11 Assessing Language Dominance with the Bilingual Language Profile

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Introduction

The construct of dominance in the bilingual context covers many dimensions of language use and experience. Proficiency, fluency, ease of processing, 'thinking in a language', cultural identification, frequency of use and so forth are among the notions associated with this construct. Dominance is properly understood in relativistic, not absolute, terms. That is, a person is not simply dominant in a given language, but is dominant in that language to a certain measurable degree. And this person can be more dominant or less dominant in that language than some other person.

Language dominance is a variable of interest in a number of domains, including academic research, education, public policy, commerce and clinical settings. Among its influences on language behavior, cognition and emotion, dominance may predict cross-linguistic transfer in syntactic processing (Rah, 2010), influence code-switching patterns (Basnight-Brown & Altarriba, 2007), govern bilingual lexical memory representation (Heredia, 1997), affect language choice for self-directed and silent speech (Dewaele, 2004), determine the language of mental calculations (Tamamaki, 1993) and shape perceptions of the usefulness, richness and colorfulness of a bilingual's two languages (Dewaele, 2004). Educators and administrators use the construct of language dominance to determine the language in which tests of academic and linguistic ability should be carried out and as a classification tool for bilingual education planning (e.g. Brunner, 2010). In commerce, data on the language dominance of consumers informs decisions about the language of packaging and nutrition labels (B. Watson, Nestlé USA, personal communication, 11 May 2012). Language dominance also plays a notable role in clinical research: Alzheimer's disease has been found to differentially affect dominant and non-dominant languages (Gollan *et al.*, 2010), for instance, and the severity of a person's stuttering may be influenced by language dominance (Howell *et al.*, 2004; Lim *et al.*, 2008a). Moreover, dominance is a key issue when deciding in which language to deliver the most effective language therapy treatment (Lim *et al.*, 2008b).

Given the importance of dominance in these various arenas, its proper measurement takes on special significance. Dominance is primarily assessed via self-evaluations or objective tests within research on bilingualism and language acquisition. Self-evaluation, in various forms, is perhaps the most common method (e.g. Cutler *et al.*, 1992; Dussias, 2003; Golato, 2002b; Li *et al.*, 2006; Lim *et al.*, 2008b; Mägiste, 1979; Rah, 2010; Tokowicz *et al.*, 2004). In conventional self-assessment approaches, such as that used by Tokowicz *et al.* (2004), bilingual dominance corresponds to relative self-reported proficiency for the two languages. Tokowicz and colleagues classified participants as dominant in either Spanish or English based on self-reported abilities in reading, writing, comprehension and speaking. Cutler *et al.* (1992) used a different method, asking English–French bilinguals a simple question: If you had to lose one of your languages to save your life, which language would you choose? The language kept was taken to be dominant. In yet another approach, Rah (2010) asked trilingual participants to give self-ratings of language dominance directly.

Objective measures of dominance offer an alternative to self-evaluations that minimize the influence of subjective reflection. For example, Flege *et al.* (2002) implemented a sentence repetition task to determine the language dominance of Italian–English bilinguals. A similar processing task was used by Golato (2002a), along with a number of other psycholinguistic measures, including recall of words in sentences presented in noise, read-aloud speed with distracter noise, and grammaticality judgments (see Bairstow *et al.*, this volume, for a psycholinguistic study on bilingual memory using an innovative translation recognition task). In a more recent study, Treffers-Daller (2011) allocated Dutch–French and French–English bilinguals to dominance groups according to lexical diversity scores from elicited speech samples.

Why a chapter about dominance in a volume concerned with proficiency? For one thing, dominance and proficiency, although conceptually overlapping in some respects, need to be distinguished (Birdsong, 2006). Although dominance is often associated with language proficiency (e.g. Tokowicz *et al.*, 2004), proficiency does not alone define language dominance: One can be dominant in a language without being highly proficient in that language. This said, as one component of dominance, proficiency is duly examined here. Second, dominance and proficiency have assessment issues in common. A reinvigorated discussion about both proficiency and

dominance assessment in the study of bilingualism is now taking place in prominent journals and international conferences (e.g. Dunn & Fox Tree, 2009; Gollan *et al.*, 2012; Hulstijn, 2012; Marian *et al.*, 2007; Tremblay, 2011; see special issue of *International Journal of Bilingualism* (2011) 15; *L2 Proficiency Assessment Workshop*, Montpellier, France, February 2012). Researchers are calling for standards and guidelines that would increase comparability and replicability in bilingual research, enhance interpretation of results, and ultimately help to clarify effects of bilingualism on social interaction, academic success, cognition and other human activity (Bedore *et al.*, 2012; Birdsong, 2006; Dunn & Fox Tree, 2009; Gollan *et al.*, 2012; Grosjean, 1998; Lim *et al.*, 2008b; Tremblay, 2011).

As with proficiency assessment, there is considerable diversity in the selection of variables pertinent to measuring language dominance and the weighting of these variables (Hulstijn, 2012; Lim *et al.*, 2008b). Underlying the various forms of dominance assessment is little consensus about what it means to be dominant, which can be attributed to the theoretical orientations of the creators and administrators of these assessments, the context of assessment and to matters of practicality and feasibility. We hope to shed some light on the construct of dominance and its testing through an understanding of language dominance as a multi-faceted, gradient and dynamic construct that includes but is not equivalent to language proficiency. Our conception of dominance aims to be broad enough to be useful for a variety of purposes and at the same time precise enough to give clarity to the construct.

In this chapter, we present the Bilingual Language Profile (BLP), a tool for measuring language dominance through self-reports and a questionnaire that delivers a general bilingual profile taking into account a variety of language-related variables. Our aim with the BLP project is to describe the notion of language dominance and to address some of the drawbacks of existing dominance assessment methods. The BLP is not intended to replace all previous forms of dominance assessment, but rather to offer a reliable, valid and highly practical instrument that can be used to describe bilingual participants within and outside academic research. We envision use of the BLP by researchers, educators and administrators wishing to quickly and easily gather information about the functional language abilities of bilingual populations. In the discussion to follow, we will address the construct of dominance, existing dominance assessment tools and the creation of the BLP instrument. Finally, we offer some concluding remarks on the BLP and dominance assessment in general.

Conceptualizing Dominance

The primary and most crucial step of language testing is to specify the construct under investigation (Alderson & Banerjee, 2002). A construct is

simply what we are trying to measure – here, language dominance. However, as we have highlighted in the preceding section, this task is not uncomplicated given the many dimensions and dynamics of bilingualism.

The construct of dominance versus proficiency

The constructs of language dominance and proficiency are easily conflated and often correlated (Birdsong, 2006). As mentioned above, measures of relative proficiency in reading, writing, speaking and listening are often used to determine language dominance. In these cases, the construct of proficiency relates to 'the largely implicit, unconscious knowledge in the domains of phonetics, prosody, phonology, morphology and syntax' and 'the largely explicit, conscious knowledge in the lexical domain (form-meaning mappings)' (Hulstijn, 2010: 186).[1] We would like to establish, however, that dominance is conceptually distinct from proficiency. Dominance is a construct that derives from the nature of bilingualism – of having two languages in one's mind (Grosjean, 1998). It involves the relationship between competencies in two languages and is thus inherently relativistic. Proficiency, on the other hand, does not require a bilingual context for its definition. Indeed, the language proficiency of monolinguals is often assessed, and a range of proficiency scores is observed (e.g. Dabrowska, 2012; Pakulak & Neville, 2010).

Consider also that two equally balanced bilinguals may yet differ in their proficiency, with one individual showing high proficiency in both languages, and the other showing lower proficiency in both languages (Treffers-Daller, 2011). Balanced bilingualism does not entail high proficiency, only a state of equilibrium (Hamers & Blanc, 2000). Dominance may also shift within a bilingual's lifetime, independent of proficiency: 'For immigrants with many years of immersion in their second language, the second language can come to be the most dominant language, even if it remains the less proficient language, as measured by tests of grammar and vocabulary.' (Harris *et al.*, 2006: 264).

Components of dominance

In our view, proficiency (where proficiency concerns the types of knowledge described in Hulstijn's, 2010, definition) is an essential component of dominance but does not alone define it. For those researchers who distinguish proficiency and dominance, whether explicitly or not, dominance is commonly described in psycholinguistic terms. For instance, from a psycholinguistic perspective, Birdsong (2006) observed that relative dominance can be conceptualized in terms of differences in processing abilities between the two languages of a bilingual. For Harris *et al.* (2006: 264), 'language dominance refers to which language is generally most accessible in day-to-day life. It is the language that is most highly activated, and can be the default language for speaking and thinking.' Heredia (1997) likewise describes the

dominant language as the 'active' language, determined by frequency of use. Dewaele (2004) also relies on psycholinguistic concepts (e.g. automaticity) for his description of a change from first to second language dominance, which he describes as characterized by slower access to the first language (regardless of proficiency). Other studies, such as that by Bahrick *et al.* (2004), have shown that differences in processing alone cannot account for differences in dominance. In their study of dominance, Bahrick and colleagues examined four measures – lexical decision, category generation, vocabulary and oral comprehension – and found that tasks that address processing and those that address competence or representation convey different information about language dominance. Processing and competence are thus two distinct and important aspects of dominance.

In addition to psycholinguistic and proficiency-related components, dominance is shaped by language attitudes. Factors such as cultural identification (Marian & Kaushanskaya, 2004) and motivation (Piller, 2002) play a role in forming language attitudes, which in turn influence language dominance. We argue, like Pavlenko (2004), that language dominance is not independent of psychosocial factors: 'Rather, [it is a corollary] of complex linguistic trajectories of individuals who make choices about what language to use, when and with whom' (Pavlenko, 2004: 189). We thus view dominance as a global construct that is informed by many factors relating to knowledge, processing and effect.

For the BLP project, we set about distinguishing several primary dimensions of dominance based on these three components, with a goal to providing a dominance assessment instrument useful for both academic research and non-research settings. In keeping with our goal, we balanced comprehensiveness with economy to establish four dimensions of language dominance that both reflected the main components of dominance and were suitable for self-assessment: language history, use, proficiency and attitudes.

We also acknowledge that bilinguals are not necessarily dominant in one language across the board, and it is often the case that a bilingual will show dominance in one language only for certain topics or within certain speech settings (e.g. Grosjean, 2001; Lim *et al.*, 2008b). We addressed this issue by including items in the questionnaire that contribute information about language practices in multiple settings, including home, work/school and social settings. By taking into account various contexts of language experience in both languages, we feel that the BLP, while still providing an overall (context-independent) dominance assessment, is a fair representation of dominance that meets our criteria of efficiency and practicality.

Dominance as a continuum

Another important aspect of language dominance, as we conceive it, is gradation. Gradient dominance highlights the fact that, although it may be

useful in some instances to classify bilinguals as dominant in one or the other language, dominance is not necessarily dichotomous (Grosjean, 2001). Indeed, discrete classifications of language dominance can obscure rich data about variation within groups, a point that Grosjean (1998) underscores in his discussion of the complexity of the bilingual individual. A bilingual may be more or less dominant in one language relative to the other, and the relative strength of the two languages can change over a lifetime (e.g. Harris *et al.*, 2006). We thus draw a principled distinction between binary and continuous conceptions of dominance. Development of the BLP was in part motivated by the observation that practical ways of measuring dominance along a continuum are scarce.

Dominance Assessment Tools

Why self-reports?

A thorough review of self-report methodology is beyond the scope of this chapter, but it is worth noting that there are several benefits to using self-evaluations for bilingual dominance assessment. First, there is ample evidence that bilinguals are able to assess their language experience and language abilities in a way that corresponds with behavioral measures of linguistic performance (Bairstow *et al.*, this volume; Flege *et al.*, 2002; Golato, 2002a; Gollan *et al.*, 2012; Langdon *et al.*, 2005; Lim *et al.*, 2008b; Marian *et al.*, 2007). As opposed to objective tests of language ability, they succeed in accounting for certain non-linguistic factors, such as language attitudes, which are crucial aspects of dominance (e.g. Pavlenko, 2004). Self-reports are efficient in that they take less time to complete than linguistically based tasks, they are easier to interpret, and they do not require complex scoring or statistical calculations. Nor is specialized training required to administer them. Additionally, self-report questionnaires can be completed by testees offsite before arriving at an experimental session, saving researchers valuable time.

Existing bilingual self-report surveys

Although a number of *ad hoc* techniques have been used to measure bilingual language dominance, there exist several reliable, valid and widely accessible self-report instruments. The Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian *et al.*, 2007), the Bilingual Dominance Scale (BDS) (Dunn & Fox Tree, 2009) and Lim *et al.*'s (2008b) Self-Report Classification Tool (SRCT) are recently developed instruments that provided the foundation upon which the BLP was built. The LEAP-Q, BDS and SRCT are self-report questionnaires that probe aspects of language experience, proficiency and, in the case of the LEAP-Q, attitudes. While the BDS

and SRCT are expressly aimed at determining language dominance, the LEAP-Q provides descriptive information for each language.

The LEAP-Q instrument is excellent for eliciting descriptive data because it is comprehensive and amenable to multilingual populations, but it is not a dominance assessment per se. The LEAP-Q provides independent data for each of a multilingual's languages rather than a composite score relating strengths in one language with the other language. A shortcoming of the LEAP-Q's comprehensiveness is that it contains many items, some of which are lengthy and complex. One question in particular stands out as quite difficult to process: 'When choosing to read a text available in all your languages, in what percentage of cases would you choose to read it in each of your languages? Assume that the original was written in another language, which is unknown to you.' (LEAP-Q; Marian *et al.*, 2007).

The BDS stands at the opposite end of the spectrum with its brevity and conciseness. The BDS elicits self-reports for a number of factors known to influence language dominance in just 12 questions. It has the advantage of being quick to administer, containing short and comprehensible questions, and being adaptable to illiterate populations. The BDS's scoring method can be used to obtain a dominance score along a continuum by subtracting one language score from the other.

One drawback to the BDS involves the free response format for responding to questions. When using the questionnaire for another research project, we found a considerable amount of variability in responses to questions such as 'Do you feel that you have lost any fluency in a particular language', ranging from 'yes/no' to anecdotes about fluency loss that were difficult to quantify. Another drawback involves the BDS's scoring procedure. Different weights are assigned to each item in the questionnaire, although we do not see sufficient motivation for assigning higher point values and thus more influence to some factors over others. For example, five points are assigned, with little justification, to the language predominantly used at home, but only four points are given to the language of the region where the participant is currently living.

Finally, it seems that the BDS may work best as a dominance assessment tool for particular bilingual populations, such as simultaneous bilinguals (see Amengual & Blanco, 2011). When administered to late L2 learners, dominance calculations can actually become invalid. Late L2 learners tend to receive low total scores for their L2 based on the weights assigned to the questions in the BDS. If a respondent indicates that he has lost fluency in the L2 as well, points are subtracted from these low scores, and the resulting total score for the L2 becomes negative. When the negative number is subtracted from the higher total score for the first language, this actually results in an erroneously inflated dominance score.

The SRCT was developed by Lim *et al.* (2008b) to assess language dominance in multilingual Asian communities for clinical purposes. Importantly,

the authors wanted to avoid equating proficiency classifications with dominance and to highlight the roles that frequency and context of language use play in determining dominance. The SRCT is a brief pencil-and-paper survey that elicits rankings of a bilingual's two languages, as well as scalar proficiency assessments, and information about frequency and context of use. A scoring system based on rating differences in the two languages can be used to determine dominance in one language or another.

A drawback to the SRCT is its narrow focus on one community of bilinguals. Specifically, the authors created the questionnaire for English–Mandarin bilinguals living in Singapore, so one section of the survey probes school examination grades uniquely relevant to the education system in Singapore. It is unclear how the items on the SRCT would apply to other bilingual contexts. The authors note, however, that the format of the questionnaire and criteria for scoring dominance may be adaptable to other bilingual groups and contexts.

The scoring procedure for the SRCT is somewhat problematic. According to Lim *et al.* (2008b), a language is interpreted as dominant if differences between language scores (e.g. Mandarin scores subtracted from English scores) are similar in directionality on two out of three criteria, including (1) the difference in total rating score; (2) the difference in scores on combined understanding, speaking and reading modalities; and (3) the difference in scores on combined understanding, speaking and writing modalities. What remains uncertain is how total rating scores are derived and whether these total scores take into account items pertaining to age of first exposure and language use in addition to the proficiency scores that make up criteria (2) and (3). Aside from the details of the scoring procedure, a final drawback of the SRCT is that the product of scoring is discrete dominance groups rather than a continuous score of bilingual language dominance.

There are differences in the accessibility of the LEAP-Q, BDS and SRCT questionnaires. The BDS and SRCT are available as a pencil-and-paper questionnaire that must be scored by hand. Because the BDS contains simple questions, it can be administered in oral format as well, and the administrator can record testees' responses. The LEAP-Q is available in writable PDF and Word document form and retrievable online as a free download.

The BLP owes much to the LEAP-Q, BDS and SRCT in its design and theoretical orientation, but is intended to address what we view as shortcomings in the format and accessibility of these instruments. The BLP underwent several rounds of pilot testing in order to refine, shorten and clarify questionnaire items, with a view to making them relevant for diverse bilingual populations (Treffers-Daller, 2011). We chose to elicit only multiple-choice scalar responses to questionnaire items, which avoids ambiguity in responses and is in keeping with the notion of a scalar dominance score. Unlike Dunn and Fox Tree (2009), we decided not to differentially weight

the four components of the BLP. To weight, say, the scores on the proficiency module above those on the other modules would bias the global scores for dominance (and, effectively, our operationalization of dominance and users' interpretation of dominance) toward reflecting proficiency at the expense of the other components. This said, those users who wish to concentrate on proficiency assessment are able to do so – either independently of, or relative to, scores on the other components. (There are instructions on the BLP website for this purpose; Birdsong *et al.*, 2012).

We developed the BLP as both a pencil-and-paper questionnaire and an online questionnaire for maximum flexibility. It can be accessed freely in its online version as a template in Google Docs.[2] Within this template is an adjoining Excel spreadsheet that automatically tabulates scores for each respondent.

Depending on the context in which it is used and the needs of the administrator, any one of the aforementioned self-report questionnaires may be the best choice for dominance assessment. The comparison in Table 11.1 can serve as a reference guide when choosing which instrument to use.

The Bilingual Language Profile

Creation of the BLP

The BLP was developed in cooperation with the Center for Open Educational Resources and Language Learning (COERLL).[3] COERLL is one of 15 National Foreign Language Resource Centers funded by the US Department of Education. COERLL's mission is to produce resources to improve the teaching and learning of foreign languages and to disseminate these resources to a variety of settings. The BLP is one of many Open Educational Resources sponsored by COERLL.

Creation of the BLP took place over two and a half years and involved a series of steps in accordance with those outlined in Dörnyei's (2003: 66–69) *Questionnaires in Second Language Research*. First, we reviewed and discussed the construct of dominance and previous dominance assessments as part of an inter-disciplinary bilingual dominance reading group. Following this, the authors collaborated to prepare a pool of questionnaire items drawing on previous research in language dominance and on items previously used in the LEAP-Q, BDS and SRCT. The initial questions were trimmed and matched to one of four dimensions of dominance: history, use, proficiency and attitudes. The resulting question pool was piloted in English on bilingual colleagues. On the basis of participants' responses and feedback (Alderson & Banerjee, 2002; Brown, 1993), the BLP was revised for clarity and succinctness (e.g. rewording, elimination of redundant or irrelevant items). Questionnaires were then translated into other languages in consultation

Table 11.1 Comparison of the bilingual language profile, bilingual dominance scale, language experience and proficiency questionnaire, and self-report classification tool

Characteristics	BLP (Birdsong et al., 2012)	BDS (Dunn & Fox Tree, 2009)	LEAP-Q (Marian et al., 2007)	SRCT (Lim et al., 2008b)
Administration	Online and pencil-and-paper formats	Pencil-and-paper questionnaire; can be administered orally	Writeable PDF format and pencil-and-paper versions for some languages	Pencil-and-paper questionnaire
Languages	Arabic, ASL, Catalan, English, French, Spanish, Russian	English	12 languages	English
Completion time	Less than 10 min	Less than 5 min	15–25 min to complete (more for each language evaluated)	Less than 5 min
Self-report components	• 19 items • Multiple-choice responses • All scalar responses	• 12 items • Fill-in-the-blank responses • No scalar responses	• 31 items • Pull-down menu for responses • Some scalar responses	• 24 items • Fill-in-the-blank and multiple-choice responses • Some scalar responses • Rankings
Scoring system	Four equally weighted modules	Weighted point system for each item	No scoring procedure for each language	Point system based on language score differences for three criteria
Result	Continuous dominance score; descriptive profile for each module	Continuous dominance score	No dominance index; descriptive profile	Discrete dominance groups
Procedure	Self-scored	Scored by hand	No scoring procedure	Scored by hand
Website	http://sites.la.utexas.edu/bilingual/	No website	http://comm.soc.northwestern.edu/bilingualism-psycholinguistics/leapq/	No website

with native speakers. Next, we worked with COERLL to create the online version of the questionnaire in Google Docs. The resulting BLP was piloted with 16 bilinguals who were either simultaneous bilinguals or L2 learners (Spanish–English, Arabic–English, French–English). We once again revised the questionnaire for clarity, online use and appropriate scoring based on feedback and results.

We undertook testing and validation of the BLP based on questionnaires completed by 68 English–French bilinguals residing in the US and in France. We performed a factor analysis in order to determine whether the items in the BLP that were designed to reflect the distinct concepts of language history, use, proficiency and attitudes patterned together. Next we measured internal consistency within these modules with Cronbach's alpha reliability (e.g. Dewaele, 2004). Finally, we established criterion-based validity by comparing BLP scores with linguistic performance on a psycholinguistic naming task and a standardized test of proficiency. The details of these analyses are beyond the scope of this chapter but conclusions are briefly summarized in the following (for a full description see Amengual et al., in preparation).

The factor analysis yielded desirable component groupings that reflected the underlying dimensions of dominance that we identified initially. Based on the observation that the factor analysis groupings accounted for the majority of the variance in English–French bilinguals' self-reports, we concluded that our questionnaire items were sufficiently broad to capture variability within the English–French bilinguals sampled for this analysis. Cronbach's alpha – a test of reliability – for each module was found to be moderately to highly reliable, indicating that the items within each module measure the same variable while still contributing unique information.

We also compared BLP scores of self-rated proficiency with the *Oxford Placement Test* (OPT) of proficiency in French. A correlation analysis between self-assessed proficiency in French on the BLP and OPT scores for French revealed a strong positive correlation, suggesting accurate self-reporting on the BLP. Finally, we evaluated the extent to which a subset of the original 68 participants' dominance scores on the BLP related to performance on *A Quick Test of Cognitive Speed* (AQT; Wiig et al., 2002), a timed test that requires participants to identify 40 images on a page as quickly as possible. We found a moderate positive correlation between the two measures, indicating that dominance scores on the BLP reflect performance on an objective psycholinguistic dominance test. We attribute the moderate (as opposed to large) amount of variance on the AQT that was explained by the BLP to the fact that the two instruments assess different aspects of dominance. The former looks at dominance in terms of executive control in lexical retrieval, while the BLP provides a more comprehensive assessment of dominance that includes experiential and attitudinal factors.

Features of the BLP

Sample screen shots from the online version of the BLP appear in Appendix 11A. The BLP contains an introductory section for collecting biographical information about testees[4] and four modules designed to assess different dimensions of dominance. The instrument contains a total of 19 items, which elicit responses about each of a bilingual's languages (Figure 11.1). Bilingual testees may choose the language in which to complete the questionnaire.

The four modules of the BLP questionnaire treat different aspects of dominance. The Language History module gathers information about the age of acquisition of each language, the age at which the testee felt comfortable using each language, the number of years of schooling in each language, the time spent in a country or region in which each language is predominantly used, the time spent in a family where each language is used, and the time spent in a work environment where each language is used. Language Use questions probe the percentage of use in an average week for each language in various contexts: with friends, with family, and at school or work. This section also asks testees to relate how often they talk to themselves in each language and how often they use each language when counting. In the Language Proficiency portion of the questionnaire, testees are asked to rate how well they speak, listen, read and write in each language on a scale from 0 ('not well at all') to 6 ('very well') for each language. The final module investigates Language Attitudes, asking the degree to which testees feel like themselves when speaking each language, how much they identify with cultures that speak each language, the importance of using each language like a native speaker and the importance of being taken for a native speaker.

Using the BLP

The BLP is an open-source language profile instrument. We developed a website (Birdsong et al., 2012) that provides detailed information about the instrument (with tabs such as 'Using the BLP', 'About the Project' and 'Connect and Share') to facilitate accessing and administering the BLP, as well as to encourage contributions and feedback from the research community.

Step-by-step instructions and an explanatory video on how to use the online BLP questionnaire can be found at the BLP website (Birdsong et al., 2012). In brief, questionnaires in each language pair are available as templates in Google Docs that can be transferred to your personal Google Docs account. Introductory comments and biographical information questions can be adjusted to suit the needs of the administrator, and the questionnaire can then be emailed to participants. The administrator can view responses and automatically tabulated scores within the Google Docs form

Biographical information
• Name • Age • Sex • Place of residence • Highest level of formal education
Module 1: Language history
• At what age did you start learning ENGLISH? (SPANISH)[5] • At what age did you start to feel comfortable using ENGLISH? (SPANISH) • How many years of classes (grammar, history, math, etc.) have you had in ENGLISH (primary school through university)? (SPANISH) • How many years have you spent in a country/region where ENGLISH is spoken? (SPANISH) • How many years have you spent in a family where ENGLISH is spoken? (SPANISH) • How many years have you spent in a work environment where ENGLISH is spoken? (SPANISH)
Module 2: Language use
• In an average week, what percentage of the time do you use ENGLISH with friends? (SPANISH; OTHER LANGUAGES) • In an average week, what percentage of the time do you use ENGLISH with family? (SPANISH; OTHER LANGUAGES) • In an average week, what percentage of the time do you use ENGLISH at school/work? (SPANISH; OTHER LANGUAGES) • When you talk to yourself, how often do you talk to yourself in ENGLISH? (SPANISH; OTHER LANGUAGES) • When you count, how often do you count in ENGLISH (SPANISH; OTHER LANGUAGES)
Module 3: Language proficiency
• How well do you speak ENGLISH? (SPANISH) • How well do you understand ENGLISH? (SPANISH) • How well do you write ENGLISH? (SPANISH) • How well do you read ENGLISH? (SPANISH)
Module 4: Language attitudes
• I feel like myself when I speak ENGLISH. (SPANISH) • I identify with an ENGLISH-speaking culture. (SPANISH) • It is important to me to use (or eventually use) ENGLISH like a native speaker. (SPANISH) • I want others to think I am a native speaker of ENGLISH. (SPANISH)

Figure 11.1 Format of the Bilingual Language Profile (sample English–Spanish questionnaire)

in their personal account. This information is not available to respondents. Responses and scores can be downloaded as Excel files for further analysis. If using the pencil-and-paper version of the BLP, it will be necessary to score the questionnaire by hand. The manual scoring procedure can also be found on the website.

The BLP is designed to assess bilinguals from a variety of linguistic and cultural backgrounds. We define bilingual in the broadest sense, to include people who use two (or more) languages. The BLP can thus be used in such bilingual contexts as L2 acquisition, heritage learning, attrition, *in situ* or immigrant contexts, and sequential or simultaneous bilingualism. Because items on the BLP require a certain amount of introspection and literacy skills, the instrument should be administered to bilinguals who are at least of high-school age.

Concluding Remarks

The BLP project has both practical and theoretical objectives. We sought to create an easy-to-use instrument for dominance assessment that tapped as many aspects of dominance as possible without sacrificing efficiency. We also wanted to design an instrument suitable to a variety of bilingual settings for a variety of purposes. As Bachman and Eignor (1997) have pointed out, validation is an ongoing process. The BLP has been used recently in several projects involving sentence processing by English-French bilinguals in the US and France (Gertken, 2013) and phonetic transfer in the production and perception of Spanish-Catalan bilinguals in Majorca, Spain (Amengual, 2013). We hope that as more members of the community use the BLP, the more reliability and validity testing there will be to help understand the value of the BLP in diverse contexts (Li *et al.*, 2006).

Already, users have contributed to its development by submitting new translations. We welcome these updates and report them regularly to the BLP website (Birdsong *et al.*, 2012). Comments and suggestions concerning the BLP can be submitted through the website's 'Give us feedback' link.

We also sought to contribute to a discussion of what it means to be dominant in a language, which we see as an obstacle to establishing standards and guidelines concerning dominance assessment. In this respect we are building on Bedore *et al.* (2012), Dunn and Fox Tree (2009) and Gollan *et al.* (2012). In addition, we have offered a comprehensive and multi-factorial understanding of language dominance that is measurable by scores on the BLP along four crucial dimensions: language history, use, proficiency and attitudes.

We do not claim this instrument is superior to others or appropriate for all contexts of bilingual assessment. However, the BLP has in its favor free access, ease of use and adaptability, and has been validated against other

measures (see Amengual *et al.*, in preparation). We look forward to further development of the BLP questionnaire across a variety of languages, as well as to users' feedback, which will be crucial to the refinement of the instrument.

Notes

(1) Hulstijn (2010: 186) also includes a processing component in his definition of proficiency: 'the automaticity with which [various] types of knowledge can be processed'. We make a distinction between this psycholinguistic component and implicit and explicit knowledge in various linguistic domains.
(2) Google Docs, Google's online document-sharing service, is now a part of Google Drive, the company's cloud storage initiative with upgraded storage capacity. With an older Google Docs account or a newer Google Drive account, users may collaborate in real time on documents such as the BLP as well as share media including movies, images and music.
(3) See http://www.coerll.utexas.edu/coerll/
(4) The section of the BLP questionnaire collecting biographical information can be modified to suit administrators' needs.
(5) Questions are repeated for the items in parentheses.

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Appendix 11A

Sample screen shots from the online Bilingual Language Profile

Measuring L2 Proficiency

Perspectives from SLA

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