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Reaching out to the other side: Formal-linguistics-based SLA and Socio-SLA

Abstract: Generative linguistics has long been concerned with the linguistic competence of the "ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly" (Chomsky 1965: 3). Research in formal-linguistics-based second language acquisition takes as its starting point the second language (L2)[1] speaker's underlying mental representation. Here the factors of interest are influence of the learner's native language and, in generative SLA, the operation of innate linguistic mechanisms (Universal Grammar). Similar to methodology in formal syntax, *lxSLA* adopts techniques such as grammaticality judgment, comprehension and perception tasks supplementing spontaneously produced oral data. While there may be individual differences in oral production, tasks that tap learners' mental representations reveal commonalities across learners from a given native language background with the same amount/type of exposure and age of initial L2 exposure. When it comes to phonology, age has long been a central factor with numerous comparative studies showing younger learners far outperforming older learners (see Piske et al. 2001). This paper discusses a case of possible non-acquisition by L2 children who had had considerable exposure to the L2. Children's non-acquisition is only apparent, and this allows us to consider the value of lxSLA methodology on the one hand, and and raises issues about what might be lacking in the current socio-SLA paradigm, on the other. We argue that only when we return to the cooperation that marked its birth in the 1960s will we have a comprehensive picture of SLA.

Keywords: Linguistics SLA and Socio-SLA, L2 speech perception and production, Input multiplicity, Foreign domestic helpers, Hong Kong English, Filipino English

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1 We follow the convention in Generative SLA in using second language/L2 to refer to the acquisition of any additional language, after the age of three or four.

1 Introduction

In spite of the fact that since the 1990s, there has been increasing attention paid to how various social factors affect second language acquisition, cooperation between those in what we refer to as *lxSLA* and *socio-SLA* is minimal (see Bayley 2005; Bayley and Preston 1996; Bayley and Regan 2004; Block 2007b; Young 1999). Although there is not denial that acquisition occurs in a social context (Baldwin and Meyer 2007; Haspelmath 2011), social factors are rarely included in formal linguistic-based approaches to SLA (Atkinson 2011b; Larsen-Freeman 2007).[2] Studies investigating both linguistic and social aspects of SLA remain few and far between (Atkinson 2011a; Batstone 2010b).

Exploration of the effect of social milieu in L2 acquisition started to take centre stage – outside of lxSLA – when Firth and Wagner (1997) called for closer scrutiny of how L2 acquisition occurs in conversations co-constructed through social interactions. Interest predates Firth and Wagner (see e.g. Tarone 1997; 2000; 2007 and Gass et al. 1989a; b; Hatch 1983; Preston 1989; 1996; Schumann 1978; Selinker and Douglas 1985) and is evident in some studies whose focus was on acquisition of morphosyntax, e.g. 1970s work on immigrant adults in Germany (Becker et al. 1977). Spolsky's (1989) general model of L2 learning is one possible starting point for integration of lxSLA and socio-SLA: social context shapes L2 attitudes which in turn affect learning opportunities which ultimately lead to different outcomes. Models and paradigms which address the social side of acquisition now also include the Language Socialisation Paradigm (Duff and Talmy 2011; Kramsch 2002; Ochs 1988; Schieffelin and Ochs 1986; Watson-Gegeo 2004), the Socio-educational Model (Gardner et al. 1999; Gardner 2006), the Socio-cultural Model (Lantolf 1994; 2006; 2011) and recent socio-cognitive perspectives such as Atkinson's (2010; 2011c; 2012), Batstone's (2010a; b) and Tarone's (2010). These argue for the indispensability of attending to the social aspects of (S)LA, the outcome of which, in turn, impacts on how the social reality of acquisition is constructed, thereby emphasising the idea that language and its acquisition are inherently social phenomena. Here researchers espouse the "social turn in second language acquisition" (Block 2003) which has emerged from a range of disci-

2 Our categorisation of SLA into lx-SLA and socio-SLA is based on researchers' objects of inquiry and their approaches to these. For lx-SLA – or formal-linguistics-based SLA – these are linguistic units and their representation in the mind, under generative as well as cognitive linguistics. In our socio-SLA category are researchers who consider language in socio-contexts as well as its relationship with social constructs without necessary inclusion of formal linguistic units. Note that this division is not neat in that variationist SLA spans both lx-SLA and socio-SLA (see e.g. Regan 2013). Also lying in the middle is the socio-cognitive approach mentioned below.

plines in the social sciences and humanities which do not necessarily share the same set of epistemological assumptions (Ortega 2011). Socio-SLA is a broad-brush term encompassing a wide-array of inter-related but somewhat distinct perspectives on SLA. Crucially, they all place a strong emphasis on the social and contextual elements of acquisition.[3] While the diversity represented by and within lxSLA and socio-SLA could enrich SLA because theoretical approaches are "sometimes complementary, sometimes incompatible" (Myles 2010: 320), this has instead "led, with a few exceptions [to] independent and even isolated existences" (Atkinson 2011a: xi).[4]

Given the general theoretical orientation of socio-SLA, the focus is on production/interactional data. As we shall see from the data reported on in this paper, considering only production does not provide a complete picture of SLA in a context where multiple varieties exist. Indeed, viewing acquisition purely in the light of production data leads to premature conclusions as in the so-called Ethan Experience (Chambers 2002; 2005) where second/third generation immigrant children never produce their parents'/grandparents' accents. Little is known about whether they mentally represent these interlanguage phonologies; that is, have they acquired the phonology to which they were exposed but for non-linguistic (e.g. psycho-social) reasons do not produce any evidence of this system in their speech? The methodology of lxSLA is ideally suited to explore this possibility. We shall also see that taking only a lxSLA perspective and ignoring social context cannot explain why the children in the present study did not produce the L2 variety to which they were heavily exposed. Our aim here is to show how lxSLA and socio-SLA advocates – who go to different conferences and publish in different outlets[5] – can work collaboratively. In the present study, we draw on the types of data used by researchers in lxSLA and socioSLA, and more specifically we show how in sociolinguistics these two approaches highlight crucial facets of SLA thus harnessing its diversity to provide a more complete picture of the processes which constitute it. We do not need a new paradigm. Rather, we need a new era

3 Socio-SLA and lxSLA are two main camps in an increasingly diversified field, a review of which is beyond the scope of this article.

4 Readers interested in exploring the various theories and approaches in SLA can refer to Doughty and Long (2003); Gass and Mackey (2011); Herschensohn and Young-Scholten (2013); Oretga (2011; 2013); Ritchie and Bhatia (2009) *inter alia*.

5 For a detailed discussion of a once unified field which has evolved into divided and even hostile territories who fire shots from their trenches (e.g. Gregg's 2006 critique of Watson-Gegeo 2004), see Young-Scholten and Piske (2009). Although L2 phonology researchers have not discounted social factors completely, they are sometimes exploited "as a facile account for results that are [otherwise] not easily interpretable" (Leung 2012: 43).

of cooperation where the individual and society do not simply co-exist but complement each other to bring about a more comprehensive understanding of SLA.

In the rest of this paper we report on a study of L2 phonology in Hong Kong, where from childhood, learners are exposed to multiple varieties of English. We begin by briefly outlining current understanding of L2 phonology. Next, we consider the context of the study and move on to the study itself. The discussion and conclusion underscore how socio-SLA and lxSLA need each other to provide a full picture of certain acquisition situations. The study findings show how social context cannot be ignored in a setting where input multiplicity is present.

2 L2 phonology acquisition

L2 phonology acquisition is a vibrant area of study with application of various formal models of phonological competence and its acquisition such as Optimality Theory, the Speech Learning Model and usage-based (see Hansen Edwards and Zampini 2008). One of the main generalisations that can be made from research on both perception and production is that acquisition of a second phonology (both segmental and suprasegmental) with rare exceptions is successful given sufficient exposure to input within the critical period (e.g. up to age 15; Patkowski 1990; see also Hyltenstam and Abrahamsson 2012; Muñoz and Singleton 2011). Many of these studies implicitly assume the target language (TL) to be a monolithic entity representing a single norm, usually the standard and/or institutional variety. Less is known about what happens when learners are exposed to more than one variety (Leather 2003). This assumption is misguided, not only due to human mobility (hence language contact), but also to variation within native-speaking contexts (see e.g. Foulkes and Docherty 2006; Hughes et al. 2012; Labov et al. 2006). Though a related line of inquiry in first dialect acquisition is of increasing interest (e.g. Chambers 1992; 2002; 2005; Nyzc 2011; Payne 1980; Pearson et al. 2009; Rys 2007; Siegel 2010; Van Hofwegen and Wolfram 2010), dialect acquisition in SLA remains under-researched.[6] By looking into multiple TL variety exposure, the present study aims to address this gap.

Researchers interested in dialect/dialect acquisition target production, using techniques such as word list reading and interviews (Labov 2006). This can be problematic as the absence of evidence is not necessarily evidence of absence in an acquisition sense. Learners' non-production of a given L2 feature does not nec-

6 But see Hansen Edwards (2011) on L2 English learners' variation in final t/d deletion and O'Brien and Smith (2010) on the potential effect of L1 dialect in L2 acquisition.

essarily mean it is not perceived. Language acquisition studies show that perceptual knowledge can exist without production (see Hendriks and Koster 2010 regarding comprehension and production asymmetries in language acquisition); yet studies that consider both are rare. Gut's (2009) review of 39 years of studies in 16 international journals uncovers only 29 studies which "describe the perceptual abilities of non-native speakers or focus on the relationship between perception and production" (2009: 40). In fact, studies of production and of perception "have progressed more or less independently for more than 60 years" (Casserly and Pisoni 2010: 629). The importance of perception data in sociolinguistics and variation is also only slowly being acknowledged, but is clearly an indispensable route to better understand the variation present in a given language (Campbell-Kibler 2010; Thomas 2011). The present study examines the two in tandem. This will not result in a sufficiently full picture so we need to consider how social factors impact on learners' acquisition. In the present study, we include only attitude (Giles and Billings 2004). Also of interest is accommodation (Giles and Ogay 2007) whereby speakers' orientation towards their interlocutors results in convergence or divergence from each other's speech (Beebe and Giles 1984; Giles et al. 1991), audience design (Bell 1984; 2001), identity (e.g. Block 2007a; Miller and Kubota 2013; Norton and McKinney 2011), and conversation analysis (e.g. Mori 2007; Kasper and Wagner 2011).[7]

3 The study's social context: English in Hong Kong

As one of Hong Kong's official languages, English is compulsory from primary school. Students receive institutional input (e.g. British or American English) from various teachers who are either native-speaking English teachers/NETs from so-called inner-circle countries (Kachru 1983; 2005) or local speakers of the well-established Hong Kong variety of English (or varieties; see Zhang 2010). These varieties are also present in the media in Hong Kong. The nature of English input in Hong Kong is currently complicated by changes in medium of instruction in the education system since the return of sovereignty to the People's Republic of China in 1997 and the rise in prominence of Mandarin. The increased presence of Mandarin in Hong Kong has meant an initial reduction in in the number of secondary schools educating children in English to about 20% (Bolton 2002;

7 Though of relevance, due to the limitation of words these notions are not directly addressed in this paper.

2011).[8] However, a reversal has begun, with schools returning to the pre-1997 freedom to choose medium of instruction (HKSAR Government). NETs are present in many Hong Kong schools (Boyle 1997; Tsui and Bunton 2002) and provide inner circle variety input alongside Hong Kong English (Benson 2000; Gisborne 2009; Hung 2002; McArthur 2002; Sewell and Chan 2010; Setter et al. 2010 *inter alia*).

Additional varieties of English also exist in Hong Kong. Many children are exposed to English from live-in foreign domestic helpers (FDHs) from countries like the Philippines and Indonesia (Crebo 2003). If both parents work during the day, FDHs will be children's main caregivers providing their main and initial source of English input. In the present study, the FDHs were Filipino English speakers who did not speak the local community language, Cantonese. Notwithstanding their significant presence and their occasional status as auxiliary English teachers (Constable 1997b; 2007; McArthur 2002; Poon 2006), FDHs' role in the L2 English acquisition of children is understudied (Crebo 2003) and usually only noted in passing (e.g. Afendras 1998; Yeung 2007) both in Hong Kong and elsewhere (e.g. Shaalan 2009). Studies examining the mental representations of bilinguals in Hong Kong (e.g. Yip and Matthews 2007) and sociological work in other disciplines (e.g. Chang and Ling 2000; Constable 1997a; Piper and Roces 2003) neglect consideration of FDH input. This is perhaps because such a situation calls for the sort of multi-disciplinary approach that is, as we have already pointed out, currently lacking in SLA. The presence of these FDHs offers a window on the acquisition of a variety of English different from the institutional and local varieties by young learners still within the purported critical period for the acquisition of phonology.

4 The study

The study focused on five English sounds instantiated differently in Filipino-accented English and in all other varieties present in Hong Kong including Cantonese-based Hong Kong English. These are the labio-dental fricatives /f/ and /v/ and the voiceless plosives /p/, /t/ and /k/. To uncover the phonological competence of children's Filipino English, a set of tasks tapped their perception and production. However, unlike in lxSLA, these tasks were complemented by a verbal guise technique to elicit children's attitudes towards Hong Kong English vari-

8 Unlike Chinese-medium schools, in English medium schools, all subjects are taught in English apart from Chinese and Chinese history. Whether Cantonese or Mandarin should be used in Chinese-medium schools is not investigated in this paper.

eties. This step was indispensable because language attitudes can affect learners' code choice, as we noted above.

4.1 The context in more detail

Working parents around the world employ FDHs for housekeeping (Constable 2007) who can be the main caregivers in households with children. In Hong Kong, an FDH can be the main and even only source of L2 English input for children in their care. In Hong Kong they come mainly from Indonesia, the Philippines and Thailand, in addition to Hong Kong.[9] With the exception of Indonesians, who speak Cantonese, FDHs communicate in English with their employers and employers' children.[10] English is thus the household language. Before starting primary school, children receive all their English input from FDHs apart from some input from other English varieties in Hong Kong, generally from the media. Filipino English is marked by the substitutions of [p, b] for /f, v/ and non-aspiration of /p, t, k/ in syllable onsets;[11] see Table 1.

Table 1: Comparable (segmental) contrasts between Filipino and Hong Kong (HK) English

	Filipino English (Bautista 2000; Tayao 2008)	**HK English** (Bolton and Kwok 1990; Deterding et al. 2008; Hung 2002; Sewell and Chan 2010 *inter alia*)
#_ (/p/, /t/, /k/)	not aspirated	aspirated
/f/, /v/	/f/ realised as [p], /v/ as [b]	/f/ realised as [f], /v/ as [v]/ [w]

Filipino English is an umbrella term describing a range of variations, as noted in Tayao's (2008) lectal continuum, which considers basilect, mesolect and acrolect. The recordings used in the present study (see below) were confirmed to be representative of the Filipino English present in Hong Kong by three Filipino FDHs in Hong Kong.

9 FDHs constitute approximately 3% of HK's population; Indonesians and Filipinos constitute the largest groups (Visa and Policies 2008).

10 Indonesian FDHs must prior to taking up work attend Cantonese courses but some Indonesians also communicate in households in English. Indonesian English and Thai English are additional varieties. Families in the control group with Indonesian FDHs only communicated in Cantonese.

11 It is worth noting that the acoustic shapes of [p, b] originated from /p, b/ are different from the ones originated from /f, v/.

4.2 Participants

Data were collected from children from four kindergartens with comparable curricula and students from two English medium secondary schools in Hong Kong as well as via the friend-of-friend approach (Milroy 1980; Tagliamonte 2006) between June 2010 and January 2011. Kindergarteners rather than pre-school children were selected for several reasons: their additional but minimal exposure to other varieties of English and socio-cognitive skills sufficiently developed to collect valid responses the attitude questionnaire. Secondary rather than primary school students were selected for the second group for two reasons: FDH vs. institutional exposure situation is partially reversed compared to the kindergarteners' and individuals' orientation shifts from home to peers around this age (Kerswill 1996; Kerswill and Williams 2000). The sample comprised 31 final-year kindergarteners aged 4;6 to 6, and 29 first-year secondary students aged 11 to 14. All were still receiving or had heard Filipino-accented English at some point as their main source of English input. 20 kindergarteners aged 4;0 to 5;11 and 14 secondary students aged 11 to 13 who had not received such input were included as controls. The control participants received English input only from the institutional source (i.e. American English and British English) and the media alongside Hong Kong English in and outside school. The estimated amount of English exposure all study participants received from various sources is shown in Table 2.[12] These present the participant subgroups: two Filipino-FDH groups (kindergarteners and secondary students) and two in the control groups without Filipino-FDH exposure (kindergarteners and secondary students).

All participants were ethnic (Hong Kong) Chinese from middle class families, in which both parents were secondary school and higher educated and worked in white collar jobs. They reported using Cantonese exclusively with their parents and most of the time with their peers. For two of the kindergarten and secondary student sub-groups, English was used at home with Filipino FDHs. At the time of testing, the youngest kindergarteners could have received up to 5000 hours of Filipino English input and the secondary students at least 8000 hours. The proportion of FDH input reduces over time once children start school. The rightmost column also represents the English exposure for the two control sub-groups. Estimating additional exposure via the media and classmates was beyond the scope of the present study but we assume some exposure to inner-circle varieties and

12 Based on school curricula and on assumed and observed interaction patterns between FDHs and children.

Hong Kong English from both sources and to Hong Kong English from the latter source.

Table 2: Sources of and estimated input amount for learners with Filipino FDHs

Period	Source of input	
	Filipino domestic helpers	Institutional
Pre-school	35–45 hours per week	Rare
Kindergarten	30 hours per week	4 hours per week
Primary school	20–30 hours per week	4.5–30 hours (depending on medium of instruction)
Secondary school	~15–25 hours per week	30 hours per week

4.3 The tasks

The 94 participants took two production tasks: a picture naming task and a pair matching task and two listening/perception tasks: a picture choosing task and a sound discrimination task. All four tasks targeted the five onsets mentioned above. Participants also took a verbal guise task where attitudes towards British, American, Hong Kong and Filipino English were tapped. Details are given below.

4.3.1 Production

The picture naming task required participants to name the picture in a carrier phrase (1) without reading the word. This task involved a degree of conscious control, yet because it was disguised as a vocabulary task, attention was not drawn to pronunciation – the actual target of the task.

(1) *(Now) I see a/an* _____.

25 pictures were presented individually to each participant, who read the carrier phrase and supplied the word that corresponded to the picture they saw. The task words contained the target onsets /f/, /v/, /p/, /t/, /k/ and mainly consisted of words from the household domain that children are likely to hear. Two kindergarten teachers provided feedback on the initial list and words selected for the final

list were confirmed as being known even by the youngest sub-group; this list is shown in appendix 1.

Production data was also obtained by engaging participants in a pair-matching card game. Individual children and secondary students played the game with the first author who also used the pre-recorded Filipino-accented English samples for two turns during each game to explore potential accommodation effects. While the game would ideally have involved an FDH, this was the only alternative due to limitation of resources. For the game, participants were dealt a hand of cards with pictures of the same items as in the picture naming task and they had to work with the other player to ask for matching cards. The question and answer template is shown in (2).[13] The same stimuli used for the picture naming task were used here. Words that informants failed to name in the previous task were excluded from analysis for that task and excluded from the data from this task.

(2) *Researcher/FDH: Do you have a/an _____?*
Participant: Yes, I have a/an _____/ No, I don't have a/an _____.

This task involved less control in that participants were focused on playing the game rather than focusing on their production. This was expected to reduce monitoring of production.

4.3.2 Perception tasks

In the picture choosing task, participants listened to recorded English words spoken in the four accents: Filipino, Hong Kong, British English (Received Pronunciation) and American (General American),[14] with the target onsets /f/, /v/, /p/, /t/, /k/ using words included in the production task.[15] Participants selected

13 In turns with Filipino recorded speech, the researcher played responses appropriate to the participants' utterances.

14 Experimental and control participants should only differ with respect to Filipino English. Through the inclusion of words spoken in the other three accents, to which all groups were exposed, this hypothesis was tested.

15 We assume that participants' school exposure was to something akin to RP and GenAm. If participants had been exposed to other varieties of British and American English, this has no consequences for the present study as none of these varieties involve the Filipino variants selected.

the picture from a set of three which represented the word they heard. The option of "not included"/"don't know" was available in case the participant thought the word they heard corresponded to none of the pictures. All words were instantiated in the pictures. Five words with five different onsets were used, yielding 25 tokens. There were 13 distracters involving words not containing the target onsets /f/, /v/, /p/, /t/, /k/ which were included to prevent participants from identifying the true purpose of task – to test perceptual knowledge of the target sounds. Vowels of various features were included (e.g. [+high] /i/ vs [+low] /æ/) to follow the target onsets and to minimise the possibility of results being affected by the quality of the following vowel (see appendix 2). Mainly monosyllabic words were used to minimise phonetic/co-articulatory effects, such as reduction in aspiration, consonant devoicing (see Davenport and Hannahs 2010; Labov, Ash and Boberg 2006; Strange and Shafer 2008).

Pictures for potential confusion pairs were included in the same set wherever possible, e.g. *fan, pan*. Not all sets, however, contained confusion pairs because some words do not form a perfect confusion pair or form pairs that fall outside participants' lexicons especially kindergarteners'. Other minimal pairs or close minimal pairs were included in such cases. Participants were asked to indicate whether there was any word in the set that they did not know after completing the task and these were excluded. Words were played to each participant who then marked their answers on a sheet containing pictures corresponding to each pre-recorded clip.

The other perception task was an AX discrimination task. Two Filipino English stimuli were juxtaposed with the first stimulus (A) remaining constant while the second in the pair (X) was either the same as or different from A, and participants had to say which was the case. Two Filipino English sounds, e.g. [f], and [v] were contrasted with [p], and [b], while unaspirated [p], [t], [k] were aligned with [b], [d], [g] due to their similar voice onset times as opposed to aspirated [p^h], [t^h], [k^h]); see appendix 3 for the list. Nonce words were used when there was no perfect minimal pair. For instance, the bracketed portion of *gee(se)* is not pronounced resulting in a nonce word. As the purpose of the task was to test participants' ability to discriminate the sound, the knowledge of the actual word used (be it real or nonce) can be ignored (Strange 1995; Strange and Shafer 2008). An example of a block is:

(3) *Fan, Fan (AA); Fan, Fan (AA); Fan, Pan (AB)*

Two same or different sounds separated by 1500 milliseconds were played in blocks of three in randomised order (hence AX^3) to avoid systematic answering (e.g. for AA, AX, AA), and each block was separated from the next by 3000ms.

Length of inter-stimulus-interval has been found to be crucial as a short interval such as 250 ms recruits participants' purely acoustic skills while longer intervals tap phonemic knowledge (Strange and Shafer 2008; Werker and Tees 1984; Werker and Logan 1985), which is the focus of this study. Where the participants indicated whether they perceived the stimuli as the same or different, in those cases where differences depending on exposure to Filipino English were noticed, this indicates that they possess a mental representation for these phonemes.

4.3.3 Verbal guise task

To examine social factors, participants took a verbal guise task (Campbell-Kibler 2006; Lambert et al. 1960; Lindemann 2003) by listening to a short paragraph recorded by four different speakers.[16] They then had to rate the speakers according to solidarity and status traits on a 5-point Likert scale, ranging from the negative end of the spectrum to the positive one. The same varieties – British, American English, Filipino English and Hong Kong English – were included, with recordings representing the typical pattern of the respective variety (RP and GenAm). Clips were recorded by female speakers for valid comparison with the typically female FDHs. A 191-word long passage was recorded, 49 words of which were employed (see appendix 4) due to the assumed short attention span of the kindergarten group.

A personality attribute list for speaker ratings was adopted from Zhang (2010) whose study looked at Hong Kong university students' attitudes toward eight varieties of English. A full replication of Zhang's instrument was impossible since some adjectives she used were too complex/abstract for kindergarteners. Also excluded were the negative adjectives in Zhang's list due to kindergarteners' unfamiliarity with them.[17] The list was accordingly modified and four parents, two local Hong Kong teachers and three secondary students not in the study verified its appropriateness for the sample. For secondary students, a list of 22 adjectives was used with e.g. *Not Friendly*, *Friendly* occupying the polar ends (i.e. *1* and *5*) in the 5-point scale. A number of adjectives on the list were expected to be difficult for the kindergarteners and they therefore used a list of 11 adjectives; see appen-

16 We are aware that "attitude" is only one of the many social factors that may potentially influence language use; however, limited by the scope of the study, this is the only social factor that we consider.

17 This was pointed out by various teachers in the kindergartens where the first author collected data.

dix 5. Unlike the secondary students who responded in written form, the kindergarteners were required to respond orally given their assumed low reading level.

4.4 Preparation of materials

Filipino English and Hong Kong English words in the picture choosing task were recorded with an Olympus WS-series recorder by a female Filipino-FDH working in Hong Kong, and a female Hong Kong speaker of English whose accent was typical. The RP and GenAm words were taken from *Cambridge Dictionary Online* (Heacock 1999). The same Filipino English speaker also recorded the sound discrimination AX[3] task and the verbal guise task and three female Hong Kong English, British English and American English speakers were recorded for the verbal guise task. These recordings of the four varieties were similar in loudness and duration: Filipino: 1 minute 28 seconds; Hong Kong: 1 minute 24 seconds; RP: 1 minute 17 seconds; GenAm: 1 minute 18 seconds to ensure valid comparisons by excluding factors such as intensity and speech rate. Pictures were obtained from the internet and determined to be unambiguous illustrations of the words in the task. Pictures which might have aroused extreme emotions were avoided.

5 Results

5.1 Production

In the picture naming task participants named 25 pictures, five with each of the onsets /f, v, p, t, k/. Their production was recorded, transcribed and scrutinised for traces of Filipino accent. For the two subgroups exposed to Filipino English, there were only three such traces: one kindergartener produced *fork* with a [p], and another produced *volcano* with a [b], and one secondary student also produced *fork* with a [p].[18] No such instances occurred in the control sub-groups' production.

Traces of Filipino production were also virtually non-existent in the oral production data from the pair matching game (table 3).

18 No meaningful inferential statistics can be attempted for the production tasks due to the low production rate of FE; hence, they are not reported.

Table 3: Participants' average production of FE (with researcher)

Sounds	Groups			
	Kindergarteners with F-FDHs (n = 31)	Kindergarteners without F-FDHs (controls) (n = 20)	Secondary students with F-FDHs (n = 29)	Secondary students without F-FDHs (controls) (n = 14)
/f/	0.0071%	0%	0.0090%	0%
/v/	0.0235%	0%	0%	0%
/p/	0%	0%	0.0090%	0%
/t/	0.0070%	0.0113%	0%	0%
/k/	0%	0%	0%	0%

Where conditions should have favoured production of Filipino English due to expected accommodation (see above), the production of such English is low as well (table 4.)

Table 4: Participants' average production of FE (with Filipino recordings)

Sounds	Groups			
	Kindergarteners with F-FDHs (n = 31)	Kindergarteners without F-FDHs (controls) (n = 20)	Secondary students with F-FDHs (n = 29)	Secondary students without F-FDHs (controls) (n = 14)
/f/	0.0075%	0%	0.0181%	0%
/v/	0.0588%	0.0196%	0.0242%	0%
/p/	0.0317%	0%	0.0227%	0%
/t/	0.0072%	0.0113%	0.0272%	0%
/k/	0%	0%	0%	0%

The production results tell us that despite thousands of hours of Filipino English input, those exposed to it have not acquired it. Can we can categorically conclude this? We have from lxSLA another methodological option: measurement of perception data. Indeed in generative linguistics, an individual's production (performance) is of little interest in comparison to how s/he mentally represents language (competence).

5.2 Perception

Table 5 shows the average of correct responses made by participants out of all test items. Two-way ANOVAs (Filipino-FDH exposure and school group) were run for the test scores (excluding the 13 distracters) of the four respective accents. Sig-

nificant results (i.e. $p \leqq 0.05$)[19] are found only with the Filipino-accented set for the two factors Filipino-FDH exposure ($F = 7.394$, $p = 0.008$, $\eta_p^2 = 0.078$, *medium effect size*) and school group ($F = 8.125$, $p = 0.005$, $\eta_p^2 = 0.085$, *medium effect size*). School group is also a significant factor for the scores of the British set ($F = 25.557$, $p = 0.000$, $\eta_p^2 = 0.223$, *large effect size*) but Filipino-FDH exposure is not ($F = 0.003$, $p = 0.955$). The F values in all the other sets are not significant with either of the factors. Figures for the factors with respect to the score in the American set are as follows: school group: $F = 0.699$, $p = 0.405$, Filipino-FDH exposure: $F = 1.237$, $p = 0.269$. The values for the Hong Kong set are: school group: $F = 0.132$, $p = 0.717$, Filipino-FDH exposure: $F = 0{,}187$, $p = 0.666$. No interaction between the two independent variables is observed in any of the sets. Table 5 in combination with the F values shows that participants with Filipino-FDH exposure perform significantly better than those in the control group on the Filipino set. Their performances do not differ significantly in the other sets.

Table 5: Group means in the picture-choosing task

Groups	Accents of the stimuli			
	Filipino	Hong Kong	British	American
Kindergarteners with F-FDH (n = 31)	68.98 (12.50)	90.66 (6.04)	86.11 (7.85)	94.48 (5.78)
Kindergarteners without F-FDH (n = 20)	62.77 (12.49)	89.29 (7.80)	88.34 (6.53)	93.18 (6.02)
Secondary students with F-FDH (n = 29)	62.54 (10.47)	89.50 (5.55)	95.07 (5.01)	95.50 (5.54)
Secondary students without F-FDH (n = 14)	54.72 (11.54)	89.82 (8.13)	92.37 (7.80)	94.09 (4.49)

Standard deviations are given in parentheses.

The group means for the AX[3] sound discrimination task shown in Table 6 indicate participants' average scores of all target Filipino English sounds that actually differ. On a par with the picture choosing task, a two-way ANOVA with the same independent variables (Filipino-FDH exposure and school group) was run for the target in this task. The group differences for the target Filipino sounds in AX[3] are significant with respect to both independent factors (Filipino-FDH exposure: $F = 5.332$, $p = 0.023$, $\eta_p^2 = 0.056$, *marginal medium effect size*; school group:

19 This is the anchor value set for all the subsequent inferential statistics in line with social sciences conventions (Larson-Hall 2010).

F = 10.934, p = 0.001, η_p^2 = 0.108, medium effect size). Since the data for the foil were not normally distributed, the two independent variables, *School group* and *Filipino-FDH exposure* used in the previous analyses were collapsed into one variable *School group x Filipino-FDH exposure* so as to conduct the non-parametric alternative instead of an ANOVA.[20] Such an analysis shows that the disparities between the foils are not statistically significant with *p = 0.351* in the Kruskal–Wallis test. Follow-up multiple Mann–Whitney U tests revealed no statistically significant differences between the averages for individual groups in the foil. This rules out the possibility that participants with F-FDH exposure are simply generally better in tackling the task than the control subgroups. There is also no interaction effect observed between the two independent variables in either set. The means in conjunction with the inferential statistics indicate that the experimental group distinguishes target Filipino English sounds better than the control.

Table 6: Group means in the sound discrimination AX³ task

Groups	Target	Foil
Kindergarteners with F-FDH (n = 31)	46.00	98.61
	(18.96)	(2.39)
Kindergarteners without F-FDH (n = 20)	34.92	99.16
	(15.47)	(1.49)
Secondary students with F-FDH (n = 29)	57.01	98.33
	(19.40)	(2.93)
Secondary students without F-FDH (n = 14)	50.47	99.23
	(19.16)	(1.99)

Standard deviations are given in parentheses.

Table 7: Mean rank table for the foil in the sound discrimination AX³ task

Groups	Mean rank
Kindergarteners with F-FDH (n = 31)	43.43
Kindergarteners without F-FDH (n = 20)	44.07
Secondary students with F-FDH (n = 29)	50.59
Secondary students without F-FDH (n = 14)	54.96

When we consider whether those participants exposed to Filipino English mentally represent this variety, it turns out that they indeed do. In a lx-SLA study, we could

20 The mean rank table (Table 7) is given here because it is necessary for non-parametric statistical measurement, such as the Kruskal–Wallis test used here.

draw conclusions at this point. But if we consider the situation of English learners in Hong Kong from socio-SLA perspective, there are a number of factors that must be taken seriously. In the present study, the factor examined was attitude.

5.3 Social context – Verbal guise technique

Different lists were used for kindergarteners and secondary students so their results are reported separately. The means for the ratings assigned by individual groups are shown in table 8. Independent-samples t-tests (independent variable: *F-FDH exposure*; dependent variable: *average rating*) were run to explore the potential relationships among variables for all the accents. Among the ratings for the four accent sets, the UK guise is the only set where the ratings of the kindergarten experimental and control group differed significantly ($t = -2.663$, $p = 0.012$, $df = 33.840$, $d = 4.24$, *large effect size*). Here the experimental group rated RP, the UK accent, significantly more positively than the control group (*4.09* vs. *3.47*). On the other hand, one-sample t-tests reveal that most ratings by either of the groups are significantly different from the middle value *3* in the 5-point Likert scale with the exception of the ratings for the Filipino set by the control group which yielded a marginally significant outcome ($t = 1.929$, $p = 0.067$, $df = 22$, $d = 2.48$, *large effect size*) and the GenAm set rating by the same group ($t = 0.838$, $p = 0.411$, $df = 21$, $d = 5.59$, *large effect size*) indicating that most participants are not indifferent towards the English varieties targeted. This confirms findings that suggest kindergarteners' development of social awareness and preference by age six (Kinzler et al. 2009; Kinzler and DeJesus 2013). The ratings for the four accents all incline towards the positive end of the Likert scale.

Table 8: Group average ratings for the four English varieties in the verbal guise task

Groups	Accents of the stimuli			
	Filipino	Hong Kong	British	American
Kindergarteners with F-FDH (n = 31)	3.5455*	3.6253*	4.0942*	3.6667*
	(0.8829)	(1.1597)	(0.5789)	(1.1372)
Kindergarteners without F-FDH (n = 20)	3.4190	3.6087*	3.4704*	3.2479
	(1.0414)	(1.1253)	(0.9934)	(1.3870)
Secondary students with F-FDH (n = 29)	2.8245	2.9409	3.7379*	4.0348*
	(0.6207)	(0.7017)	(0.6860)	(0.5738)
Secondary students without F-FDH (n = 14)	2.3352*	2.8040	3.5848*	4.2131*
	(0.5785)	(0.6149)	(0.3351)	(0.4725)

Standard deviations are given in parentheses.
* Marks the rating that is significantly different from the middle value *3* in the 5-point Likert scale

These findings indicate that even kindergarteners have varying attitudes towards varieties of English with a preference for inner circle varieties (except for the control group). The positive attitude participants have towards the Filipino variety, on the other hand, makes the experimental group's non-production of Filipino-accented speech puzzling given accommodation theory.

Independent-samples t-tests and one-sample t-tests were also run for the ratings by secondary students to explore the relationships among variables as well as whether the rating is different from the neutral value *3* in the 5-point Likert scale respectively. The average rating given by participants and controls in the secondary school group differed only with regard to the Filipino accent guise ($t = -2.645$, $p = 0.012$, $df = 32.979$, $d = 1.18$, *large effect size*). In this guise, the experimental group's rating is not significantly different from the middle value *3* ($t = -1.523$, $p = 0.139$, $df = 28$, $d = 3.53$, *large effect size*), while the rating the controls assigned to this accent is significantly lower than *3*. Furthermore, the ratings both groups assigned to the RP and GenAm guises are statistically significantly disparate from *3*. On the other hand, the ratings by both the experimental group and the controls are not significantly different from *3* in the HK set. Figures for the experimental group are: $t = -0.461$, $p = 0.648$, $df = 29$, $d = 11.87$, *large effect size*; while the figures for the control group are: $t = -1.275$, $p = 0.222$, $df = 15$, $d = 3.13$, *large effect size*. The ratings for the four accents all fall between the neutral to positive spectrum of the 5-point Likert scale except for the lower rating of the Filipino accent by the control group (table 8).

These results suggest that secondary students with FDH exposure have a wider spectrum of attitudes that spread across the negative and positive ends than the kindergarteners. They, too, seem to prefer GenAm and RP over the other two. Similar to the kindergarteners, secondary students in the experimental group also do not hold a negative attitude towards the Filipino variety. This again makes explaining their non-production of such a variety challenging.

6 Discussion

Against the backdrop of a dearth of research examining child L2 acquisition in the context of exposure to multiple varieties, including both inner and outer circle varieties, this study set out to investigate the acquisition of the variety in which kindergartners and secondary students had received most of the English input, from birth, namely Filipino English.

The results reveal nearly no production of this variety but show that it is indeed mentally represented by these individuals. Once perception is taken into

consideration, it becomes obvious that participants' non-production cannot be unambiguously regarded as evidence of non-acquisition of the Filipino variety. In fact, all that can be conclusively stated is that participants had not adopted Filipino-accented English in an experimental setting. Systematic research along the same lines of children who do not acquire their immigrant parents' accents (the Ethan Experience; Chambers 2002; 2005) would doubtless arrive at similar results. Such findings are perplexing for second language phonology researchers as sufficient exposure to a target language within the critical period leads with few exceptions to successful acquisition. In the present study, exposure was more than sufficient; indeed, it was extensive, at thousands of hours.[21] Non-production of this variety is not easily explained through participants' language attitudes either.

There is considerable experience from sociolinguistics upon which to draw and the sociolinguistic instrument – the verbal guise technique- reveals that even children at the ages of 4;6 to 6 have attitudes towards the three or four different varieties of English (Filipino, Hong Kong, British, and American English) to which they were exposed. The younger learners in both the experimental and group groups showed positive attitudes towards almost all of the targeted varieties in the task; that is, they assigned a rating that was significantly higher than the middle value, 3, in the 5-point Likert scale for most of the guises. The exception was the control group, who assigned a marginally significantly different rating to the Filipino accent and a value that was not significantly different from 3 for GenAm. The secondary students exposed to Filipino English and those never exposed rated the GenAm and RP guises positively, with a preference for the former; these results confirm Zhang's (2010) for university-level Hong Kong speakers. And while the control group rated the Filipino accent negatively and the Hong Kong accent neutrally, the experimental group showed a neutral attitude towards both. The perception results and attitude results make it difficult to apply the speech accommodation model or audience design to explain the non-production of Filipino-accented speech. Both models posit a negative attitude towards a variety as one of the causes of divergence from that code.

It is feasible that even the youngest learners know that the Filipino variety is not the Hong Kong community norm/institutional model and hence they do not adopt it. This is perhaps also reflected through the low ranking that Filipino English receives comparing to other varieties targeted in the study. Even at the tender age of four and five, children demonstrate awareness of when to say

21 Obviously, in addition to input quantity, input quality (e.g. from whom they obtained the input) also matters (e.g. Moyer 2011; Place and Hoff 2011; Trofimovich 2011).

what to whom, enabling them to select the right code to use in a given context (cf. Fishman 1965; Hymes 1974). This ability to use the appropriate code with the appropriate person in the appropriate setting has long been demonstrated by young bi-/multilinguals who are able to use the relevant language in relation to their interlocutors and context (see e.g. Deuchar and Quay 1999; Paradis and Nicoladis 2007; Tare and Gelman 2011).

That kindergarten and secondary school Hong Kong English speakers with considerable exposure to Filipino-accented English produced almost no examples of this variety could also be an artefact of the context in which data were collected. Proponents of socio-SLA would point out what is missing in this study: interaction data. Because the study was conceived in the lxSLA camp, collection of such data was not a natural choice. But the baby must not be thrown out with the bath water. Working within a lx SLA framework to discover that those exposed to Filipino English mentally represent that variety confirms that social factors do not prevent the (young) human mind from processing linguistic information which is plentiful in the environment. This once again highlights the need for a comprehensive approach of the sort long suggested (see e.g. Spolsky 1989).

7 Conclusion

Despite on-going calls for research to take into consideration the social as well as linguistic aspects of (second) language acquisition (most recently e.g. Batstone 2010; Cook 2010; Ellis 2010), there are still few studies that incorporate elements from both traditions. The study reported on in this paper highlights the fact that research instruments associated with each provide required pieces of the SLA puzzle. LxSLA researchers would predict that the kindergarteners in our study would have been chatting away in Filipino English. By any measure, they were well within the critical period and had received nearly all of their input, every day for years, in Filipino-accented English. This was not the case, at least in their production, and unravelling this mystery required not only looking at perception but also at the attitudes that might have led to their lack of production. However, the picture is still incomplete and requires carefully examining how these kindergarteners interact with the interlocutors, their parents and their peers, and ultimately how they construct their linguistic identities in the face of considerable input from a variety not representing their own culture.

This is an appropriate time for researchers in both camps to cooperate to address an increasingly complex L2 context in which multiple varieties and multiple languages constitute the input. This calls for carefully designed studies that encompass eclectic measures delving into various aspects of acquisition. The use

of production data associated with socio-SLA is clearly indispensable; at the same time a range of psycholinguistic measures associated with lxSLA are of equal importance as we have witnessed in the present study. Our findings raise more questions than they answer, and clearly attitude is only one of the social factors that requires consideration.[22] We hope to have highlighted that a truly comprehensive study will have to include both production and perception data along with interactional data paying attention to contextual and social variables, operationalised as language attitude in the current study. This is so that issues at the heart of both lxSLA (linguistic competence) and socio-SLA (e.g. communicative competence, social adaptability, alignment, situatedness and so on) can be addressed. It is all very well for acquisitionists to focus on what they are interested in but without properly acknowledging the intertwined nature of the individual and the group – mind and society – we are all blind in describing the elephant.

The 1980s witnessed unprecedented progress in the study of the L2 learner's mind and the 1990s saw the social turn described in Firth and Wagner (1997). We now call for a return to the cooperation that marked the beginnings of second language acquisition research. With our considerably more extensive knowledge about linguo-cognitive and social factors and our experience with increasingly sophisticated methodologies to probe their influence, any serious cooperation promises to be far more exciting than in the 1960s and 1970s. There is a need for the widening of perspectives beyond a tolerance of diversity championed by pluralism (e.g. Lantolf 1996; 2002) where we "continue to cultivate our own gardens without throwing weed killer over the fence into the one next door" (Cook 2010: 14). Cooperation between lxSLA and socioSLA requires each camp to value the other's perspective and by fitting together the multiple pieces of the puzzle provide a truly integrated picture of SLA.

Paradigm shifts over the decades have resulted in researchers speaking languages no longer mutually intelligible. We call for a new era of communication where researchers come together to consider data gathered by various means. This promises to result in new insights as well as new questions and this then might well lead to a paradigm shift.

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22 Family policies (e.g. King et al. 2007; King and Fogle 2013; Lanza 2007; Pearson 2007) and identity (e.g. Block 2007a see b above; Gatbonton et al. 2011; Norton and McKinney 2011; Regan and Ni Chasaide 2010) for instance, can also play a role.

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Bionotes

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Appendix 1: Words used in the production tasks

(2) /f/: *food, feet, fan, fish, fork*
/v/: *van, vegetables, vase, vet, volcano*[23]
/p/: *pan, plate, police, park, peach*
/t/: *tea, two, ten, taxi, table*
/k/: *key, cat, cup, cake, car*

Appendix 2

Words and respective features of vowels immediately after target onset in the picture choosing task

/f/:	*food*, /uː/	[+high, +back, +round, +tense],
	feet, /iː/	[+high, +front, +tense],
	fish, /ɪ/	[+high, +front, –tense],
	fan, /æ/	[+low, +front],
	fork, /ɔː/	[–high, –low, +back, +round]
/v/:	*vegetables*, /ɛ/	[–high, –low, +front],
	vet, /ɛ/	[–high, –low, +front],
	van, /æ/	[+low, +front],
	volcano, /ɒ/	[+low, +back, +round] (RP) or /ɑː/ [+low, +back, +tense] (GenAm)
	vase, /ɑː/	[+low, +back, +tense] or /eɪ/ (diphthong) (GenAm)
/p/:	*peach*, /iː/	[+high, +front, +tense],
	park, /ɑː/	[+low, +back, +tense] (RP) or /ɑɹ/ (GenAm)
	police, /ə/	(schwa)
	plate, /eɪ/	(diphthong)
	pear, /ɛə/	(diphthong) (RP) or /ɛɹ/ (GenAmr)
/t/:	*yea*, /iː/	[+high, +front, +tense],
	wo, /uː/	[+high, +back, +round, +tense],
	ten, /ɛ/	[–high, –low, +front],
	taxi, /æ/	[+low, +front],
	table, /eɪ/	(diphthong)

23 The data collection coincided with the Iceland volcanic eruption in 2010, hence the word volcano was considered familiar to participants.

/k/:	*key*, /iː/	[+high, +front, +tense],
	cup, /ʌ/	[+low, –front, –back],
	cat, /æ/	[+low, +front],
	car, /ɑː/	[+low, +back, +tense], or /ɑɹ/ (GenAmr)
	cake, /eɪ/	(diphthong)

Appendix 3: Words used in the sound discrimination task

f – fan, pan; feet, peat; far; par
v – van, ban, veep, beep; var, bar
p – pan, ban; peep, beep; par, bar
p – tea, D; tan, Dan; tar, dar(k)
k – can, gan; key, gee(se); car, gar(den)

Appendix 4: Paragraph used in the verbal guise task

The story of Pat.

In an old farm very far away lives a fat furry panda called Pat. Pat likes eating very much. He likes all sorts of food. Vegetables are good for him. He loves fruits too, pineapple, pumpkin, pear and more, but berries are his favourite fruit.

Appendix 5: Adjectives used in the verbal guise task

Boldfaced words are those presented to both kindergarteners and secondary students

1	5
Not friendly	**Friendly**
Not sociable	Sociable
Not intelligent	Intelligent
Not humble	Humble
Not highly educated	Highly educated

Not warm	**Warm**
Not wealthy	Wealthy
Not pleasant	**Pleasant**
Not successful	Successful
Not helpful	**Helpful**
Not sincere	**Sincere**
Not elegant	Elegant
Not kind	**Kind**
Not competent	**Competent**
Not honest	Honest
Not interesting	**Interesting**
Not hard-working	**Hard-working**
Not considerate	Considerate
Not reliable	Reliable
Not modern	Modern
Not generous	**Generous**
Not polite	**Polite**