

First Language
Bidialectism in Second
Language Interface
Acquisition

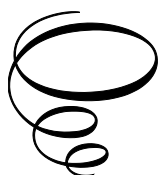
First Language Bidialectism in Second Language Interface Acquisition:

Difference and Disorder

By

Weifeng Han

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CHAPTER 1

INTRODUCTION

Accurately identifying language impairment in bilingual speakers is a primary concern in modern speech-language pathology studies and practice (Han, Brebner, and McAllister 2016). This is true because no matter how “close” the two languages a bilingual speaks are, their second language (L2) is different from the first language (L1) so that bilinguals, in terms of their linguistic knowledge, are definitively different from monolinguals. Therefore, diagnosis and assessment of bilingual speakers’ linguistic abilities are challenging, since measurement of bilinguals’ skills with monolingual norms will result in biased results (see Thordardottir et al. 2006, Oller, Pearson, and Cobo-Lewis 2007, Patterson and Pearson 2004, Paradis 2005, 2010a, Marinis and Chondrogianni 2011 among many others).

Bilingual speakers are defined as people who speak two languages: L1 and L2. An L2 is conventionally understood as the subsequent language acquired after the L1. In many studies today, however, it includes all other languages acquired. Therefore, some authors refer to L2 as “Ln” (i.e. the additional language) (e.g. Rothman, Cabrelli Amaro, and de Bot 2013), or simply as the target language (TL) (e.g. Saviile-Troike 2012). This book uses the term “bilingualism” to also refer to multilingualism, the ability to use one or more languages other than the L1.

Due to social, cultural, educational, or other demographic factors, a person speaking any language may take any other languages as their L2, such as a Korean speaker learning Japanese, or a Spanish user learning Italian. However, English has the largest number of L2 users. For example, Cook (2002, 3) estimated that there had been no less than one billion people worldwide having English as their L2. McArthur (2001) estimated the number to be up to 1.75 billion by including all varieties of English into consideration. While the biggest bilingual population takes English as the second language (ESL), the increase of Chinese immigration in English speaking countries and regions in the past few decades means that learners with Chinese as their L1 have become one of the biggest ESL populations

in the world. For example, speakers using Mandarin or Cantonese as their home language have become the biggest bilingual population in Australia (combined up to 3.7% of all the Australian population; Australian Bureau of Statistics 2016). This study, therefore, explores bilingualism with particular consideration of Chinese L1 speakers learning English as an L2.

Among all L2 learners, child L2 learners are of particular interest in both linguistics and speech-language pathology studies, not only because they represent a great number of ESL learners, but it is also because of their “flexibility” in learning/acquiring languages in comparison to adult learners. Child second language acquisition (cL2A) refers to sequential bilingualism where the L2 acquisition happens after the age of three when fundamental rules in L1 have been established (see Lakshmanan 2013, 71).¹ From the cL2A perspective, this study is particularly interested in that while both child and adult learners enter the L2 acquisition after substantial L1 exposure, the learning outcomes may be very different (usually children are more successful L2 learners; see Chapter 2 for more detail). Therefore, understanding child L2 learners’ acquisition of specific L2 properties, such as the acquisition at the syntax-semantics interface, is crucial to the understanding of language development in general (Unsworth 2008). Also, a better understanding of the role of L1 at the beginning of L2 acquisition will help inform speech-language pathologists (SLPs) in understanding and controlling L1 as a variable in language assessment and treatment, especially in separating language difference from disorder. The aim, henceforth, is to contribute to the understanding of typical development in a previously unidentified group of bilingual-bidialectal children who may perform differently in the target language.

Large corpus studies have shown L2 learners are under the influence of their L1 knowledge in the process of L2 acquisition, that is there is an L1 transfer (Shatz 2017). The optimistic view is that bilinguals’ L1 transfer can lead to advantages in L2 language awareness. For example, Korean learners of English are found to be more accurately aware of unreleased stops in English than even English monolinguals (Chang and Mishler 2012). Similar research also seemed to point to such an interlanguage speech intelligibility benefit, or native-language transfer benefit, stating that alignment of properties in L1 and L2 will favor the linguistic biases of the first language

¹ Broadly speaking, a child exposed to the L2 anytime before the age of six is defined as a simultaneous bilingual (Kupisch 2018). Following such a broad definition, cL2A refers to sequential bilingualism after six. In either definition, participants in this book were sequential bilinguals.

(see for example Bent and Bradlow 2003, Best, McRoberts, and Goodell 2001, Flege 2002, Imai, Flege, and Walley 2003, Pallier, Colome, and Sebastian-Galles 2001, Smith, Bradlow, and Bent 2003, van Wijngaarden 2001, van Wijngaarden, Steeneken, and Houtgast 2002 among many others). These studies, however, appeared to be overwhelmingly focusing on the positive transfer from the L1 phonological knowledge onto L2. Figure 1 below illustrates such an L1 positive transfer.

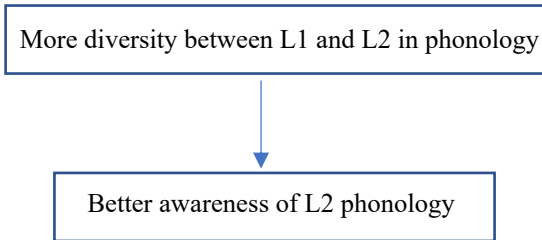


Figure 1: L1 positive transfer

(e.g. Korean (L1)-English (L2) bilinguals; Chang and Mishler 2012)

On the contrary, there is no strong evidence proving the L1 transfer benefit in the L2 syntactic acquisition. Rather, many studies have implied that there are negative transfers of L1 on the L2 syntax. And the bigger the differences between L1 and L2 syntactically are, the more negative transfers there will be (e.g. Bransford, Brown, and Cocking 2000, Nitschke, Kidd, and Serratrice 2010). That is to say, when there are greater differences between L1 and L2, there will be more chances for the learners to apply knowledge from their native language to the target one(s) (Whitley 2002), which will result in misuse, as presented in Figure 2. In this sense, Chinese-L1 learners will experience more negative transfers in syntax from their L1 in learning English as an L2, considering the huge syntactic typological differences between the two. This book explores if there is any difference in a monodialectal (e.g. Mandarin) learner's ESL learning outcome in comparison with that of a bidialectal learner (e.g. Mandarin-Wu) when there are similarly large syntactic differences between the L1 and the L2.

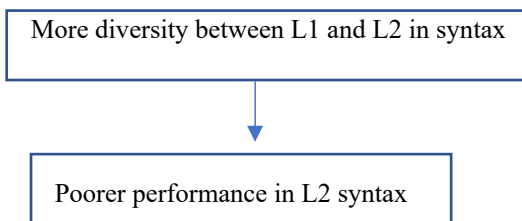


Figure 2: L1 negative transfer

(e.g. English (L1)-Spanish (L2) bilinguals; Whitley 2002)

The interfaces between language modules, such as the phonology-syntax, the morpho-syntax, or the syntax-semantics and syntax-pragmatics interfaces, are probably one of the most “non-transferrable” features in second language learning. While processing a sentence, one needs to combine all the lexical and grammatical meanings of each word and phrase and put them in a sequence (i.e. word order), that is the sentence is processed at the syntax-semantics interface. The “closeness” between the syntactic modules and the semantic modules (Rothman and Slabakova 2011) in L1, as well as the different processing models across L1 and L2, means such a syntax-semantics interface is not only at the core of first language processing, but, most possibly, an obstacle for L2 acquisition. In fact, the interface knowledge is believed to be vulnerable in the L2 acquisition, which may result in developmental delays, or even fossilization (see Sorace and Serratrice 2009, Tsimpli and Sorace 2006). However, few studies in applied linguistics, even fewer in those of speech-language pathology, have provided a clear picture regarding the L2 syntax-semantics interface. For example, in Kaderavek’s (2011) discussion of issues of literacy, reading and writing for school-aged children, a whole chapter was spent on the intervention of aspects such as the phonological awareness, narrative skills, spelling, etc., but not syntax or semantics, let alone the interface between the two. One aim of this book, therefore, is to find out if the L2 syntax-semantics interface is equally “vulnerable” between L1 monodialectal and bidialectal learners, and what this tells us about language disorders in bilingual children.

When talking about child language disorders, it seems that one predicament lies in its definition being more about what it is not than what it is (Paul and Norbury 2007, 3). Language disorder study has a relatively short history. Language “problems” were traditionally viewed from the neurological perspective since the 19th century (e.g. Gall 1825). It was not until the mid-20th century that the language deficits in children were taken

into serious consideration by behavioral (e.g. Orton 1937) and developmental (e.g. Gesell and Amatruda 1947) scientists. It was only around 60 years ago that such “problems” or “deficits” in child language were reevaluated as “disorders”, when Myklebust (1954) established “language pathology”, a term of the distinct, and then new, field of study. Indeed, apart from obvious social communication inabilities, language disorder can be broadly defined as an impairment both receptive and expressive, which involves problems with the form (i.e. syntax) and/or content (i.e. semantics) of language (Paul and Norbury 2007, 3, 6). This book observes such a broad definition of language disorder, and, therefore, use the terms “disorder” and “impairment” interchangeably without the intention to go into definitive issues of terminology.

Developmental language disorder (DLD) (see Bishop 2017, Bishop et al. 2016, 2017), therefore, refers to problems in child language development, which may arise from a wide range of causes, and cannot be simply accounted for by generally slow physical or psychological development (also see Bishop and Norbury 2008, Bishop 2004, 2008, Coady and Evans 2008). Most children diagnosed with DLD are found to have primary deficits in syntax (Rescorla and Lee 2001) and semantics (Ravid, Levie, and Avivi Ben-zvi 2003). Most interestingly, children with language disorders, or impairments, are not found to make many syntactic errors in production (Paul 2007). Rather, problems and deficits are often found in language comprehension, especially of sentences with complex syntax (see Catts et al. 1999, Scott 2004, Tomblin et al. 2003). For example, children with DLD are found to have particular problems in understanding sentences involving negation, passive voice, or relative clauses (RC) (Kuder 1997). Such problems may very possibly come from the problems of processing and integrating meanings with syntax (Klein-Konigsberg 1984), that is they arise from problems at the syntax-semantics interface.

The prevalence of language disorder is estimated at around 7% of children (Fox, Dodd, and Howard 2002, Leonard 2014). There is evidence that language disorder has a genetic basis (Rice 2000), and there is a gender difference (Leonard 2014, Tomblin et al. 1997). However, as Han, Brebner, and McAllister (2016) pointed out, for bilingual speakers, while many problems with language production and language comprehension in L2 are real disorders or impairments, others may simply be language differences, caused by the typological incongruence between L1 and L2 (also see Grech and McLeod 2012, Kayser 2002). Similar performance of language difference and disorder may cause misdiagnosis of typically developing (TD) L2 children as having language disorders, and result in overrepresentation of

bilingual children in special schools (see de Jong, Cavus, and Baker 2010). Therefore, by examining bilingual children's performance at the L2 syntax-semantics interface this book aims to reveal the similarities and differences of the L2 competence between the L1 monodialectal and bidialectal learners, and to provide both empirical and theoretical supports in future effort to separate differences from disorders.

The whole book is arranged as follows: after the current chapter of general introduction, Chapter 1 will review the key issues and theoretical foundations of the research. It will begin with the definition and detail of second language development by comparing it with the first language development. Bilingualism and bidialectism will be introduced with a focus on the connection between L1 bidialectism and L2 acquisition, which is followed by the assessment of TD bilingual children and those with DLD. Chapter 3 deals with the methodological issues: the hypotheses, participant recruitment, the selection of mixed methods, etc. The rationale of the study will be explained, and the general research question will be presented, too. Following Chapter 3, Chapters 4 and 5 present the detail of the quantitative and qualitative procedures and analyses. The results will be interpreted and discussed. Chapter 6 will further explore the relationship between language differences and disorders in pluralistic contexts. Limitations will also be identified and discussed. Implications and directions for future research, both theoretical and clinical, will then be provided. For example, the theoretical implications such as the definition of bilingualism, the L2 development at the interface level, and, in particular, the clinical implications to SLPs with bilingual children as their clients, will be extended in full detail. Finally, Chapter 7 concludes the whole book by reiterating its importance and contributions to both theoretical and applied linguistics and speech-language pathology studies.

CHAPTER 2

BILINGUAL LANGUAGE DEVELOPMENT AND ASSESSMENT

This chapter reviews bilingualism and bidialectism by putting them in the context of first language and second language development. The relationship between typical bilingual development and that of monolinguals' is also examined in comparison with bilinguals and monolinguals with language impairment. The weakness and bias in assessment and diagnosis of bilinguals through measurement of monolingual standards will be highlighted. Overall, this chapter is designed to help readers understand that bilingualism and bidialectism are very common and can result in "language differences": the non-target-like performance caused by the negative influences from the existing linguistic knowledge. Bilingual children, however, might experience language disorder in L1 or L2, with either a psychological, a neurological, or a biological etiology. While language differences and disorders can be difficult to differentiate, discriminating between the two is particularly important for L2 users, because it informs SLPs as well as language educators as when and to what extent "problems" in the target language need clinical intervention. In this sense, understanding the impact of L1 bidialectism on language differences in L2 will be of great help to practitioners in a multicultural and multilingual context where their bilingual clients' L1 dialectal backgrounds are complex.

First, bilingualism and bidialectism are two different, yet closely related, topics in the studies of language acquisition and development. While bilingualism refers to the command of two distinct languages that differ in all levels of syntax, lexicon, pragmatics, writing systems, etc. (see Bhatia and Ritchie 2004), bidialectism, refers to the co-existence of knowledge of two similar linguistic varieties that share a great amount of the same lexicon and grammar (also see Rickford 1996, Richards, Platt, and Weber 1985). Broadly speaking, a bilingual speaker and a bidialectal speaker are both exposed to inputs from two linguistic varieties. An L1 bidialectal speaker learning a second language, therefore, is typologically exposed to three different linguistic inputs. However, it is unclear if first

language bidialectism has any impact on second language acquisition (SLA). In fact, even the relationship with respect to typically developing bilinguals and monolinguals, as well as to bilinguals with language impairments, has not received adequate attention (Paradis 2010a), either.

Language disorder or impairment is another important issue to be considered. Generally, a speaker with language impairment is defined as having linguistic difficulties in language production and/or comprehension as compared to their peers with similar linguistic exposure (Bedore and Peña 2008). However, inaccurate assessment and misdiagnosis of language impairment are more common in second language learners (L2ers). For speech-language pathologists, unbiased language assessment of bilingual children can be complex (Gillam et al. 2013). It becomes even more complicated when involving bidialectal L1 speakers since the L2 learning process involves learners' pre-existing knowledge of multiple linguistic systems distinctive to the target language system.

Overall, as mentioned earlier, for speakers with bidialectal and/or bilingual knowledge, to distinguish true language impairment from normal language difference has not been easy in practice due to inappropriate assessments and a lack of normative data (Kohnert 2010, Teoh, Brebner, and McCormack 2012). In fact, there are no unified understandings and/or standards for identification of bilinguals' language impairment (Broomfield and Dodd 2004), except a general agreement that impairment will be evident in all languages (Kohnert 2010). Therefore, an important determinant in differentiating cross-linguistic differences from language disorder is to know that if the impairment is present then it will be present in both languages.

2.1 First and second language development

Language development is an acquisition process specific to human beings, which starts even before birth (Graven and Browne 2008). The processes of primary language (i.e. L1) acquisition and additional language (i.e. L2) acquisition, however, largely observe the same route and sequence (Ellis 2008, Mitchell and Myles 1998) whether one takes a behaviorist view (Ramscar and Yarlett 2007), a nativist view (e.g. Hawkins 2001a, b), a connectionist view (e.g. Sokolik and Smith 1992, Ellis and Schmidt 1997), an empiricist view (e.g. Plunkett and Wood 2004, Slater and Oates 2005), or an interactionist (e.g. Gass 1997, Long 1996) and a sociocultural view (e.g. Lantolf 2000, Vygotsky 1986). Learners complete their first language development within the so-called "critical period", a period (starts from the

age of two and ends around puberty) after which complete and native-like language acquisition is said to be impossible (see Krashen 1981, 1982). Such an optimal period of language learning is also “critical” to child second language learners. Therefore, understanding of L1 development is important before a detailed discussion of L2 development.

2.1.1 L1 development

In the long history of evolution, for human beings, one of the quintessential traits is the biological and psychological readiness for language development or acquisition. Undoubtedly, the ability for language acquisition is one subset of human beings’ abilities to learn concepts and to acquire knowledge.² For example, the three mechanisms of sentence generation, that is complementization, relativization, and coordination (Lightfoot 2010), not only shape the way of language production but also reflect how logic and relations of events are organized.

There are quite a few established theories that try to explain the mechanism of first language development. From the psychological perspective, behaviorists believe that language acquisition is an interaction of stimuli (input) and responses (output) (Ramscar and Yarlett 2007). Instructions, therefore, are considered as one key to successful language learning. Child-directed speech (CDS) (e.g. Tomasello 2003), in the view of an empiricist linguist, is also believed to be critical in the process of acquisition. Social-interactionism, from the social/interactive perspective, believes that language acquisition is basically a process of learning forms of meaningful moves of communication that mainly involves syntax and function (Moerk 1994). Therefore, they put the focus on feedback and reinforcement in the process of language acquisition. It is different from traditional (radical) behaviorism in that it views learners as active participants in the learning process through dynamic interaction with the learning environment rather than passive receivers of conditioning (Baum 2011, Moxley 2004). Researchers in the relational frame also agree that language is learned via a system of inherent reinforcement (e.g. Hayes, Barnes-Holmes, and Roche 2001). On the other hand, emergentists, taking the biological and cognitive perspective, propose that the interactions

² The question as to whether the linguistic ability is only a part of a more general cognitive competence as modern cognitive theories propose or it is indeed an independent ability, which is unique to human beings, that parallels other general cognitive abilities, is more of a metaphysical argument, and is not germane to the current discussion.

between the environment, the biological pressures, and cognitive processes result in language acquisition. And one specific result is the acquisition of grammar (MacWhinney 1999). Furthermore, the universal-typological theory³ considers universal language principles (as contrary to individual rules that are typologically different between individual languages) as the key to language acquisition, under which interlanguage development is constrained or inhibited (VanPatten and Benati 2010, 161).

Nativism, on the other hand, attributes language acquisition to a set of Language Acquisition Devices (LAD), which human beings are naturally born with. It is believed that the LAD helps to build implicit and abstract syntactic and semantic rules of a particular language based on the very limited and sometimes ill-formed inputs (Chomsky 1959, 1971, 1975, Baker 2002, Pinker 1995, 1994, 2007). In fact, the input is a critical aspect of the process of language acquisition. In the monitor model (see for example Krashen 1982, 1981, 1985, 1989)⁴, comprehensible input, rather than output, is proposed to be most beneficial for the language learners. As the “*i+1*” hypothesis claims, the input that equals to the existing knowledge of the learner (i.e. *i*; that is the interlanguage of a second language learner) plus a bit of new knowledge (i.e. *I*) is most helpful for learners to move onto the next stage of acquisition.

The “poverty of stimulus” argument (e.g. Chomsky 1988, Clark and Lappin 2010, Laurence and Margolis 2001) points to the fact that children’s exposure to the limited inputs is not sufficient for the successful acquisition of the syntax in a language unless there are some innate linguistic capacities that facilitate the whole process. According to Montrul (2008, 269), input in language development consists of both physical and cognitive elements. While external factors such as the speech sound or the writing are physical inputs, it is our minds that perceive and organize the physical inputs and internalize and categorize them as cognitive elements at the levels of lexicon, syntax, semantics, pragmatics, etc. The data are then computed at these different levels to form rules. That is the raw data of language are analyzed to form a grammar that learners later use to operate and execute linguistic

³ It should be noted that Universal Grammar is a mental construct, while Universal Typology refers to the actual data ready for verification. As related as the two are, they should by no means be compared on the same basis.

⁴ Although Krashen originally proposed the monitor model for L2 acquisition, it can also be applied to the L1 process. The most striking properties of L1 acquisition, different from that of the L2, are the universality of the phenomenon, its uniformity, and its extraordinary rate of achievement.

operations at the multi-levels of morphology, syntax, semantics, etc., as well as the interfaces between them (see for example Murphy 2015 for the development of linguistic computation).

Age is also considered to be critical in first language acquisition. For example, children between the age of three and five start development of grammatical morphemes and clausal structures, while it is from the age of six up to 10 that children begin to refine the complex structures in the L1 (Brown 1973). Such developmental stages of language are universal, regardless of the child learner's socio-cultural, or language backgrounds (Radford et al. 2009). Neuro-linguistically, however, there is evidence that L1 acquisition and L2 acquisition are represented differently in the cortex, that is the neuro-physical processes in L1 acquisition do not parallel those in SLA (see Sakai 2005).

2.1.2 L2 development

Broadly speaking, the “second language” in L2 acquisition may refer to any additional language other than the speaker's first language. It can be a second, third, or any subsequent languages (Gass and Selinker 2008, 7). Generally, L2 acquisition develops and progresses through five stages (see Haynes 2007, 29-35), which are roughly comparable to those of the first language acquisition (also see Ellis 2008, 73-75), that is the preproduction stage, the early production stage, the speech emergence stage, the intermediate fluency stage (during which complicated structures are used) and the advanced fluency stage (during which even more complicated structures are used).

Although there are many comparable aspects between L1 and L2 development, by nature, the L2 development has a few aspects unparalleled with that of L1. For example, while SLA also relies on the mechanism of input (Cook 2016, 215), whether the input in the L2 acquisition is as important as that in the L1 acquisition remains questionable. Swain (1991), for example, proposes that input alone is far from being sufficient in L2 development. However, in the L2 learning process, the second language is not acquired in a vacuum, in which the learner's first language is absent. Rather, there are consistent interactions between the two (Lightbown and Spada 2006, 93-96).

One noticeable issue in L2 development, therefore, is that L2 learners enter the additional language with knowledge of at least one language. Although every second language learner will bring their L1 knowledge in

the process of L2 acquisition (i.e. there is L1 transfer in L2), the extent to which they are influenced by the L1 varies, which leads to differential outcomes of acquisition and divergent performance among the learners (Montrul 2008, 5). Unlike the outcome of L1 acquisition, that of the L2 acquisition often appears to be incomplete, and this is due to the L1 negative transfer (i.e. non-target-like influences by L1). When the L1 negative transfer persists and the corresponding target-language like performance is not ultimately achieved, fossilization happens and the L2 performance (the phonetics, morphology, syntax, etc.) is more comparable to the learner's home, rather than the target, language (Montrul 2008, 19).

It is a fact that any typically developing child will completely acquire the core rules of their L1 (phonology, morphology, syntax, semantics, etc.) before six years of age by simply being exposed to natural inputs (which are, by the way, filled with “mistakes”), disregarding their gender, personality, ethnicity, parental educational backgrounds, etc. In fact, L1 learners do not even need overt motivation to learn a language. Bearing such a fact in mind, one of the biggest questions about L2 development is why some learners turn out to be more successful than others even when they share the same L1 background and comparable demographic background, and academic competence? The age of the first contact of L2 has always been considered as a factor (Singleton and Lengyel 1995). It seems that child learners will more likely attain native-like competence than adolescent or adult learners in L2 (Birdsong 1999). Such a general pattern has indeed raised debates as per whether adults and children access the second language in the same way.

Another distinct feature in L2 development is that L2 users are often found to have superior cognitive abilities and better metalinguistic awareness than L1 monolingual users. Singh et al. (2015), for example, find, at a very early age (6 months), infants exposed to both L1 and L2 demonstrate more efficiency in stimulus encoding and improved recognition memory for familiar stimuli than those exposed to only L1. Metalinguistic awareness is defined “as the ability to step back...so to speak, from the comprehension or production of language to analyze its form” (Romaine 1999, 272). Metalinguistically, L2 learners show a greater advantage of recall for concrete over abstract words (Paivio, Clark, and Lambert 1988). They can select and integrate into a sentence the correct meanings of homographs by explicitly knowing why the meanings are “appropriate” (Hoversten and Traxler 2016). Cross-trial consistency is also found in terms of phonetics: L2 users are found to show better performance in evoking responses in neural encoding tests (Krizman et al. 2015). In Krizman et al.'s (2015) test, auditory brainstem responses were recorded to the synthesized syllables ‘ba’ and ‘ga’

in two groups age-matched children. The study found that increasing bilingual experience leads to more robust F_0 encoding and greater neural consistency, which supported that bilingualism enhances both cortical and subcortical auditory processing (also see Krizman et al. 2012, McNealy, Mazziotta, and Dapretto 2011). Bialystok (2007) suggested that adult speakers, with normal cognitive aging, would decline in their abilities of executive language processes (also see Bialystok et al. 2005, McDowd and Shaw 2000, Park 2000, Bialystok 2006, Bialystok and Martin 2004, Bialystok, Craik, and Ryan 2006). However, child speakers were suggested to have more enhanced attentional control in language than adult speakers, while child L2 users were found to be more competent and more efficient in executive processing than their monolingual counterparts. Furthermore, proficient L2 users have the ability to selectively access information associated with the contextually cued language and dynamically adapt to contextual cues, such as context biased monographs (Hoversten and Traxler 2016). The interdependence between L1 and L2 apparently facilitates the underlying proficiency in both languages a bilingual speaker uses (Cummings 2000). Therefore, a re-examination of whether a second language learner still has access to some innate linguistic mechanisms in the process of SLA (Thomas 1991), or not (Meisel 1997), may provide the key as to the cognitive advantages L2 users may have.

2.2 Bilingualism and bidialectism

2.2.1 Two languages vs. two dialects

People use more than one language as the means of daily communication in most communities in the world today (Cook 2002). This means bilingual people find themselves in most communities in the modern world. Bilingualism, therefore, refers to the speakers' knowledge of a second, or third, language, in addition to their L1. Such a command of the additional language(s), however, may not live up to the proficiency of the L1 (Montrul 2008, 17).

Grosjean (1989) defined a bilingual speaker as one who speaks two or more languages in everyday life. Such a usage-based definition refers to bilinguals as those who demonstrate implicit knowledge of grammar, while perfect explicit knowledge is not required. Although termed as "bilingual", people who speak two languages can be either simultaneous bilinguals or sequential bilinguals. Usually, children who have exposure to a naturalistic linguistic environment that includes more than one language up to the age of three years are defined as being simultaneous bilinguals. According to

Grech and McLeod (2012), simultaneous bilinguals can be further categorized into three sub-types, that is those who have exposure to two or more languages from birth, those who use two or more languages for basic everyday functioning, and those who show equal proficiency in two or more languages. In fact, bilingual children are either balanced simultaneous bilinguals or, in most cases, more proficient in one language and less proficient in the other. Sequential bilinguals, on the other hand, refer to those who start to learn a second language after the age of three when their first language has been comparably acquired (Genesee, Paradis, and Crago 2011). Immigrant children and children learning English as a second language at school compose the majority of sequential bilinguals (Montrul 2008, 30).

As bilingualism refers to the command of two different languages, bidialectism refers to the command of two different varieties within the same language. In fact, it is economic or socio-politic, rather than linguistic reasons that are taken into consideration as to whether a linguistic variety in a community is characterized as a dialect or a language (Contossopoulos 1994, Pavlou 1990, Sciriha 1995, 1996). This probably explains why while the German spoken in Berlin and Bonn are recognized as two dialects of the same language, Swiss German and High German are often compared as two languages. In this sense, although Chinese dialects may differ from each other in many linguistic aspects, such as phonology, syntax (especially word order) and lexicon, socio-politically as well as pedagogically, they form a relation of varieties under the same language of “Chinese”. Though one needs to be aware that Chinese dialects are more akin to what linguists would call distinct, but genetically related “languages”, this book, following Han, Arppe and Newman (2017), defer to the common tradition of referring to the Chinese varieties under investigation (such as Mandarin and Wu) as “dialects”. A person who speaks both Mandarin and Wu is, therefore, recognized as a Chinese bidialectal speaker.⁵

L1 bidialectals are claimed to have more structural choices than L1 monodialectals to access the same structure in L2 (Giancaspro, Halloran, and Iverson 2015). For example, Hermas (2014) finds the relative complementizer phrase structures in the multiple L1 dialects can be used as structural references by an L1 bidialectal to approach the same structure in L2, while L1 monodialectals were not found to be able to do the same in L2.

⁵ Such a terminological consideration is not intended for theoretical argument and it does not affect the design of the current study or its results.

The influence of L1 bidialectism on L2 syntactic-semantic acquisition, however, is an area that has not received adequate attention yet.

2.2.2 L1 bidialectism and L2 acquisition

As studies are showing that bilingual speakers, compared to monolingual ones, have better language awareness and are less subject to cross-linguistic syntactic interference when there are high comprehension demands (see for example Leung 2005, Filippi et al. 2012), similar advantages are also found for bidialectals as opposed to their monodialectal counterparts. Kouridou (2009), for example, found that, overall, bidialectal speakers outperform monodialectal learners in tests of lexicon, morphology, and syntax in the target language. Multiple advantages, therefore, could be expected, if bilingualism and L1 bidialectism are combined. That is to say, L1 bidialectals may have advantages over L1 monodialectals in L2 learning. Therefore, research of L2 acquisition under first language bidialectism has been recommended (e.g. Kouridou 2007, Sittisakpaiboon 2008).

Learning in general, just as Ringbom (2007, 1) has pointed out, “is based on prior knowledge. When you learn something new, such as a foreign language, you try to connect the new elements to whatever linguistic and other knowledge you may have”. Previous knowledge, therefore, is of paramount importance in L2 acquisition. A well-accepted view of the role of the existing L1 knowledge in the process of L2 learning is that the former constitutes the initial state of the latter (see Schwartz and Sprouse 1996). The L1 knowledge, however, does not comprise the entirety of the L2 initial state. Under the Universal Grammar (UG) framework, UG, i.e. the genetic component of the language faculty consisting of a set of structural rules innate to human beings and independent of sensory experience (Chomsky 2007), is what L2 learners have to first access the target language. Although there remain arguments as to whether L2 acquisition also involves cognitive acquisition devices, such as the UG, as the L1 acquisition does (see Schlyter 1993, Schlyter and Håkansson 1994), related research indicates that L1 bidialectals may be at a greater advantage than the monodialectals, to access the L2. For example, Kouridou (2009) found that bidialectal children who were able to use both Standard Greek and Cypriot Greek in Cyprus outperformed in all tests (vocabulary, grammar, phonology, etc.) in English as the second language than the age-matched monodialectals who only spoke Standard Greek. Therefore, the speakers’ existing L1 knowledge of syntax and semantics is particularly important since they are relied on to deduct the syntactic and semantic rules of the target language based on limited inputs. One implication from the related studies is that the more

diversified previous linguistic knowledge is, the better the tasks are performed in the target language (cf. De Angelis 2008).

A learner has syntactic awareness if they show explicit knowledge and control of the syntactic rules in the language (Gombert 1992, 39). Past studies of syntactic awareness of standard languages such as English (Sutter and Johnson 1990), Spanish (Mayo, Ibarrola, and Licerias 2005, Mayo and Olaizola 2010), Italian (Rossi and Pontecorvo 1989), Dutch (Cornips and Hulk 2006), Portuguese (Flores 1995), Swedish (Ostern 1991), Konkani (Dash and Mishra 1992), etc., have confirmed that, overall, metalinguistic awareness is a key factor for L1 bidialectals to successfully acquire the L2.

Due to the two varieties that co-exist in the first language, as well as their active metalinguistic awareness, L1 bidialectals may show advantages in transferring the existing syntactic and semantic knowledge to the acquisition of the same knowledge in the target language (also see Kouridou 2009). Therefore, exploration of the syntactic-semantic features in a language that is less studied, such as Chinese with multiple dialects, is helpful for the understanding of child language learners' meta-syntactic and meta-semantic development. Although little research has been published on the aspects of L2 syntactic-semantic awareness of L1 bidialectal learners, studies are claiming that bidialectal speakers may improve their syntactic awareness in L2 more than those speaking only the standard variety (e.g. Tsang and Stokes 2001). It is also suggested (e.g. Papapavlou and Kouridou 2007) that bidialectals are more syntactically and semantically sensitive than monodialectals. Such extra sensitivities may be of great help for L1 bidialectals to access the syntax and semantics in L2.

2.3 Language assessment of bilingual children

2.3.1 Assessment of typically developing bilingual children

The first question to ask is with what standard should bilingual children be assessed? An earlier study by Thordardottir and her colleagues (Thordardottir et al. 2006) found when assessed by monolingual measures, French-English bilinguals (age, 2;5) generally scored lower than the monolingual expectations on vocabulary and syntax. The researchers found that the French-English bilinguals scored lower in both languages by the monolingual measures, while the performance was consistently poorer in English than in French. Oller et al. (2007) then pointed to a “lag-behind” phenomenon for bilingual children in vocabulary performance when tested by monolingual measures. Patterson and Pearson (2004) also found “difficulties” in their Spanish-

English bilingual toddler participants' lexical development. Due to the fact that there has not been enough research that directly compares TD bilingual children and TD monolinguals as to their performance on linguistic tasks (see Paradis 2010a), it is not conclusive that bilingual speakers actually “lag” in the performance of conceptual vocabulary. The fact is although bilinguals scored lower in early stages, they can later catch up quickly even in monolingual tests (Paradis 2010a).

Paradis (2005) compared, based on their chronological age, bilingual children's ESL tense-morpheme performance using the TEGI (Test of Early Grammatical Impairment; see Rice and Wexler 2001) criterion. The grammatical probes from TEGI in tense morphemes included separate probes for auxiliary (BE and DO), regular past tense (PASTREG), and irregular past tense (PASTIRREG), and third-person singular (TPS). The elicited grammar composite scores yielded from TEGI represented an overall percentage correct score as an average calculation from the individual probe scores. The probe scores were raw scores and could be used independently from norm-referenced interpretations. The results showed that only three out of the 24 participants (12.5%) in the study performed within the criterion, while the rest (over 87%) yielded a score comparable to monolinguals with language impairment. The results indicated that there were overlapping linguistic characteristics between bilinguals' L2 performance and that of monolinguals with DLD. Therefore, using only monolingual tasks may lead to misidentification of bilinguals' L2 performance as language impairment.

There is evidence that bilingual children whose linguistic knowledge is still developing are not appropriately comparable with monolingual children using the same monolingual norms. For example, in a longitudinal study, Paradis (2010a) found that most TD sequential bilingual children's overall English performance at the age of 7;6 is similar to TD monolingual children at three years of age or those monolinguals with DLD at 5;6. Similarly, Muñoz et al. (1999) found a set of code switches typified as disorders by bilingual speakers with and without aphasia. Although most studies point to differences between rates of language development, some studies (e.g. Marinis and Chondrogianni 2011) argue that the development stages in bilingual children resemble those in monolinguals. The above “discouraging” results, however, clearly show that bilingual children's L2 development is not comparable to that of monolingual children (even those with DLD) at a young age if assessed by monolingual criteria.

2.3.2 Bilingual language disorder

A child can be diagnosed as having language impairment⁶ if their language does not develop “normally” (see Bishop and Norbury 2008), although there might be no apparent reasons for such a “non-normal” development. Language impairment is a term reserved for school children who have those common language difficulties such as misuse and/or misunderstanding of complex sentences (Thal and Katich 1996). It is estimated that approximately 7% of the general population, including both monolingual and bilingual speakers, is affected by language impairment, or language disorder, a disorder that can be neurodevelopmental (Leonard 2014, Rice 2004, Meir, Walters, and Armon-Lotem 2016). Therefore, for children with language disorders, their neurocognitive and linguistic development could experience severe disruption and thus could be very difficult (Rice 2004). Although the hearing and intellectual abilities of children with DLD may fall within normal limits, and they usually exhibit no acquired neurological damage, or motor problems in producing speech (Leonard 2014, Rice 2004), their general language abilities are not comparable to age expectations.

Children with language impairment exhibit an overall linguistic competence, such as lexical and discourse-pragmatic abilities, below that of age-matched typically developing children. Tomblin et al. (1996), in particular, proposed that grammar is one of the most important language domains and modalities to look into in the studies of language impairment. This is true since when it comes to morphosyntax, children with language disorder are found to perform morphosyntactic tasks more poorly than younger TD children (see Paradis 2010a), which suggests that morphosyntax is the linguistic domain most difficult to master for children with language impairment (also see Leonard 2014, Rice 2004, see Kohnert and Ebert 2010, Kohnert and Medina 2009 for further discussion).

The linguistic parallels found between TD sequential bilingual children and children with impairment, however, poses a major challenge for the studies of bilingual DLD (Crago and Paradis 2003). For example,

⁶ It may be generally accepted that language impairment is mainly a genetic disorder (see Bishop 2006). However, terms such as “developmental dysphasia” or “developmental aphasia” can be misleading since language impairment is not always caused by brain damage (Ingram and Reid 1956). Other terms, such as SLCN (Speech, Language and Communication Needs) in the UK system, cover a wider range of causes in speech and language difficulties and thus less discriminating. However, it is not the purpose of the current study to argue about terminologies.

Armon-Lotem (2014) compared TD English-Hebrew (4;6) and Russian-Hebrew (6;0) bilingual speakers with impaired Hebrew monolinguals (7;9) and claimed that bilingual children have similar morphosyntactic competence as impaired monolinguals. Watkins and Rice's (1991) study of the use of prepositions among TD English-Hebrew bilingual children, and their age-matched monolingual and bilingual peers with language impairment (4;5-5;7) also supports such a claim. Other studies (for example Dromi et al. 1999, Paradis 2007, Paradis, Crago, and Genesee 2005, Paradis et al. 2003) suggest, however, bilingual children do not always lag behind monolinguals, even when both groups are identified with language disorder. In fact, bilinguals may even do better in some respects, such as their awareness at the morpho-syntax interface, compared to their monolingual counterparts.

2.3.3 Assessment of bilingual children with language disorder

Assessment and diagnosis of bilingual children with language impairment have always been challenging. One of the most recognized problems is that bilingual children are overrepresented in special education and speech-language pathology services (see for example Cummings 2000, Donovan and Cross 2002, Klingner and Artiles 2003, Chiat 2010). Due to the overlap in linguistic characteristics and comparable features in language performance between TD bilingual children and monolingual children with DLD, and between bilingual children with and without DLD, the over-identification of typically developing bilinguals with DLD could happen (Paradis 2010a).

However, there are more and more comparative studies between TD bilingual children and monolingual children with DLD, and those between bilingual and monolingual children with DLD, suggesting that monolingual standards could be misleading and are, therefore, not ideal for the measurement of bilinguals. Indeed, it is the most complicated and challenging for an unbiased and accurate diagnosis of bilinguals with DLD.

For bilinguals (with or without DLD), it is suggested that they will draw on the structures in one language to acquire the related ones in the other (Döpke 2000, Hulk and Müller 2000). Such structural parallels can easily lead to the overuse (or misuse) of certain structures in the target language. For example, while English-Spanish child learners tend to overuse pronominal subjects in Spanish due to the obligatory subject in English (Silva-Corvalán et al. 2009), Spanish-English young learners appear to be over-sensitive to the BE verb in English because of the copular dichotomy, i.e. *ser* vs. *estar*, in Spanish (Fernández Fuertes and Kiceras 2008). Also, the similar performance between TD bilinguals and monolinguals

with DLD in the domain of morphosyntax (Chiat 2010), especially tense and inflection, has also made the accurate identification of children with DLD “definitively problematic” (Gathercole 2010). In theory, bilingual children can be diagnosed as experiencing language impairment or disorder only if they are impaired in both languages (Armon-Lotem 2010).

Bilingual children are more vulnerable when assessed with monolingual standards, since bilinguals, diagnosed against trends learned from monolingual data alone, tend to have poorer language skills than expected for monolinguals (Hope et al. 2015). It might be true that if there is impairment in lexical access, a language with more use of inflectional morphemes will also be impaired, or a language in which sentences are more organized through word order will be impaired if a deficit at the syntactic level occurs (Lorenzen and Murray 2008). However, problems in lexical access or syntax in the second language do not necessarily suggest impairment in morphological inflections or word orders in the first language. In fact, actual linguistic performance varies from person to person, and that is why abilities in each language for bilinguals should not be assumed as equivalent. In other words, being bilingual does not imply equal proficiency or accuracy in all modules of both languages (Muñoz and Marquardt 2003). As Ortega (2011, 4) has pointed out, the divergence among L2 learners should not be read as evidence of “failed” attainment.

Support for bilingual children in the process of assessment or diagnosis, as suggested, should differ from those given to monolinguals (Håkansson 2010). This is particularly true considering the fact that four out of five bilingual children are assessed in their L2 (the dominant language(s) of the communities they live in) with monolingual tests and standards (Jordaan 2008). As the coexistence of multiple languages in a community is the reality, monolingual assessment should no longer be implemented with the bilingual/multilingual population (Thordardottir et al. 2015).

2.4 Summary

Some key issues and ideas of language development and assessment are introduced in this chapter. Both first and second language development are reviewed. It is found that although L1 and L2 can be typologically very different from each other, the process of L2 development is comparable to that of the L1. However, bilingual users are believed to show both cognitive advantages and better linguistic awareness over their monolingual counterparts. The terms of bilingualism and bidialectism are then discussed. As L2 may refer to any additional language(s) acquired after the L1, bilingualism refers