indivisible whole, in more recent studies, it is regarded as a constellation of closely related, yet separable, mental operations each entailing a unique set of sub-skills (e.g. Carr & Levy 1990). By dissecting reading into its components, the newer approach allows systematic explorations of functional connections among reading sub-skills within and across languages. Thus, a growing number of studies are now exploring cross-linguistic relationships in reading sub-skills, collectively yielding an increasingly refined picture of reading development among school-age children learning to read in two languages. Another conceptual shift related to the issue at hand pertains to cross-linguistic variations in reading sub-skills. In early reading theories, virtually no attention was given to such variations. Subsequent studies, however, have presented convincing evidence that qualitatively different sub-skills are involved in reading typologically diverse languages. The emerging consensus is that learning to read is constrained by the demands stemming from both universal and language-specific requirements. From the language-specific perspective, current transfer research investigates how transferred L1 skills are integrated in L2 reading by addressing various cross-linguistic issues uniquely associated with bilingual information processing.

In the initial step of constructing the present timeline, we identified a total of 112 publications on reading skills transfer through database searches. Based on the review of these articles, we uncovered six recurring themes, listed below. Using these themes as the selection criteria, we determined the final set of publications to be entered in the timeline. The specific theme relevant to each entry is marked by the corresponding letter in the annotations. Bibliographic cross-references within the timeline are marked by small capitals.

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A. Lasting L1 impacts: **A1** – interference and **A2** – facilitation stemming from transferred L1 skills
B. Cross-linguistic relationships in L1 and L2 reading skills
C. Transfer of language-neutral vs. language-specific skills
D. Relative contributions of transferred L1 skills and L2 proficiency
E. Procedural variations in L2 processing attributable to transferred L1 skills
F. Interaction between transferred L1 skills and L2 input properties

References

Carr, T. H. & B. A. Levy (eds.) (1990). *Reading and its development: Component skills approaches*. San Diego, CA: Academic Press.
Cummins, J. (1979). Linguistic interdependence and educational development of bilingual children. *Review of Educational Research* 49, 222–251.
Genesee, F., E. Geva, C. Dressler & M. L. Kamil (2006). Synthesis: Cross-linguistic relationships. In D. August & T. Shanahan (eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-minority Children and Youth*. New York: Routledge, 153–183.
Koda, K. (2008). Impacts of prior literacy experience on second-language learning to read. In K. Koda & A. M. Zehler (eds.), *Learning to read across languages*. New York: Routledge, 68–96.

KEIKO KODA is Professor in the Department of Modern Languages at Carnegie Mellon University, Pittsburgh, PA, USA. Her research on second language reading and biliteracy development is published widely in journals, books and book chapters. She has edited and co-edited special issues of *Language Learning and Reading in a Foreign Language*. Her recent books include *Insights into second language reading* (Cambridge University Press, 2005) and *Learning to read across languages* (Routledge, 2008).

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	REFERENCES	ANNOTATIONS
1957	Lado, R. (1957). *Linguistics across cultures*. Ann Arbor, MI: University of Michigan Press.	**Lado** proposed the Contrastive Analysis (CA) hypothesis, contending that structural differences between a learner's two languages are a major source of difficulty in learning an L2. **A1**
1978	Troike, R. C. (1978). Research evidence for the effectiveness of bilingual education. *NABE Journal* 3, 13–24.	In a review of bilingual education programs, **Troike** found consistently high correlations between L1 and L2 reading/academic skills among older minority-language-speaking children. **B**
1979	Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research* 49.2, 222–251.	In his highly influential theoretical formulation, the Development Interdependence Hypothesis, **Cummins** claimed that the degree of proficiency that will be achieved in a learner's L2 is dependent upon their L1 proficiency. He also distinguished basic interpersonal communication skills (BICS) and cognitive and academic language proficiency (CALP). **A2**, **C**
1980	Clarke, M. A. (1980). The short circuit hypothesis of ESL reading – Or when language competence interferes with reading performance. *The Modern Language Journal* 64.2, 203–209.	**Clarke** underscored the notion that no matter how well-developed an adult reader's L1 is, it does not facilitate L2 reading comprehension unless the linguistic demands are within his/her L2 linguistic capabilities. **D**
1984	Alderson, J. C. (1984). Reading in a foreign language: A reading problem or a language problem? In J. C. Alderson & A. H. Urquhart (eds.), *Reading in a foreign language*. London: Longman, 1–24.	**Alderson** asked one of the most basic, yet critical, questions of L2 reading: whether L2 reading difficulties stem from reading skill deficits in L1 or from insufficient L2 linguistic knowledge. **D**
1984	Saville-Troike, M. (1984). What really matters in second language learning for academic achievement? *TESOL Quarterly* 18.2, 199–219.	**Saville-Troike** provided empirical evidence showing that oral communication skills and academic proficiency in school-age ESL children (age 7–12; USA) developed independently, and the acquisition of the latter was systematically related to students' L1 use. **A2**, **C**
1987	Green, W. D. & P. Meara (1987). The effects of script on visual search. *Second Language Research* 3.2, 102–117.	In one of the first studies to systemically show the cross-linguistic effect of L1 reading processes on L2 reading, **Green & Meara** demonstrated that ESL readers with diverse L1 backgrounds tend to process visual script in the same way as they do in their respective L1s. **E**

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1988	Koda, K. (1988). Effects of L1 orthographic representation on L2 phonological coding strategies. *Journal of Psycholinguistic Research* 18.2, 201–222.	**Koda** provided additional substantiation of the processing variation that stems from L1 orthographic properties among adult ESL learners from different alphabetic and logographic L1 backgrounds. **E**
1989	Kilborn, K. & T. Ito (1989). Sentence processing strategies in adult bilinguals. In B. MacWhinney & E. Bates. (eds.), *The cross-linguistic study of sentence processing*. Cambridge: Cambridge University Press, 257–291.	**Kilborn & Ito** offered empirical evidence for lasting L1 impacts on L2 sentence processing in adult bilinguals, extending the notion of L1-induced variation to syntactic processing. **E**
1991	Carrell, P. L. (1991). Second language reading: reading ability or language proficiency? *Applied Linguistics* 12.2, 159–179.	By addressing ALDERSON's (1984) question, **Carrell** showed that both L1 reading and L2 linguistic knowledge play a significant role in L2 reading comprehension among adult ESL learners with Spanish L1 backgrounds. Of the two variables, however, L2 proficiency was clearly the stronger predictor. **D**
1992	Hsia, S. (1992). Developmental knowledge of inter- and intraword boundaries: Evidence from American and Mandarin Chinese speaking beginning readers. *Applied Psycholinguistics* 13.3, 341– 372.	**Hsia** revealed that Chinese–English incipient bilingual children (age 4–5; USA) preferred syllabic level intra-word segmentation patterns when compared to monolingual English-speaking children, signifying a transfer effect of the phonological constraints of Chinese in reading English. **E**
1993	Durgunoglu, A. Y., W. E. Nagy & B. J. Hancin-Bhatt (1993). Cross-language transfer of phonological awareness. *Journal of Educational Psychology* 85.3, 453–465.	In a study involving Spanish–English bilingual children (age 7; USA). **Durgunoglu et al**. showed that once developed in one language, L1 phonological awareness significantly contributed to L2 decoding. **A2**
1993	Koda, K. (1993). Transferred L1 strategies and L2 syntactic structure in L2 sentence comprehension. *Modern Language Journal* 77.4, 490–500.	**Koda** provided evidence for the cross-linguistic interplay between a learner's L1 background and L2-specific linguistic demands by demonstrating that while adult L2 learners used the processing skills that reflect their L1 morphosyntactic properties, they were also sensitized to the L2-specific syntactic properties. **B**
1994	Hancin-Bhatt, B. J., & W. E. Nagy (1994). Lexical transfer and second language morphological development. *Applied Psycholinguistics* 15.3, 289– 310.	**Hancin-Bhatt & Nagy** demonstrated that Spanish-speaking bilingual students (age 9–14; USA) performed significantly better at recognizing cognate stems in suffixed English words than in non-cognate words, indicating that transfer effects could be also applied to L2 morphological development. **A2**

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1994	Verhoeven, L. T. (1994). Transfer in bilingual development: The linguistic interdependence hypothesis revisited. *Language Learning* 44.3, 381–415.	In a two-year longitudinal investigation of minority Turkish-speaking children (age 6; the Netherlands) learning to read Dutch, **Verhoeven** revealed cross-linguistic relationships in phonological awareness and decoding skills, while showing no such linkages in lexical and syntactic knowledge. **B**
1995	Bernhardt, E. & M. Kamil (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics* 16.1, 15–34.	**Bernhardt & Kamil** provided additional information on ALDERSON's (1984) question of whether L2 reading is a language problem or a reading problem. Their analysis revealed that L1 reading ability explained roughly 20% of the variance in L2 reading consistently across studies involving adult L2 learners while L2 proficiency accounted for approximately 30%. They concluded that while both factors contribute to L2 reading development, neither is adequate by itself in predicting L2 reading achievement. **D**
1995	Da Fontoura, H. A. & L. S. Siegel (1995). Reading, syntactic, and working memory skills of Portuguese–English Canadian children. *Reading and Writing* 7.1, 139–153.	Under the componential view of reading, **Da Fontoura & Siegel** measured and compared reading sub-skills in Portuguese–English bilingual students (age 9–12; Canada). Their results showed systematic cross-linguistic relationships in decoding, grammatical sensitivity and working memory. **B**, **C**
1997	Abu-Rabia, S. (1997). Verbal and working-memory skills of bilingual Hebrew–English speaking children. *International Journal of Psycholinguistics* 13.1, 25–40.	**Abu-Rabia** found strong cross-linguistic relationships in decoding, syntactic and working-memory skills in Hebrew–English bilingual students (age 16; Israel). However, no such connections were found in orthographic and phonological skills, thereby implying the complexities inherent in learning to read involving two typologically distinct languages and writing systems. **B**
1997	Geva, E., L. Wade-Woolley & M. Shany (1997). Development of reading efficiency in first and second language. *Scientific Studies of Reading* 1.2, 119–144.	**Geva et al**. found systematic cross-linguistic relationships in reading sub-skills, including letter naming, decoding, and oral text reading, among Hebrew–English bilingual children (mean age 6.5; Canada). Their findings also suggest that specific linguistic properties, such as orthographic transparency and morphosyntactic complexity, may alter the requisite level of L2 proficiency needed for the acquisition of particular L2 sub-skills. **A2**

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1997	Nagy, W. E., E. F. McClure & M. Mir (1997). Linguistic transfer and the use of context by Spanish–English bilinguals. *Applied Psycholinguistics* 18.4, 431–452.	**Nagy et al**. distinguished transfer from non-transfer errors made by Spanish–English bilingual students (ages 13 and 14; USA) when they selected possible meanings for unfamiliar English words presented in brief contexts. They found that non-transferred errors (multiple-choice items inconsistent with either L1 or L2 syntax) were negatively correlated with both L1 and L2 reading proficiency, but transferred errors (items consistent with L1 syntax) were positively correlated with L1 reading and unrelated to L2 reading, thus suggesting that L1 syntactic knowledge influences L2 word meaning inference. **B**
1998	Koda, K. (1998). The role of phonemic awareness in second language reading. *Second Language Research* 14.2, 194–215.	**Koda** demonstrated that while adult ESL learners with Chinese and Korean L1 backgrounds did not differ in phonemic awareness, they used their phonological awareness skills when reading an English text for comprehension, underscoring the interplay between a learner's prior L1 processing experiences and varying L2 task demands. **A2**
1998	Liow, S. J. R. & K. K. L. Poon (1998). Phonological awareness in multilingual Chinese children. *Applied Linguistics* 19.3, 339–362.	In a study of multilingual children (ages 9 and 10; Singapore), **Liow & Poon** clearly showed that children with exposure to a transparent orthography (Bahasa Indonesian) developed alphabetic phonological awareness quicker than those with exposure to less transparent English or Mandarin, indicating the influence of L1 orthographic experience on L2 reading development. **E**
1998	Mori, Y. (1998). Effects of first language and phonological accessibility on kanji recognition. *The Modern Language Journal* 82.1, 69–82.	Adding evidence to the influence of L1 orthographic experience on L2 reading development, **Mori** found that adult L2 learners of Japanese with logographic L1 background were far less affected when reading Japanese Kanji that had unpronounceable components (phonologically inaccessible radicals) than those with alphabetic L1 backgrounds. **E**
1998	Muljani, D., K. Koda & D. R. Moates (1998). The development of word recognition in a second language. *Applied Psycholinguistics* 19.1, 99–113.	**Muljani et al**.'s results from a study involving adult ESL learners with Chinese and Indonesian L1 backgrounds suggest that while L1 and L2 orthographic similarity has general facilitative impacts, accelerated efficiency is far more localized than has been assumed, occurring only in the operations whose demands are identical between the languages involved. **A2**

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1999	Carlisle, J. F., M. Beeman, L. H. Davis & G. Spharim (1999). Relationship of metalinguistic capabilities and reading achievement for children who are becoming bilingual. *Applied Psycholinguistics* 20.4, 459–478.	**Carlisle et al**. found that metalinguistic awareness and vocabulary knowledge were significantly related both within and across languages in Hispanic children (age 6–8; USA). Their results also demonstrated that L1 vocabulary and phonological awareness significantly contributed to L2 reading comprehension, lending further support to L1-induced facilitation in L2 reading development. **A2**
1999	Comeau, L., P. Cormier, E. Grandmaison & D. Lacroix (1999). A longitudinal study of phonological processing skills in children learning to read in a second language. *Journal of Educational Psychology* 91.1, 29–43.	In one of the first longitudinal studies to examine functional and developmental relationships in reading sub-skills, **Comeau et al**. found that phonological awareness and decoding were closely related both within and across languages among English native speakers (age 6–10 at start of one-year study; USA) learning French in an L2 immersion setting. **A2**, **B**
1999	Gholamain, M. & E. Geva (1999). Orthographic and cognitive factors in the concurrent development of basic reading skills in English and Persian. *Language Learning* 49.2, 183–217.	In a cross-sectional study involving Grade 1–5 Persian–English bilingual children (age 6–10; Canada), **Gholamain & Geva** found that there were significant correlations between L1 and L2 decoding, working memory and rapid naming, substantiating a universal processing system underlying both L1 and L2 reading development. **B**, **C**
1999	Wade-Woolley, L. (1999). First language influences on second language word reading: All roads lead to Rome. *Language Learning* 49.3, 447–471.	**Wade-Woolley**'s study involving Japanese and Russian adult ESL learners offers compelling evidence of cross-language transfer effects with each group using strategies that are predictable, based on their L1's orthographic properties; the Russians performed better on phonemic segmentation while the Japanese were more adept at visual processing. **A1**
2000	Geva, E. & L. S. Siegel (2000). Orthographic and cognitive factors in the concurrent development of basic reading skills in two languages. *Reading and Writing* 12.1–2, 1–30.	In a study involving children (age 6–10; Canada) acquiring reading skills in English and Hebrew, **Geva & Siegel** found positive correlations in working memory and decoding skills in the two languages, suggesting that learning to read is promoted by the central processing system common across languages. However, age had a significant effect on decoding English words but not Hebrew words, implying that reading acquisition is also constrained by orthography-specific properties. **A2**, **C**

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2000	Koda, K. (2000). Cross-linguistic variations in L2 morphological awareness. *Applied Psycholinguistics* 21.3, 297–320.	**Koda**'s study extended the extant findings of L1-induced variation in L2 phonological processing to morphological processing among adult L2 learners. Furthermore, her findings corroborate the claim by MULJANI ET AL. (1998) that L1-induced facilitation occurs only in the operations imposing similar processing demands between the languages involved. **E**
2000	Wade-Woolley, L. & E. Geva (2000). Processing novel phonemic contrasts in the acquisition of L2 word reading. *Scientific Studies of Reading* 4.4, 295–311.	**Wade-Woolley & Geva** showed that Hebrew–English bilingual children (age 7; Canada) performed poorly when phonemic contrasts in an L2 word were located in a position that is illegal in their L1, indicating a lasting L1 impact on L2 reading sub-skills development. **A1**
2001	Gottardo, A., B. Yan, L. S. Siegel & L. Wade-Woolley (2001). Factors related to English reading performance in children with Chinese as a first language: More evidence of cross-language transfer of phonological processing. *Journal of Educational Psychology* 93.3, 530–542.	**Gottardo et al**. extended the cross-linguistic relationship in phonological awareness from biliteracy development involving two alphabetic languages to biliteracy development among children (age 6–13; Canada) learning to read in two typologically incongruent languages. Their results demonstrated that Cantonese (L1) and English (L2) phonological awareness were closely related. Their findings also replicated those in the DURGUNOGLU ET AL. 1993 study showing that L1 phonological awareness was a strong predictor of L2 decoding performance. **A2**, **B**
2002	Abu-Rabia, S. & L. S. Siegel (2002). Reading, syntactic, orthographic, and working memory skills of bilingual Arabic–English speaking Canadian children. *Journal of Psycholinguistic Research* 31.6, 661–678.	**Abu-Rabia & Siegel** measured and compared decoding, syntactic, and working memory skills in Arabic–English bilingual and monolingual children (age 9–14; Canada). They found that normally developing bilingual and English monolingual children did not differ in any of the measured skills. However, bilingual children with reading disabilities performed better on English decoding than their English monolingual counterparts, indicating that decoding skills transfer from an orthographically transparent L1 (Arabic) to a less transparent L2 (English). **A2**
2002	Akamatsu, N. (2002). A similarity in word-recognition procedures among second language readers with different first language backgrounds. *Applied Psycholinguistics* 23.1, 117–133.	**Akamatsu** extended the idea of cross-linguistic interaction presented by KODA (1993) to show L1 orthographic impacts on L2 word reading in adult ESL learners with varying L1 backgrounds. His findings indicate, however, that such an effect is limited to low-frequency words, implying a visual universal route for reading high-frequency words which is largely unaffected by L1 orthographic properties. **E**

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2002	Mumtaz, S. & G. W. Humphreys (2002). The effect of Urdu vocabulary size on the acquisition of single word reading in English. *Educational Psychology* 22.2, 165–190.	**Mumtaz & Humphreys** compared Urdu–English bilingual children (ages 7 and 8; UK) and found that children with larger vocabulary sizes in their orthographically transparent L1 (Urdu) outperformed their counterparts with smaller vocabulary sizes, thereby suggesting a facilitative transfer effect of the phonological segmentation skills honed when learning to read the transparent Urdu orthography. **A2**
2002	Ordóñez, C. L., M. S. Carlo, C. E. Snow & B. MacLaughlin (2002). Depth and breadth of vocabulary in two languages: Which vocabulary skills transfer? *Journal of Educational Psychology* 94.4, 719–728.	**Ordóñez et al**.'s study involving Spanish–English bilingual children (age 9–10; USA) lends further support for the distinction between CALP and BICS proposed by CUMMINS (1979), by showing that L1 performance on academically mediated 'paradigmatic' definitions was a strong predictor of L2 performance on the same task. In contrast, communicative adequacy of definitions and rich descriptions of concrete nouns were more language-independent, relying on vocabulary knowledge in each language. **A2**, **C**
2003	Abu-Rabia, S. & L. Siegel (2003). Reading skills in three orthographies: The case of trilingual Arabic-Hebrew–English-speaking Arab children. *Reading and Writing* 16.7, 611–634.	**Abu-Rabia & Siegel** found systematic cross-linguistic relationships in phonological awareness, syntactic knowledge, and working memory among children (age 14–15; Israel) learning to read across three languages – L1 Arabic, L2 Hebrew, and L3 English. The study thus extended the notion of an underlying universal processing system (GEVA & SIEGEL 2000) in biliteracy acquisition to trilingual reading development. **B**, **C**
2003	Akamatsu, N. (2003). The effects of first language orthographic features on second language reading in text. *Language Learning* 53.2, 207–231.	By altering upper- and lower-case letters in English words in a text, **Akamatsu** extended the L1-induced variation from lexical processing to text reading. Adult logographic ESL learners' reading speed was impaired by the orthographic manipulation to a far greater extent than alphabetic learners. The findings suggest that logographic ESL learners are less efficient in phonological information extraction than their alphabetic counterparts. **E**
2003	Pichette, F., N. Segalowitz & K. Connors (2003). Impact of maintaining L1 reading skills on L2 reading skill development in adults: Evidence from speakers of Serbo-Croation learning French. *Modern Language Journal* 87.3, 391–403.	**Pichette et al**.'s study teased apart the role of L1 reading ability and L2 linguistic knowledge. Findings from Serbo-Croatian adults learning to read French revealed that transfer effects are apparent only when the learner has already achieved a threshold level of L2 linguistic knowledge and they are maintaining a threshold level of L2 reading activity. **D**

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2003	Wang, M., K. Koda & C. A. Perfetti (2003). Alphabetic and nonalphabetic L1 effects in English word identification: A comparison of Korean and Chinese English L2 learners. *Cognition* 87.2, 129–149.	**Wang et al**. found that semantic category judgment performance was differentially affected by phonological and orthographic similarities among adult ESL learners with Korean and Chinese L1 backgrounds. Their findings suggest that the two groups of learners rely on both phonological and orthographic information, but the groups utilize each type of information in varying degrees, thus underscoring the complex interaction between L1 processing experiences and processing demands unique to the L2. **E**
2005	Bialystok, E., G. Luk & E. Kwan (2005). Bilingualism, biliteracy, and learning to read: Interactions among languages and writing systems. *Scientific Studies of Reading* 9.1, 43–61.	**Bialystok et al**. found that bilinguals (Cantonese–English, Hebrew–English, and Spanish–English; mean age 6.8; Canada) were superior to English monolinguals in their concept of print skills and in decoding, but the degree to which bilingualism contributed to early reading achievement was dependent upon the distance between the two writing systems. **A2**
2005	Bialystok, E., C. McBride-Chang & G. Luk (2005). Bilingualism, language proficiency, and learning to read in two writing systems. *Journal of Educational Psychology* 97.4, 580–590.	**Bialystok et al**. showed that bilingualism *per se* was not a mitigating factor of facilitation in biliteracy development in Cantonese–English bilingual children (age 5–6; Hong Kong) and native Chinese-speaking children (K – Grade 1) learning L2 English. Their reading development was enhanced through instruction, oral vocabulary knowledge in the language in which literacy is learned, and phonological awareness transferred across languages. **A2**, **D**
2005	Paribakht, S. (2005). The influence of first language lexicalization on second language lexical inferencing: A study of Farsi-speaking learners of English as a foreign language. *Language Learning* 55.4, 701–748.	Using think-aloud protocols, **Paribakht** examined lexical inference skills of native Farsi-speaking adult EFL readers. Her results demonstrated that L2 words with no lexical equivalent in the L1 were less successfully inferred, indicating that L1 lexicalization may be a significant factor contributing to L2 word meaning inference. **A2**
2005	Wang, M., C. A. Perfetti & Y. Liu (2005). Chinese–English biliteracy acquisition: Cross-language and writing system transfer. *Cognition* 97.1, 67–88.	In a study involving Chinese–English bilingual children (age 7–8; USA), **Wang et al**. found that phonological processing skills were a significant predictor of decoding both within and across languages, but orthographic processing skills predicted decoding only within each language. These results suggest that biliteracy development is greatly facilitated by language-neutral skills, such as phonological processing, transferred from the dominant language. **A2**

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2006	Branum-Martin, L., P. D. Mehta, J. M. Fletcher, C. D. Carlson, A. Ortiz, M. Carlo & D. J. Francis (2006). Bilingual phonological awareness: Multilevel construct validation among Spanish-speaking kindergarteners in transitional bilingual education classrooms. *Journal of Educational Psychology* 98.1, 170–181.	In a large-scale validation study, **Branum-Martin et al**. attempted to distinguish facets of phonological awareness in kindergarten Spanish–English bilingual children (age 5; USA). Multilevel confirmatory factor analyses revealed that three out of the four facets measured in the study formed a single construct within each language. However, significant covariance was found across languages for the fourth facet – phoneme deletion – suggesting a strong probability that a shared, language-independent, phonological awareness facet does exist. **C**
2006	Proctor, P. C., D. August, M. S. Carlo & C. Snow (2006). The intriguing role of Spanish language vocabulary knowledge in predicting English reading comprehension. *Journal of Educational Psychology* 98.1, 159–169.	In a study of Spanish–English bilingual children (age 10; USA), **Proctor et al**. demonstrated that L1 vocabulary knowledge accounted for a unique variance in L2 English reading comprehension over and above L2 decoding and oral vocabulary knowledge. Also, children who were more efficient L2 readers benefited more from transferred L1 vocabulary knowledge than their less efficient counterparts, thus lending further support for the critical role that L2 linguistic knowledge plays in L2 reading development (CLARKE 1980; ALDERSON 1984). **D**
2006	Wang, M., C. Cheng & S. Chen (2006). Contribution of morphological awareness to Chinese–English biliteracy acquisition. *Journal of Educational Psychology* 98.3, 542–553.	**Wang et al**. examined cross-linguistic facilitation stemming from shared morphological awareness skills across languages in English–Chinese bilingual children (age 6–10; USA). Findings showed that morphological awareness in English was a significant predictor of Chinese character reading and Chinese sentence comprehension, further extending systematic morphological awareness cross-linguistic relationships. **A2**
2007	Atwill, K., J. Blanchard, J. S. Gorin & K. Burstein (2007). Receptive vocabulary and cross-language transfer of phonemic awareness in kindergarten children. *Journal of Educational Research* 100.6, 336–345.	**Atwill et al**. found higher correlations between L1 and L2 phonemic awareness among Spanish–English bilingual kindergarten children (age 5; USA) who had stronger L1 vocabulary knowledge, suggesting the role of L1 oral vocabulary knowledge as a critical factor in promoting cross-language transfer of phonemic awareness. **A2**

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2007	Schiff, R. & S. Calif (2007). Role of phonological and morphological awareness in L2 oral word reading. *Language Learning* 57.2, 271–298.	**Schiff & Calif** found that while morphological awareness was highly correlated across languages, orthographic skills and phonological awareness were only weakly related in Hebrew-speaking children (age 10; Israel) learning English as an L2. They claimed that the strength of cross-linguistic relationships in reading sub-skills is a function of the distance (similarity) in the sub-skills measured in the two languages. **B**
2007	Wang, M. & K. Koda (2007). Commonalities and differences in word identification skills among learners of English as a second language. *Language Learning* 5, Supplement 1, 201–222.	**Wang & Koda** provided further support for the distance effect on L2 reading development by showing that alphabetic (Korean) adult ESL learners were more efficient in L2 decoding than their logographic (Chinese) ESL counterparts. However, the two groups responded similarly to critical L2 word properties, such as regularity and frequency. These findings indicate that L2 word properties and experience with L2 print may exert an even greater impact on L2 reading development than L1 orthographic experience. **F**
2008	Hamada, M. & K. Koda (2008). Influence of first language orthographic experience on second language decoding and word learning. *Language Learning* 58.1, 1–31.	**Hamada & Koda** demonstrated that alphabetic adult ESL learners (Korean) were significantly more efficient in L2 pseudoword decoding and subsequent pseudoword learning than logographic (Chinese) learners. They also found that regularly spelled pseudowords were decoded faster and retained better by both groups, indicating that both L1–L2 orthographic distance and L2 word properties play a critical role in L2 reading development. The study thus extended the orthographic distance effect and cross-linguistic interaction in L2 decoding to L2 word learning. **F**