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RUNNING HEAD: L1-L2 CONVERGENCE IN CLAUSAL PACKAGING

L1-L2 Convergence in Clausal Packaging in Japanese and English*

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Abstract

This study investigates L1-L2 convergence among bilinguals at an intermediate (CEFR-B2) level of L2 proficiency, focusing on the clausal packaging of Manner and Path of motion. Previous research has shown cross-linguistic differences between English and Japanese in this domain (Allen et al., 2003; Kita & Özyürek, 2003, though note Brown & Gullberg, in press.). We compared descriptions of motion from monolingual English and Japanese speakers to L1 and L2 descriptions from Japanese users of English as a second (ESL) and foreign (EFL) language. Results showed no significant difference between the monolinguals, who predominately used single-clause constructions packaging Manner and Path. However, bilinguals, both ESL and EFL speakers of English, used significantly more multi-clause constructions in both their L1 and L2. Following Pavlenko (2011a), findings are interpreted as evidence for L1-L2 convergence. We discuss potential bidirectional cross-linguistic influences underpinning the L1-L2 convergence and implications for the restructuring of bilingual systems.

Key words: L1, L2, ESL, EFL, English, Japanese, convergence, motion events, manner, path, clause

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1. Introduction

Linguistic convergence, where contrastive features in two or more languages progressively become less contrastive, is a phenomenon traditionally studied diachronically in the field of language contact. However, the concept has also been applied synchronically in the field of bilingualism (e.g. Bullock & Toribio, 2004; Cook & Bassetti, 2011; Pavlenko, 2011a). This paper argues that convergence between linguistic systems may also be a normal part of second language acquisition, even at lower proficiency levels.

We investigate monolingual and bilingual[1] descriptions of motion, focusing on how semantic information is structured syntactically. Given the cross-linguistic differences that have previously been reported in the clausal packaging of semantic information between Japanese and English (Allen et al., 2003; Kita & Özyürek, 2003, though note different findings for Japanese in Brown & Gullberg, in press), we observe how native Japanese users of English with intermediate-level knowledge of their second language may reconcile potential differences between their first (L1) and second (L2) languages in this domain. We examine the possibilities for bidirectional cross-linguistic influence, that is, the process by which an L1 and L2 affect one another. We ask to what extent this influence is mutual and whether L1 and L2 systems converge within an individual bilingual mind.

2. Background

2.1 Convergence in Bilingualism

The notion of convergence has been discussed in the field of language contact, where it is commonly viewed as the diachronic outcome of contact between speech communities whereby languages come to be more similar to one another (Muysken, 1997). Early discussions of convergence in individual bilingualism were framed in the 'one system-two system' debate and were restricted to advanced bilinguals, i.e. those with very advanced proficiency in two languages, revolving around such issues as combined versus separate mental lexicons (e.g. Schwanenflugel & Rey, 1986, versus Taylor, 1971), or the extent of language selectivity in lexical processing (e.g. Gerard & Scarborough, 1989, versus Dijkstra & van Heuven, 2002). More recent work has taken a less categorical and more process-oriented approach, allowing for 'emergent' and potentially 'transitional' relationships between the languages of a bilingual (e.g. Bullock & Toribio, 2004).

This paper employs Pavlenko's framework (e.g. 1999, 2005, 2011a), which provides a broad definition of bilingual, enabling the inclusion of those with less than advanced or functional proficiency in one or more of the languages. Pavlenko's framework defines convergence as one of seven processes involved in the restructuring of bilingual systems. These processes are outlined below:

1. Co-existence - the maintenance of language-specific categories or preferences in each of a bilingual's two languages.
2. Influence of the L1 on the L2 - the shaping of L2 performance in terms of L1 categories or preferences.

3. Convergence - differentiation of bilingual L1 and L2 performance from monolingual speakers of each of the respective languages.
4. Restructuring toward L2 - the gradual movement away from L1 categories or preferences towards those more typical of the L2.
5. Internalization of new categories - adoption of categories or preferences from the L2 that are absent in the L1.
6. Influence of the L2 on the L1 - the shaping of L1 performance in terms of L2 categories or preferences.
7. Attrition – loss of categories or preferences typical in the L1 as a result of an increasingly dominant L2.

(based on Pavlenko, 2011a, p. 246-248)

The seven restructuring processes are argued to take place over time depending on linguistic domain and on shifts in language development and use. Moreover, the mechanisms involved are not claimed to be mutually exclusive and may alternate or occur simultaneously. Under this framework, evidence of convergence may be found in cases where the two language systems of a bilingual are undifferentiated and where the bilingual patterns are distinct from monolingual patterns in a given linguistic domain. Such patterns are often characterized as "in-between performance" (Pavlenko, 2011a, p. 247) or L1-L2 "integration" (Bylund, 2011, p. 63), but can also consist of unique patterns which do not lie between the source and target languages (Bassetti & Cook, 2011) and sometimes arise from 'hypersensitivity' to features in one or both languages (Czechowska & Ewert, 2011).

Investigations of convergence are relatively scarce in comparison to

investigations of other components of Pavlenko's (2011a) taxonomy, in part due to the absence of studies incorporating within- and between-subject alongside within- and between-language designs.[2] Using between-subject analyses, an enormous amount of research has been dedicated to the influence of the L1 on the L2, which is widely attested in almost all linguistic domains and at various levels of L2 proficiency (see overviews in Cenoz, Hufeisen, & Jessner, 2001; DeAngelis, 2007; Gass & Selinker, 1992; Jarvis & Pavlenko, 2008; Kellerman & Sharwood Smith, 1986; Odlin, 1989; Odlin, 2008; Ringbom, 2007). In such work, attention is typically on L2 performance with little, if any, consideration of the L1 as an object of study, except as it affects the L2. However, a growing body of work has started to acknowledge influences of the L2 on the L1 in a number of linguistic domains (see overviews and papers in Cook, 2003b; Cook & Bassetti, 2011; Jarvis & Pavlenko, 2008; Pavlenko, 2011b), although Pavlenko (2011a) argues that research to date cannot distinguish between influence of the L2 on the L1 from the effects of L1 attrition, which is particularly problematic in studies examining bilinguals resident in the L2 community.

A few studies have explicitly included within-subject L1-L2 analyses and provided some direct support for the existence of L1-L2 convergence (in the sense of Pavlenko's (2011a) third process as identified above) in different areas of the linguistic system. In a study of event conceptualization, Bylund (2011) showed that in each of their languages, functionally bilingual Spanish-Swedish speakers displayed convergence in patterns of event segmentation. They encoded more events in L2 Swedish narratives than monolingual Swedish speakers did, but fewer events in L1 Spanish narratives than monolingual Spanish speakers did, resulting in an integration of L1-L2 performance in

this area. However, these same speakers resembled their monolingual counterparts in each of the languages in the use of anaphoric linking devices, resulting in differentiated L1-L2 performance in temporal structuring. L1-L2 convergence in bilingual systems has been found in further linguistic areas such as lexicalization (Filipovic, 2011); lexical categorization (e.g. Ameel, Malt, Storms, & Van Asschec, 2009; Gathercole & Moawad, 2010); pragmatics (e.g. Cenoz, 2003); and phonetics (e.g. Flege, 1987). A merged L1-L2 system has been found in conceptual representations of number (Athanasopoulos, 2006), gender (Bassetti, 2011), temporal sequencing (Chen & Su, 2011), motion (Czechowska & Ewert, 2011), color (Athanasopoulos, Sasaki, & Cook, 2004), and shape (Cook, Bassetti, Kasai, Sasaki, & Arata Takahashi, 2006); as well as recognition memory for events (Filipovic, 2011), although the process may be mediated by factors such as age of exposure to the L2 (e.g. Bylund, 2009; Mennen, 2004).

The majority of work on L1-L2 convergence thus far has focused on those with very high formal and functional proficiency in both of their languages, who are generally resident in the L2 community. Much less research has observed speakers with lower proficiency in the L2, including those still resident in the L1 community. The little work that does exist has generated somewhat mixed results.

Experiments on categorization of inanimate objects/substances by Japanese L1 speakers of English L2 have shown strong effects of L2 proficiency (Athanasopoulos, 2007), specifically no convergence between the L1 and an L2 at 'intermediate' levels of L2 proficiency (Athanasopoulos, 2006) or with less than three years' residence in the L2 community (Cook et al., 2006). Similarly, differences between monolingual and bilingual performance in categorical similarity judgments of motion events based on differences in

Manner or Path were found for high proficiency (Cambridge CAE level) but not for intermediate L2 proficiency (Cambridge FCE level) Polish L1 speakers of English L2 (Czechowska & Ewert, 2011). Furthermore, in contrast to the bilingual results above, L1-L2 convergence in Voice Onset Time was not found among English-speaking learners of French with a moderate degree of L2 proficiency (though proficiency was not formally tested) and less than a year of residence in the L2 community (Flege, 1987) (see also Chen & Su, 2011, for a similar lack of effects in perceptions of temporal sequencing among lower proficiency Chinese learners of English). Finally, in terms of the directness of strategies for making requests, Chinese learners of English with intermediate as well as advanced L2 proficiency displayed potentially converging patterns midway between those of monolingual speakers of each of the languages, but still differentiated their L1 and L2 (Su, 2010).

In contrast, other work has revealed merged L1-L2 performance at intermediate levels of proficiency with no residence in the L2 community. In work on sentence processing in Chinese L1 speakers of English L2, Su (2001) detected Chinese dominant patterns in L1 and L2 at beginning levels of L2 English proficiency (influence of L1 on L2), mixed L1-L2 patterns at intermediate levels of L2 proficiency (convergence), and English dominant patterns in L1 and L2 at advanced levels of L2 proficiency (restructuring of L1 towards L2). However, the same results did not hold for English L1 speakers of Chinese L2, who differentiated their L1 and L2 strategies. A series of studies on Japanese L1 speakers of English L2 at an intermediate level of L2 proficiency, on the other hand, showed convergence in several linguistic domains. These bilinguals used a converged L1-L2 system of motion event construal, such that they encoded the goal or

endpoint of the motion significantly more often in their L1 and L2 than monolingual speakers of Japanese and English (Brown & Gullberg, 2011). In addition, the bilinguals patterned between monolingual speakers of Japanese and English with respect to how information about motion was distributed across speech and gesture (Brown & Gullberg, 2008) and in the viewpoint, character versus observer, taken in gestures depicting motion (Brown, 2008) (see also Czechowska & Ewert, 2011, for in-between performance among intermediate level Polish speakers of English in ratings of the salience of trajectories of motion, as well as other effects of early L2 exposure in children and in adults after training, e.g. Boroditsky, 2001; Boroditsky, Schmidt, & Phillips, 2003; Kecskes & Papp, 2000; Yelland, 1993).

To summarize, in comparing the work on advanced bilinguals versus lower proficiency second language users, we see that work on advanced bilinguals often refers to dominant and non-dominant languages, but tends to assume the existence of at least partial interaction between the two languages and focuses on identifying the nature of that interaction. Therefore, in the context of Pavlenko's (2011a) taxonomy, all processes involving interaction are addressed, with substantial evidence provided for the existence of convergence between advanced bilingual language systems. In contrast, most of the studies on second language learners have generally considered performance solely in the second language, which can provide evidence of only one side of cross-linguistic interactions: L1 influence on the L2. From the studies that have examined both the L1 and L2 of a second language learner, we have a picture that is far from complete and partially conflicting. At moderate levels of L2 proficiency, the evidence suggests differentiation between the L1 and L2 in some conceptual representations and

pragmatics, but integration of the L1 and L2 in other conceptual representations, event construal, sentence processing, and gesture patterns, with differential effects of immersion in the L2 community. To contribute to the debate on the extent of interaction between languages in the developing bilingual mind, this study investigates L1-L2 convergence in the syntactic packaging of semantic information in descriptions of motion. The domain of motion, specifically the syntactic structuring of information about Manner and Path at the level of the clause, is one that offers cross-linguistic differences rich enough to make potentially converging L1-L2 patterns more visible.

2.3 Clausal Packaging of Motion in English and Japanese

Description of motion is a domain that varies cross-linguistically with respect to the ways in which semantic elements are mapped onto lexical items. Talmy (1985; 1991, 2000a, 2000b) has argued that the encoding of Manner of motion, i.e. the way in which a protagonist moves (e.g. *jump, roll)*, depends on how Path of motion, i.e. the trajectory followed by protagonist (e.g. *up, down),* is encoded. In so-called satellite-framed languages such as English, Path is typically lexicalized in a satellite outside the main verb root, leaving the main verb slot free for lexicalization of Manner. This is demonstrated in example (1), with Manner and Path expressions underlined. In contrast, verb-framed languages such as Japanese tend to lexicalize Path in a main verb root, leaving Manner to be lexicalized in a participial adverbial or subordinated verb as shown in examples (2) and (3) respectively.

(1) The ball <u>rolls</u> <u>down</u> the hill.

(2) Booru-ga saka-o <u>korogatte</u> <u>iku</u>

ball-NOM[3] hill-ACC roll.CON go

"The ball goes rolling on the hill."

(3) Mawari-nagara saka-o oriru

rotate-while hill-ACC descend

"(It) descends the hill while rotating."

Although such distinctions are rarely obligatorily grammaticalized, and both satellite- and verb-framed languages have alternative options available for description of motion, these differences appear to affect how semantic information is syntactically structured at the level of the clause. The constructions employed by satellite-framed languages, e.g. Manner main verb + Path satellite, facilitate the packaging of Manner and Path in a single clause. The constructions employed by verb-framed languages e.g. Manner main verb + Path main verb, in contrast, generally entail the production of multiple clauses. Indeed, the use of directional adpositional phrases in combination with main verbs of Manner is argued to be restricted in verb-framed languages such that they cannot be used for telic events (Aske, 1989) or events involving state changing boundary crossing (Slobin & Hoiting, 1994). Support for a cross-linguistic difference in clausal packaging has been found for English and Japanese (Allen et al., 2003; Kita & Özyürek, 2003). However, recent work challenges the clausal packaging pattern attributed to Japanese. In a study of monolingual speakers of Japanese and native Japanese speakers with knowledge of English, Brown and Gullberg (in press) found that monolinguals lexicalized Manner in a variety of ways and preferred single clause packaging of Manner and Path, a pattern normally associated with satellite-framed languages. Non-

monolingual Japanese speakers, in contrast, produced significantly fewer single clause constructions, displaying an equal preference for both packaging types. As discussed in Brown and Gullberg (in press), the discrepancy between this and earlier studies could be due to methodological differences in the segmentation of spontaneous speech or to the possibility that the participants in other studies were not monolinguals but bilinguals. Either way, precise characterizations of Japanese and English are somewhat unclear.

3. The Current Study

This study investigates the potential for linguistic convergence between established and emerging linguistic systems within the bilingual mind. We compare language production from monolingual English and Japanese speakers to L1 and L2 production from native Japanese speakers with intermediate knowledge of English as a foreign and second language, manipulating residence in the L2 community as a variable in order to examine the effects of immersion experience among the ESL speakers, and at the same time control for the possibility attrition among the EFL speakers. The clausal packaging of semantic information in descriptions of motion serves as the focus of enquiry. With cross-linguistic between- and within-participant analyses, we seek to (1) investigate how L1 Japanese users of L2 English as a foreign versus second language distribute information about Manner and Path across clauses as compared to monolingual speakers of the source and target languages, and (2) ask whether L1-L2 convergence in the domain of clausal packaging is possible at an intermediate level of L2 proficiency. Following Pavlenko (2011a), we interpret differentiation between bilinguals and

monolinguals but a corresponding lack of differentiation within individuals, specifically bilinguals in L1 and L2, as evidence of convergence.

4. Method

4.1 Participants

Fifty-six adults aged 18-48 participated in this study: 15 monolingual speakers of Japanese resident in the Kansai region of Japan, 13 monolingual speakers of English resident in and around Boston, USA, 15 native Japanese speakers with knowledge of English resident in the Kansai region of Japan (speakers of English as a foreign language - EFL), and 13 native Japanese speakers with knowledge of English resident in and around Boston, USA (speakers of English as a second language - ESL). The contrast in residence among the L2 speakers enabled examination of effects of L2 immersion, while at the same time controlling for the possibility of L1 loss (cf. Pavlenko, 2011a). Effects seen only in the production of ESL speakers might be explained by immersion in the L2 community with the additional possibility of loss of the L1, but similar patterns in both the ESL and EFL groups would render such an explanation less likely.

All participants were recruited initially on the basis of their responses to a detailed questionnaire targeting biographical information and information on language usage (Gullberg & Indefrey, 2003). As it is practically impossible to find truly monolingual speakers of any language, individuals who reported relatively minimal exposure to an L2, no active study of an L2, and no use of L2 in their everyday lives were considered 'functionally monolingual' for the purposes of this study. In contrast, participants

reporting active use of their L2 were considered bilingual ('second language users' in Cook, 2003a).

The monolingual speakers of Japanese all reported exposure to English in grade-school and one also reported previous study of Spanish. The monolingual speakers of English reported some exposure to a variety of languages, including French, German, Italian and Spanish. However, no participant in either monolingual group reported any recent second language study or use. The Japanese EFL speakers reported that they had never lived in an English-speaking country, had acquired English primarily through formal study in Japan, and used English on a daily basis. The Japanese ESL speakers had been residents in the U.S. for between one and two years at the time of testing, had acquired English through formal study in Japan and the U.S., and also reported daily use of the language.[4] Although both groups could be considered functional bilinguals, the ESL group reported significantly greater daily use of English than the EFL group (t (24) = -3.085, p = .005).[5]

To control for knowledge of English, proficiency was measured in three different ways. All Japanese-speaking participants, monolingual and bilingual, reported age and length of exposure and rated their own proficiency in speaking, listening, writing, reading, grammar, and pronunciation. Two additional standardized measures of English proficiency were administered to the bilinguals.[6] First, oral proficiency was evaluated using the Cambridge ESOL oral testing rubric for the First Certificate in English (FCE), a mid-level exam in the Cambridge suite of exams. The rubric was applied to the narrative data elicited as part of the study, and two ex-Cambridge-certified examiners scored grammar and vocabulary, discourse management, pronunciation, and global achievement.

Finally, bilingual participants also completed the first grammar section (cloze test – a quarter of the entire exam) of the Oxford Placement Test (Allan, 1992).

The Japanese monolingual and two groups of bilingual speakers significantly differed in self-ratings of English proficiency, (χ^2 (2) = 12.101, p < .001), with the monolingual speakers (*M:* 1.38/5) rating themselves significantly lower in knowledge of English than both the EFL speakers (*M:* 2.97/5, p < .001) and the ESL speakers (*M:* 3.27/5, p < .001), who did not significantly differ from each other (p = .406). In the standardized measures, the Japanese EFL speakers (*M:* 4.2/5) were slightly more proficient than the Japanese ESL speakers (*M:* 3/6/5) as measured by the Cambridge FCE criteria, a difference that was statistically significant (*t* (26) = 2.232, p = .034), but the groups did not significantly differ according to the Oxford Placement Test (*M:* 78% versus 75%, *t* (25) = .795, p = .434).[7] From Cambridge ESOL's standard setting equivalence estimates, the FCE exam maps onto level B2, "independent user", of the Common European Framework of Reference for Languages (CEFR) developed by the Council of Europe, a level preceded by the A1 and A2 'basic user' levels and followed by the C1 and C2 'proficient user' levels. Overall, despite a slight difference in proficiency as measured by the FCE rubric, both groups of bilingual speakers could be considered 'intermediate' CEFR B2 level users of their L2 according to the majority of L2 proficiency measures. Table 1 summarizes participants' language usage and English proficiency data.

Insert Table 1 about here

4.2 Procedure

Participants were asked to watch the Sylvester and Tweety cartoon, "Canary Row" (Freleng, 1950) and describe the events. Monolingual participants narrated in their L1 only. Second language speakers narrated in both their L1 and L2 in a counter-balanced order across participants. Bilinguals were requested to attend their second appointment at least three days after their first and interacted with a native speaker of the relevant language, either an English- or Japanese-speaking confederate in order to control for the effects of "language mode" (Grosjean, 1998). Prior to narrative elicitation, the participant and experimenter engaged in small talk in the target language to promote a "monolingual mode". In order to maximize the potential for mention of individual motion events, the cartoon was broken down and shown in scenes, separated by a blank screen (cf. McNeill, 1992). The experimenter asked participants to watch the series of scenes and describe each one immediately after viewing. The confederate was trained to appear engaged in the descriptions, but to avoid asking and answering questions, particularly with respect to Manner or Path of motion.

Prior to narrating in the L2, second language speakers were provided with a word list containing key, low frequency nouns from each scene, e.g. *birdcage, trolley*, which were predicted to be difficult in the L2, English, at this level of proficiency. The word list remained accessible throughout the appointment, and participants were free to consult it at any time, which reduced the likelihood of requests for lexical assistance from the listener.

4.3 Clausal Segmentation and Coding

Native speakers of English and Japanese transcribed narratives in their respective languages. Transcriptions were linearly segmented for coding using the framework developed by Berman and Slobin (1994`). Narratives were divided into "clauses", defined as "any unit that contains a unified predicate … (expressing) a single situation (activity, event, state)," (p. 660). Descriptions of four specific motion events that were reliably mentioned by participants were initially selected for examination. These target motion events contained different combinations of Manner and Path:

CLIMB + TROUGH - in which the protagonist, Sylvester, climbs up through the inside of a drainpipe in order to reach Tweety.

ROLL + DOWN - in which Sylvester, having swallowed a bowling ball, seemingly rolls down a street into a bowling alley.

CLAMBER + UP - in which the Sylvester clambers up the outside of a drainpipe in order to reach Tweety.

SWING + ACROSS - in which the Sylvester swings on a rope across a street up in order to reach Tweety.

Only those event descriptions that included mention of both Manner and Path could subsequently be coded for clausal packaging. Talmy's (1991) original framework predicted that speakers of verb-framed languages may omit Manner from motion descriptions, and this has been found in empirical work on languages such as Spanish (e.g. Slobin 2006) and specifically Japanese (Brown & Gullberg 2008). Analyses of clausal packaging of Manner and Path were therefore based on a total of 201 event descriptions in which both Manner and Path were mentioned naturally and without

prompting (27 from monolingual Japanese speakers, 47 from monolingual English speakers, 32 from Japanese EFL speakers in L1 and 37 in L2, and Japanese 26 from ESL speakers in L1 and 32 in L2).

Calculations of the frequency of mention of motion largely depends on the morphosyntactic recourses examined. When lexical items other than verbs are examined, for example, speakers of verb-framed languages are found to mention Manner more often than would normally be predicted (cf. Hohenstein, Eisenberg, & Naigles, 2006; Naigles, 1998). Therefore, a fairly inclusive system was followed by which any element encoding information about the source, direction, goal, and form of the protagonist's translocational motion was coded. For expression of Path, this included deictic verbs (e.g. *go*), adverbs (e.g. *up)*, prepositions (e.g. *to*) and post-positions (e.g. *kara* 'from'). For expression of Manner, this included main, subordinated, and compound verbs (e.g. *roll, while rolling, koroge-ochiru* 'roll-fall'), adverbial participials (e.g. *korogatte iku* 'rolling go'), mimetics (e.g. *gorogoro* 'roll'), and comparison phrases (e.g. *like Tarzan*).

Examples of clausal segmentation and coding in descriptions of the 'SWING ACROSS' event in English and Japanese are shown in (4) and (5), with clause boundaries marked by brackets and Manner and Path expressions underlined.

(4) [*he's just going to swing across into the window from one building to the next*]

(5) [*roopu-o* *kou* *yurashite*]
rope-ACC like swing.CON
[*tori-o* *tsukamaeni*]
bird-ACC in.order.to.catch
[*ikouto* *shitandesukeredomo*]

try.to.go did.but

"In order to catch the bird, (he) swung on a rope and tried to go"

Example (4) from a native speaker of English contains a Manner verb, *swing,* with four adverbial Path expressions, *across, into, from,* and *to*, combined in a single clause. Example (5) from a native speaker of Japanese describing the same event shows multiple clauses separating the components of Manner and Path: Manner expressed as a main verb, *yurasu* "swing", in the first clause, and Path expressed in a main verb, *iku* "go", in the third clause.

The segmentation and coding of L2 data was complicated by the numerous false starts, repetitions, and unclear semantics typical of this level of proficiency. A particularly problematic example from an EFL speaker describing the 'ROLL DOWN' event is provided in (6) with potential Manner and Path expressions underlined.

(6) [*there was <u>sucked</u> <u>into</u> the ah the cat <u>sucked</u> <u>into</u> the bowling center*]

One possibility for clausal segmentation in example (6) would have been to treat the noun phrase *the cat* as the object of an initial passive construction *was sucked into,* and then to segment a new clause, without an overt subject, beginning at the second instance of the verb. Crucially for analyses of clausal packaging, this would have yielded two clauses each with Manner and Path. Given the disfluency marked by a hesitation and subsequent repetition, however, the first five words were treated as a false start and were not included in the clause proper. For the purposes of segmentation, the clause was determined to begin at *the cat* as the subject. Coding was further complicated by the fact that the verb *suck* is not an appropriate description of the cat rolling into the bowling alley. Since this is arguably a representation of Manner of motion and no other

expressions in the description more appropriately fit the stimulus, this expression was coded as a target Manner verb. In general, when at least parts of a preceding phrase were repeated, the first phrase was treated as a false start and maintained as part of the main clause, only one instance of a repeated expression was coded, and details of the stimuli were used to interpret unclear semantics.

4.4 Reliability of Coding

To establish inter-rater reliability, 15% of the entire data set was segmented and coded by a second coder. For L1 data in English and Japanese, 95% agreement was reached on the selection of relevant clauses for coding, and of these, 100% agreement was reached on semantic coding. For L2 data in English, 90% agreement was reached on the selection of relevant verb clauses for coding, and of these, 100% agreement was reached on semantic coding. Disagreements were settled by accepting the judgment of the initial coder.

4.5 Analyses

Four main analyses were conducted:

1. A between-participant analysis compared clausal packaging of Manner and Path in the EFL speakers versus the ESL speakers in both their L1 and L2 to test for any differences between the Japanese speakers residing in Japan vs. in the US.
2. A between-participant analysis compared clausal packaging in the L1 groups: English monolingual, Japanese monolingual, native Japanese speakers with knowledge of English in their L1, Japanese.

3. A between-participant analysis compared clausal packaging in monolingual L1 versus L2 groups: English monolingual, Japanese monolingual, native Japanese speakers in their L2, English.
4. A within-participant analysis compared clausal packaging in the L1 and L2 of the second language speakers.

Since the types of clausal packaging types considered - single and multiple - were categorical and mutually exclusive, we focused all analyses on the use of single clause packaging of Manner and Path. Given the sample sizes and data distributions, non-parametric equivalents of ANOVA, Independent-Sample and Paired-Sample T-Tests, were used throughout, specifically Kruskal-Wallis for multiple-group analyses, Mann-Whitney for between-group analyses, and Wilcoxon for repeated-measures analyses.

5 Results

5.1 Clausal Packaging in Bilingual Production by Residence

The first between-participant analysis examined clausal packaging of Manner and Path within languages by the EFL speakers versus the ESL speakers first in their L1, Japanese, and second in their L2, English, focusing on how often speakers packaged Manner and Path together in single clauses. Table 2 shows the mean proportion of single clauses containing both Manner and Path in event descriptions that mentioned both Manner and Path across groups.

Insert Table 2 about here

There were no significant differences between the EFL speakers in Japan versus the ESL speakers in the U.S. in the L1 (z = -.249, p = .803) or the L2 (z = -1.664, p = .096); therefore, residence in the L2 community appeared not to have an impact on clausal packaging among Japanese speakers of English. EFL and ESL groups were subsequently collapsed across residence, although not across language, for all further analyses.

5.2 Clausal Packaging in L1 Production

The second between-participant analysis examined clausal packaging cross-linguistically across L1 groups. All L1 speakers exhibited some variety in clausal packaging of Manner and Path. Brown and Gullberg (in press) demonstrated that monolingual Japanese speakers structured information in the packaging type commonly associated with verb-framed languages, with Manner and Path expressed in separate clauses as illustrated in (7).

(7) [*subette*] [*bouringujyou ni* *haitte* *itte*]
slide.CON bowling.alley to enter.CON go.CON
"(He) slides and goes into the bowling alley"

However, they were also shown to produce alternative constructions with Manner and Path expressed in a single clause such as those listed in examples (8) – (11), a pattern generally associated with satellite-framed languages (Brown & Gullberg, in press).

(8) [*korogatte* *iku*]
rolling.CON go.CON

"(He) goes rolling"

(9) [*guruguru* *gorogoro-to* *haitte* *itte*]

roll-MIMETIC roll-MIMETIC-COMP enter.CON go.CON

"(He) enters going ROLL ROLL"

(10) [*heya* *ni* *tobi-utsurou-to*]

room to fly-try.to.move-COMP

"(He) tries to fly to a room"

(11) [*kou* *yoji-nobotte*]

like clamber-climb.CON

"(He) climbs up"

In (8) there is use of a mono-clausal, complex motion predicate (Mastumoto, 1996), a combination of a Manner participial, *korogatte* "rolling", and deictic Path verb, *iku* "go"; in (9) a combination of Path verbs, *haitte* "entering" and *iku* "go" and Manner mimetics, "words which imitate sound or shape," (Weingold, 1995, p. 319), *guruguru* "roll" and *gorogoro* "roll"; in (10) the use of a Manner-Path compound verb, *tobi-utsuru* "fly-move" with a Path post-position, *ni* "to"; and in (11) with a Manner-Path compound verb alone, *yoji-noboru* "clamber up".

Brown and Gullberg (in press) also showed that Japanese EFL and ESL speakers in their L1, Japanese, frequently structured information in the packaging type predicted for verb-framed languages, with Manner and Path expressed in separate clauses as illustrated in (12). Yet like their monolingual counterparts, they also produced alternative single-clause packaging types more typical of satellite-framed languages, such as those shown in examples (13)-(16).

(12) [*hashiru*] [*bouringujyou made haitte itte*]

run bowling.alley to enter.CON go.CON

"(He) runs and goes into the bowling alley"

(13) [*kakette itte*]

running.CON go.CON

"(He) goes running"

(14) [*syuu-tto taazan mitai-ni itte*]

swing-MIMETIC-COMP Tarzan looks.like go.CON

"Like Tarzan, (he) goes WHOOSH"

(15) [*biru kara biru e tobi-utsurou-to*]

building from building to fly-try.to.move-COMP

"(He) tries to move flying from a building to a building"

(16) [*yoji-noborou-to*]

clamber-try.to.climb-COMP

"(He) tries to climb up"

These examples contain many of the same types of constructions used by monolingual speakers of Japanese: in (12), a Manner verb, *hashiru* "run" in one clause followed by a combination of a Path post-position and Path verbs, *made* "to/until", *haitte* "entering", and *iku* "go"; in (13) a mono-clausal, Manner-Path complex motion predicate consisting of a Manner participial, *kakette* "running", and a deictic Path verb, *iku* "go"; in (14) a mono-clausal combination of Manner mimetics, *syuu* "swing", a Manner adverbial, *taazan mitai-ni* "looks like Tarzan", and a Path verb, *iku* "go"; in (15) the use of a mono-clausal Manner-Path compound verb, *tobi-utsuru* "fly.move" with Path post-positions,

kara “from” and *e* “to”; and in (16) a mono-clausal Manner-Path compound verb alone, *yoji-noboru* “clamber up”.

The new dataset presented here showed that monolingual English speakers structured information about motion in the packaging type predicted for satellite-framed languages with a main Manner verb, e.g. *climb,* and associated Path adverbial e.g. *up,* expressed in a single clause as illustrated in (17).

(17) [*he climbs up the drainpipe*]

They also produced alternative constructions such as that shown in example (18), with one clause containing only a Manner verb, *swing,* followed by a second clause containing a Path verb and adverbial, *get over*.

(18) [*and he swings*] [*and tries to get over there*]

Again, a quantitative analysis focused on the frequency of use of the single clause packaging type among native Japanese and native English speakers. Figure 1 shows the mean proportion of clauses containing both Manner and Path in event descriptions where both Manner and Path were mentioned by monolingual English speakers, monolingual Japanese speakers, and native Japanese speakers with knowledge of English in their L1, Japanese.

Insert Fig. 1 about here

The groups differed significantly in the mean number of single clauses packaging both Manner and Path (χ^2 (2, N=53) = 9.916, p = .007). Follow-up tests revealed that native Japanese speakers with knowledge of English in their L1, Japanese, produced

significantly fewer single clauses packaging both Manner and Path than monolingual Japanese speakers (z = -2.252, p = .024) and monolingual English speakers (z = -2.806, p = .005), who did not differ from one another (z = -.824, p = .410). In sum, between-participant analyses of the L1 demonstrated clear differentiation between monolingual and bilingual L1 performance.

5.3 Clausal Packaging in L2 Production

The third between-participant analysis contrasted clausal packaging from L2 English speakers with that from monolingual speakers of the source language, Japanese, and target language, English. Representative data from the monolingual speakers can be found in example (7) to (11) for Japanese and (17) and (18) for English. English L2 users produced a variety of packaging types as shown in examples (19)-(22).

(19) [*he climbs up the wall pipe*]

(20) [*the cat was climbing on drainpipe*] [*and he finally got the floor*]

(21) [*and he was kept running*] [*and he went into the bowling place*]

(22) [*and then like swing like a Tarzan*] [*and then get to the other side*]

Example (19) represents the predicted single clausal package for Manner and Path in English, with the Manner verb, *climb*, plus Path adverbial, *up*, which was indeed used with considerable frequency in monolingual English discourse. With the exception of the lexical choice, *wall pipe,* this example can be considered target-like. However, just like monolingual target language speakers, L2 speakers also produced other packaging types. Example (20) contains a Manner-only clause with the Manner verb, *climbing,* followed by a clause containing Path, expressing the endpoint of the trajectory in a verb, *got*.

Example (21) illustrates a Manner-only clause with a Manner verb, *running,* followed by a Path-only clause with a verb and preposition, *went into*. Finally, in example (22), a Manner-only clause with a verb and comparison phrase, *swing like a Tarzan*, is followed by the Path-only clause, again expressing the endpoint of the trajectory in a verb and preposition, *get to.* Such examples demonstrate the multiple clause packaging type most commonly associated with verb-framed languages.

The distribution of the frequency of single clauses combining Manner and Path was calculated across the groups. Figure 2 shows the mean proportion of clauses containing both Manner and Path in event descriptions that mentioned both Manner and Path from monolingual English speakers, monolingual Japanese speakers, and native Japanese speakers with knowledge of English in their L2, English.

Insert Fig. 2 about here

Again, the groups differed significantly in the mean number of single clauses packaging both Manner and Path (χ^2 (2, N=56) = 12.992, p = .002). Native Japanese speakers in their L2, English, produced significantly fewer clauses packaging both Manner and Path than monolingual English speakers (z = -3.180, p = .001) and monolingual Japanese speakers (z = -2.588, p = .01), who, as shown above, did not differ significantly from each other. Again, between-participant analyses, this time of the monolingual L1 and bilingual L2, showed clear differentiation between monolingual and bilingual performance.

5.4 Clausal Packaging in Bilingual L1 and L2 Production

The final, within-participant analysis examined clausal packaging from the same native Japanese speakers in their L1 and L2. Examples of data from these speakers can be found in (12)-(16) for the L1, Japanese, and (19)-(22) for the L2, English. Examples (23)-(24) below are taken from individual speakers, who used both clausal packaging types in their L1 and L2.

(23) Multi-clause

L1: [*neko mo nanteiundesuka* <u>*hashitte*</u> *shimatta*]
cat too how.to.say run.CON did
[*de bouringujyou-no naka* <u>*made*</u> <u>*haitte*</u> <u>*itte*</u>]
and bowling.place-GEN inside until enter.CON go.CON
"The cat ran too, and went into the bowling alley"

L2: [*and he was he kept* <u>*running*</u>]
[*and he* <u>*went into*</u> *the bowling place*]

Single clause

L1: [*de* <u>*syuutto*</u> <u>*taazan mitai-ni*</u> <u>*itte*</u>]
and whoosh-MIMETIC Tarzan looks.like go.CON
"And goes WHOOSH like Tarzan"

L2: [*and he* <u>*climbed*</u> <u>*up*</u> *on the wall pipe*]

Example (23) shows an EFL speaker describing the ROLL DOWN event in the L1, packaging Manner in one clause with the verb *hashiru* "run", and Path in the following mono-clausal complex motion predicate with a post position, *made* "until" and two verbs

haitte "entering" and *iku* "go". When describing the same event in the L2, the speaker once again used multiple clauses, with the Manner verb *run* followed by the Path verb and preposition *go into*. However, the same speaker then used a mono-clausal construction to describe the SWING ACROSS event in the L1, expressing Manner through a mimetic *syuutto* "whoosh" and comparison phrase *taazan mitai-ni* "looks like Tarzan", and Path through a verb *iku* "go". Similarly, in the L2 description of the CLIMB UP event, the speaker combined Manner and Path in the same clause though a verb, *climb,* and adverb, *up*, respectively.

(24) Multi-clause

L1: [*sonomama* *korogari-nagara*]

in.that.way rolling-while

[*bouringujyou-no* *tokoro made* *haitte* *shimatte*]

bowling-alley-GEN place until enter.CON do.CON

"And while rolling, (he) enters the bowling alley,"

L2: [*and rolling*]

[*until he was finally reaching the reaching the small house*]

Single clause

L1: [*zutto* *saka-o* *korogari-ochite* *itte*]

all.the.way hill-ACC roll-descend.CON go.CON

"(He) goes down the hill rolling all the way"

L2: [*so that he can jump into the in the window at the other building in the opposite side*]

Example (24) depicts the parallel case from an ESL speaker. In her description of the

ROLL DOWN event in the L1, she packaged Manner in one clause with the verb *korogaru* "roll", and Path in the following clause with a post position, *made* "until" and verb *hairu* "enter". The speaker's description of the same event in the L2 also employed multiple clauses, with the verb *roll* followed by the verb *reach*. Like the previous EFL speaker, this ESL speaker also used single clause constructions, for the ROLL DOWN event in the L1, with a Manner-Path compound verb embedded in a complex motion predicate, *korogari-ochitte iku "*roll-descending go", and for the SWING ACROSS event in the L2, with a Manner verb, *jump,* and Path preposition, *in* (the first instance of *into* was deemed a false start and not coded).

A repeated measures analysis within the combined group of ESL and EFL speakers showed no significant differences in single clause packaging of Manner and Path in the L1, Japanese, and L2, English (z = -.157, p = .875). Therefore, strikingly, there was no differentiation in clausal packaging between the L1 and L2 within individuals even though they were speaking two languages traditionally regarded as typologically different in the domain of motion event expression.

6. Discussion

This study examined how monolingual and bilingual Japanese-English speakers syntactically structured semantic information, specifically how Manner and Path of motion were packaged into clauses. Two possible construction types, single versus multiple clause, were identified following the satellite- and verb-framed typological distinction in lexicalization of motion (Talmy, 1985; 1991, 2000a, 2000b).

Results for monolinguals revealed that, in line with predictions (cf. Allen et al., 2007; Kita & Özyürek, 2003), monolingual English speakers preferred single clauses packaging Manner and Path together, typically in main Manner verbs with Path adverbials. This matches the surprising pattern previously found for monolingual Japanese speakers (Brown & Gullberg, in press), in which speakers also preferred single clauses packaging Manner and Path together and employed constructions such as complex motion predicates with a Manner participial and deictic Path verb, Path verbs in combination with Manner mimetics, and Manner-Path compound verbs. As a result, there was no cross-linguistic, monolingual baseline difference in patterns of clausal packaging corresponding to the typological distinctions found in patterns of lexicalization of motion.

Despite the lack of difference between source and target language production in the monolingual baseline, comparisons of monolingual data and data from native Japanese speakers with intermediate knowledge of English as an L2 yielded striking within-language differences and between-language similarities. In both their L1, Japanese, and L2, English, bilingual speakers produced fewer single clause constructions packaging Manner and Path than both monolingual Japanese and English speakers. Furthermore, a within-participant analysis revealed no significant difference between the L1 and the L2 of the bilingual speakers. Importantly, these results did not appear to be affected by immersion in the L2 community. In other words, Japanese speakers of English patterned similarly in their L1 and L2 and EFL speakers in Japan patterned similarly to ESL speakers in the U.S. With a lack of differentiation between the L1 and L2 within individuals but differentiation between the L1-L2 performance of bilinguals versus monolingual speakers of each of the languages, this appears to fit Pavlenko's

(2011a) criteria for convergence with seemingly no effects of attrition, particularly for the L1. From these results, then, we propose that there is convergence between a Japanese L1 system and an English L2 system within individual language speakers at an intermediate level of L2 proficiency in the syntactic organization of semantic information, specifically clausal packaging of Manner and Path of motion.

An obvious question is why Japanese L1 speakers of English L2 exhibit this unique and convergent pattern in clausal packaging. Convergence often arises as a result of bi-directional, cross-linguistic influences, hence its frequent characterization as "in-between" performance (cf. Pavlenko, 2011a). In such cases, visible cross-linguistic contrasts in a given linguistic domain between monolingual speakers of two different languages may appear less contrastive or not contrastive at all for bilingual speakers of those same two languages. Voice Onset Time, as discussed previously, is a classic example, where a language with a longer VOT, e.g. English, significantly differs from a language with a shorter VOT, e.g. French, when monolingual production is considered. However, between-language VOT durations become more similar when bilingual French-English production is observed (Flege, 1987). On the surface, however, with a lack of contrast between monolingual speakers of the source and target languages, as seen among the monolingual Japanese and English speakers here, it is problematic to conceive of the bilingual Japanese-English patterns as the result of cross-linguistic influence. Their performance with respect to clausal packaging cannot be characterized as "in-between" Japanese and English.

One possible explanation for the unique syntactic organization of semantic information seen in bilingual production may involve cross-linguistic influence in a

linguistic domain below the level of the clause, e.g. the domain of lexicalization. In English, while alternatives exist, Manner is generally lexicalized in a main verb, as shown in examples (17)-(18) from monolingual speakers. In Japanese, on the other hand, speakers can choose between a number of options: main verbs, participial forms, compound verbs, and mimetics. Although these options are very frequent and accessible, they are not all equal with respect to simultaneous expression of Path. Manner can only co-occur with Path in the same clause in an adverbial participial form (25), in a compound form (26), and in mimetics (27) (examples repeated here for convenience). However, Manner expressed as a main verb can generally not co-occur with Path in the same clause, as shown in the hypothetical example in (28)

(25) [*korogatte* *itte*]

rolling.CON go.CON

"(He) goes rolling"

(26) [*yoji-noborou-to*]

clamber-try.to.climb-COMP

"(He) tries to climb up"

(27) [*guruguru* *gorogoro-to* *haitte* *itte*]

roll-MIMETIC roll-MIMETIC-COMP enter.CON go.CON

"(He) enters going ROLL ROLL"

(28) */? [*bouringujyou* *ni* *korogaru*]

bowling.alley to roll

"(He) rolls to the bowling alley"[8]

Under a cross-linguistic influence account focusing on influence of the L2 on the L1 in the area of Manner expression, bilingual Japanese-English speakers might be prompted by their knowledge of English, which overwhelmingly prefers to lexicalize Manner in a main verb, to employ this option, which is grammatical and available, in their L1, Japanese. In contrast, monolingual Japanese speakers, with no influence from English, might encode Manner in ways that do not syntactically constrain simultaneous expression of Path within a clause, i.e. participial forms, compound forms and mimetics. Any elevated use of main Manner verbs in Japanese by Japanese-English bilinguals would entail a syntactic constraint, leaving Path to be expressed in a separate clause and ultimately yielding a multi-clause construction for Manner and Path.

A preliminary post-hoc analysis of the data for lexicalization of Manner suggests that monolingual and bilingual Japanese speakers broadly follow the pattern hypothesized above. Table 3 displays the frequencies of lexicalization of Manner in the different constructions possible in Japanese: main verb, compound with Path verb, participial within a complex motion predicate, and other adverbial forms, e.g. mimetics and comparison phrases.

Insert Table 3 about here

The general picture from this analysis is that bilingual Japanese-English speakers appear to lexicalize Manner in a main verb or a compound verb in their L1, Japanese, more often than monolingual Japanese speakers do, and conversely that they lexicalize Manner in

participial forms and other adverbial forms (e.g. mimetics and comparison phrases) less often than monolingual Japanese speakers do. None of these differences are statistically significant, although the difference in frequency of use of participials approaches significance ($z = -1.675$, $p = .09$). However, collectively, the results suggest a trend for bilingual Japanese-English speakers to lexicalize Manner in their L1 in ways that syntactically constrain expression of Path in the same clause and for monolingual Japanese speakers to lexicalize Manner in ways that syntactically license expression of Path in the same clause.

If differential lexicalization of Manner is indeed a plausible explanation for bilingual L1 performance, we must consider in parallel what would yield the multi-clause pattern also observed in the L2 of bilingual Japanese-English speakers. As we have seen, use of main Manner verbs in English should not block simultaneous expression of Path in the same clause. And as shown in examples (19)-(22), bilingual Japanese-English speakers did indeed encode Manner in mains verbs in their L2. An explanation for clausal packaging in the L2 might be found in a simultaneous influence of the L1 on the L2 in the area of Path expression. Such an influence might have caused these learners, whose first language, Japanese, lexicalizes Path in main verbs, to adopt the same strategy for their L2, English. This pattern can be seen in examples (21) and (22), and several studies have shown influence of the L1 on the L2 in areas such as this (e.g. Cadierno & Ruiz, 2006; Inagaki, 2002a; Navarro & Nicoladis, 2005; Negueruela, Lantolf, Jordan, & Gelabert, 2004). Indeed, the use of a combined strategy of both verbs and adverbials for lexicalization of Path from Japanese speakers of English has been found in previous research on both the L1 and L2 (Brown & Gullberg, 2011).

Again, a post-hoc analysis of the data for lexicalization of Path suggests that Japanese speakers of English do lexicalize Path in verbs. Table 4 displays the frequencies of lexicalization of Path in the different constructions possible in English: main verb or other adverbial forms, e.g. adverbs and prepositions.

Insert Table 4 about here

Here, the difference between bilinguals and monolinguals is much clearer. Bilingual Japanese-English speakers lexicalize Path in a main verb in their L2, English, significantly more often than monolingual English speakers do ($z = -3.866$, $p < .001$), and lexicalize Path in other forms (e.g. adverbs and prepositions) significantly less often than monolingual English speakers do ($z = 3.057$, $p = .002$).

Taking these two proposed scenarios together, i.e. (1) the presence of L2 English causing Manner to be expressed in main verbs in L1 Japanese, and (2) the presence of L1 Japanese causing Path to be expressed in main verbs in L2 English, we would predict bilingual Japanese-English speakers to employ separate clauses, each packaging Manner and Path in main verbs, in each of the languages. Importantly, as Manner and Path can both be expressed in main verbs and adverbials in both of the languages, such predictions for use of multiple clause packaging would not be categorical, but rather distributional. This can clearly be seen in the data, as use of a given type of clausal packaging was not categorical for any of the language groups.

If such bi-directional, cross-linguistic influences are responsible for the

converging patterns between the L1 and L2 seen here, this may be the result of the frequency with which certain construction types, e.g. main verbs expressing Manner and Path, are encountered in English and Japanese. A frequency-based explanation would be in line with other usage-based accounts of language knowledge in general (see overview in e.g. Ellis, 2011), as well as usage-based accounts of multilingual language knowledge in particular (e.g. Hall, Cheng, & Carlson, 2006). In addition, such influences would support models that predict convergence in areas of similarity between bilingual grammars (e.g. Bullock & Toribio, 2004; Döpke, 1998; Filipovic, 2011; Müller & Hulk, 2001; Nicol, Teller, & Greth, 2001). In their introduction to a special issue on convergence in functional bilingualism, Bullock and Toribio (2004) define the phenomenon as a synchronic process of enhancement of similarities between two grammars, which engenders some kind of emergent and potentially transitional change in the linguistic system(s) (p. 91). The similarities exploited by Japanese L1 speakers of English L2 would be the availability of main verbs to lexicalize Manner and Path in each of the languages, which might subsequently yield the transition to an emergent structure for clausal packaging, i.e. multi-clause constructions. One might further argue that the use of these constructions among bilinguals reflects a gradual elimination of the more complex language specificities of one language in favor of the less complex specificities of another language, a model proposed by Ameel et al. (2009).

Although an explanation for the unique bilingual patterns of clausal packaging of Manner and Path in terms of bi-directional cross-linguistic influences seems plausible, further research needs to consider competing hypotheses. These include the possibility that bilingual speakers in general tend to differentiate semantic components in syntax

more than monolingual speakers, as has been proposed for children acquiring their L1 (cf. Bowerman, 1982), perhaps related to the generally slower language production observed among bilinguals (see e.g. Runnqvist, FitzPatrick, Strijkers, & Costa, forth.), for which an examination of the clausal packaging of semantic elements other than Manner and Path would be needed. In addition, data from other language pairings would serve to tease apart language specific, cross-linguistic influences from more general effects of bilingualism, labeled "micro" and "macro" effects by Bassetti and Cook (2011) (see Jarvis, 2000; 2010 for discussion of the evidence needed to verify the existence of cross-linguistic influence). Future research should also address weaknesses in the current study such as the slightly different levels of formal L2 proficiency between the two groups of bilinguals as measured by the FCE test, the second language knowledge of the 'monolinguals', which in the case of the English speakers included knowledge of verb-framed languages, and the time span (a minimum of three days) between L1 and L2 testing, which reduced drop-out rates but was less likely to reduce the effects of memory for the stimulus.

The convergence demonstrated here may not be permanent. Ameel and Malt (2009) define convergence in the mind of a bilingual as an "outcome" in opposition to a "process of evolution" (p. 271), but convergences in L1-L2 grammars may alternatively be viewed as intermediate stages in development, and therefore part of a larger process. Pavlenko (2011a) highlights the dynamism of two languages in interaction within a single mind, arguing that the restructuring of bilingual systems is a developmental phenomenon, but one that is complex and non-linear. It remains to be seen, then, whether the L1 and L2 patterns seen among the native Japanese speakers with intermediate level knowledge of

English would prevail if and when the individuals reached a more advanced state of L2 proficiency. Indeed, in a study of sentence combining in Chinese L1 speakers of English L2, Chen (2006) found that bilingual L1 patterns only differed from monolingual L1 patterns at an intermediate but not an advanced level of L2 proficiency (see Tversky, Kugelmass, & Winter, 1991, cited in Bassetti & Cook, 2011, for initial effects of bilingualism that weaken over time). We are very far from an understanding of the development of and interaction between the seven processes in Pavlenko's (2011a) restructuring framework. For that, longitudinal studies observing different linguistic domains and different language pairings would surely provide valuable insights.

The need for further research notwithstanding, there are clear implications from the findings presented here. "Interlanguage" (Selinker, 1972) is a concept traditionally only associated with L2 performance, and interlanguage performance that differs from target language performance is generally regarded as non-target-like. A partial analysis of bilingualism observing only L2 production might have simply concluded that L2 users at this level of proficiency do not yet possess the target-like syntactic capability to package Manner and Path in a single clause. However, given that the same speakers show parallel patterns in their L1, we may begin to see the flip side of interlanguage, to question the notion of what constitutes native speakerhood, and to query assessments of non-target-like performance. Furthermore, Bassetti and Cook (2011) state that the "most straightforward" bilingual research generally proceeds from a previously observed gap between the source and target languages. This research was undertaken following the same principle, albeit with a conflicting picture of clausal packaging of Manner and Path in Japanese (cf. Allen et al., 2007; Brown & Gullberg, in press; Kita & Özyürek, 2003). If

the lack of a monolingual baseline difference between these particular source and target languages had been clearly known from the outset, there would have been little reason to predict a gap between the first and second language that Japanese speakers of English would have to reconcile and little motivation for any empirical investigation. This would have concealed an interesting domain in which monolingual and bilingual L1-L2 performance is differentiated. The findings presented here point to a need for more exploratory work that does not limit itself to parts of the language system where cross-linguistic differences lie in monolingual baselines, but to broader investigations that seek to characterize the bilingual linguistic system more fully.

Similar cautionary notes can be found elsewhere in the literature. Grosjean (1989) has argued that a bilingual should not be expected to resemble two monolinguals in one. Likewise, Cook (1992) has proposed the concept of "multicompetence", in which the multiple competencies exhibited by multilinguals differ from single competencies exhibited by monolinguals, proposing that "the two or more languages of multicompetence form a total language system rather than independent systems" (p. 566). These positions impact fields such as language assessment, where benchmarking against a perceived native speaker "standard" is common practice (cf. Zhang & Elder, 2011), and language typology, where language descriptions based on language use do not often consider the psycholinguistic effects of multilingualism (cf. Gullberg, 2012). One clear message from all such work is that prudent research and pedagogy will not view an individual's multicompetent performance in one language in isolation from their performance in the other language.

To conclude, this paper argues that, in addition to situations of language contact between speech communities and individual cases of advanced bilingualism, convergence between linguistic systems may also operate in the context of an individual who is arguably still in the process of developing a second language. Thus, convergence between bilingual systems may be a phenomenon that emerges much earlier in natural language development than has previously been thought (cf. Athanasopoulos, 2006; Cook et al., 2006; Flege, 1987; Nicol et al., 2001). Furthermore, L1 Japanese speakers of L2 English even at this CEFR B2 'independent' but still 'intermediate' stage of L2 proficiency may exhibit evidence of at least four of the processes involved in the restructuring of the bilingual grammar outlined by Pavlenko (2011a). *Coexistence of the L1 and L2* can be seen in the speakers' continued use of lexicalization patterns employed by monolingual speakers of the source and target languages. *Influence of the L1 on the L2* may be seen in the L2 English speakers' use of verbs to lexicalize Path, a pattern typical of their source language. *Influence of the L2 on the L1* may be seen in the L1 Japanese speakers' lexicalization of Manner in main verbs, a pattern typical of the target language. And *convergence* can be seen at the level of the clause, where L1-L2 bilingual performance is differentiated from monolingual source and target language performance. Importantly, we claim that the possible additional process of *attrition* is not at work since results from the EFL speakers, who continue to reside in the source language community, match those of ESL speakers, who have become immersed the target language community (although see Schmid & Kopke, 2007, for a broader view of attrition). Finally, we propose that although they may be a consequence of bi-directional cross-linguistic influences elsewhere in the system, convergent L1-L2 patterns may not fall between divergent

monolingual baselines but occupy a unique place of their own (cf. Bassetti & Cook, 2011). The convergence shown here may be transitional, may be restricted to native Japanese speakers with intermediate-level knowledge of English, and may not be seen in all areas of the linguistic system, but convergence should be considered a possibility at any stage in the development of a bilingual grammar.

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Notes

[1] We use the term "bilingual" here to refer to an individual with familiarity with two languages regardless of profciency level or age of acquisition. The term also includes multilinguals with knowledge of more than two languages. However, the focus in this paper is restricted to examination of convergence between only two linguistic systems.

[2] Of course, as some constructions are relevant for one language and not another, not all linguistic domains lend themselves to within-subject, between-language comparisons, which explains their absence in some cases.

[3] Abbreviations used in examples are ACC = accusative case, GEN = genitive case, NOM = nominative case; CON = connector, TOP = topic marker.

[4] Other research (e.g. Cook et al., 2006; Dewaele, 1999) has found effects of an L2 on an L1 only after two or three years of residence in the L2 community, but a period of one to two years of residence was used for the ESL speakers here in order to ensure comparable formal proficiency with the EFL speakers (cf. Athanasopoulos, 2006).

[5] One EFL participant and one ESL participant did not report the number of hours of English usage per day, just that the language was used daily.

[6] As the Japanese monolinguals reported no active use of English, it was considered pragmatically inappropriate to administer either of the standardized proficiency tests of English.

[7] One bilingual participant did not take the Oxford Placement Test.

[8] Like other verb-framed languages, in which directional adpositions rarely appear with main Manner verbs (cf. Aske, 1989, Slobin & Hoiting, 1994), Japanese may be similarly constrained. This may explain the ungrammaticality of example (28), although see Inagaki (2002b, p. 191, footnote 11) for discussion of variations in native speaker judgments of sentences such as these as well as an alternative analysis of grammaticality constraints. In addition, note that *John-ga gakkoo-made hashitta/aruita* 'John walked/ran to school' (Inagaki, 2002b:191) is commonly accepted, which may reflect semantic differences concealed in translation equivalents, e.g. of *made* "to/until".

Table 1: *Summary of language usage/proficiency data*

Language background	Monolingual Japanese (n = 15)	EFL speakers (n = 15)	ESL speakers (n = 13)	Monolingual English (n = 13)
Mean Age	39 (range 34-44)	36 (range 19-47)	30 (range 21-45)	27 (range 18-48)
Mean AoE[a]: English	12.3 (range 7-14)	11.9 (range 9-13)	12.8 (range 12-14)	Birth
Mean usage[b]: English	0 hrs	3 hrs (range .5-8.5)	7 hrs (range 1-15)	NA
Mean self-rating[c]: English	1.38 (range 1-2.5)	2.97 (range 2-4.2)	3.27 (range 1.8-4.3)	NA
Mean FCE[d] Score	NA	4.17 / 5 (range 2.5-4.7)	3.64 / 5 (range 2.5-4.6)	NA
Mean Oxford Score[e]	NA	78% (range 60-90%)	75% (range 58-85%)	NA

[a] Age of exposure; [b] Hours of current usage per day; [c] A composite score of self ratings of individual skills (listening, speaking, reading, writing, grammar, and pronunciation); [d] A composite score of Cambridge First Certificate in English ratings (grammar and vocabulary, discourse management, pronunciation, and global impression); [e] Scores from the first half of the grammar portion of the Oxford Placement Test.

Table 2*: Mean proportion (SD) of clauses containing both Manner and Path in EFL and ESL speakers in L1 and L2*

Language background	EFL Speakers in L1, Japanese (n = 14) [a]	ESL Speakers in L1, Japanese (n = 11)	EFL Speakers in L2, English (n = 15)	ESL Speakers in L2, English (n = 13)
Mean Prop. Of Clauses	.53 (.29)	.56 (.23)	.56 (.31)	.37 (.26)

[a] Participant numbers vary slightly across groups as all participants mentioned Manner and Path in event descriptions in their L2 but not necessarily in their L1.

Table 3: *Mean proportion (SD) of clauses containing Manner with lexicalization of Manner as a main verb, compound verb, complex motion predicate, or other in monolingual and bilingual Japanese discourse*

Language background	Manner in main verb	Manner in compound verb	Manner in participial	Manner in other[a]
Monolingual Japanese	.17 (.30)	.32 (.37)	.43 (.42)	.39 (.45)
Bilingual Japanese	.29 (.34)	.51 (.40)	.19 (.24)	.37 (.42)

a: 'Other' comprises Manner in mimetics or comparison phrases.

Table 4: *Mean proportion (SD) of clauses containing Path with lexicalization of Path as a main verb or other in monolingual and bilingual English discourse*

Language background	Path in main verb	Path in other[a]
Monolingual English	.28 (.18)	.94 (.09)
Bilingual English	.64 (.23)	.75 (.23)

a: 'Other' comprises Path in adverbs or prepositional phrases, which could be combined with main verbs; thus, the categories are not mutually exclusive.

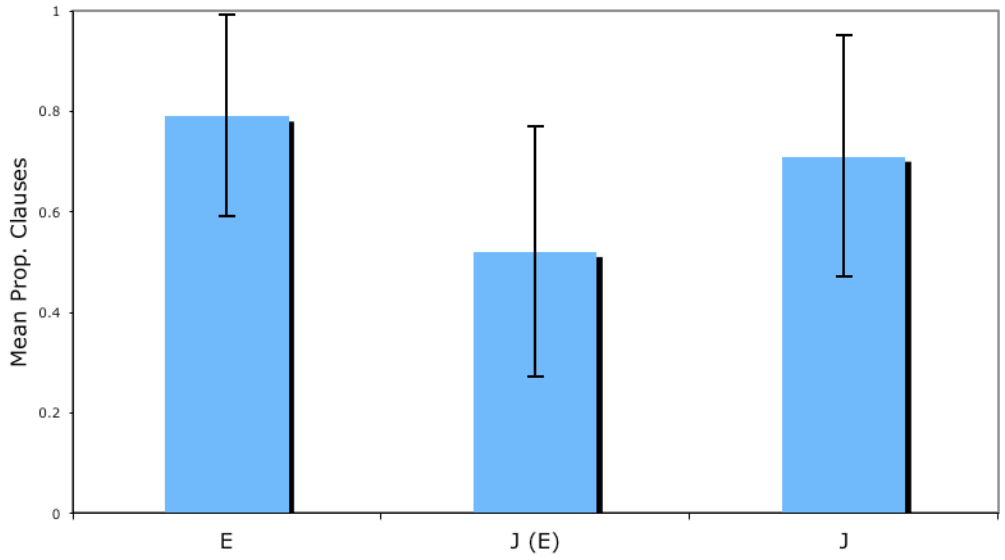

Figure 1: Mean proportion of clauses containing both Manner and Path in L1 groups: E (monolingual English), J (E) (Japanese-English speakers in their L1, Japanese), and J (monolingual Japanese).

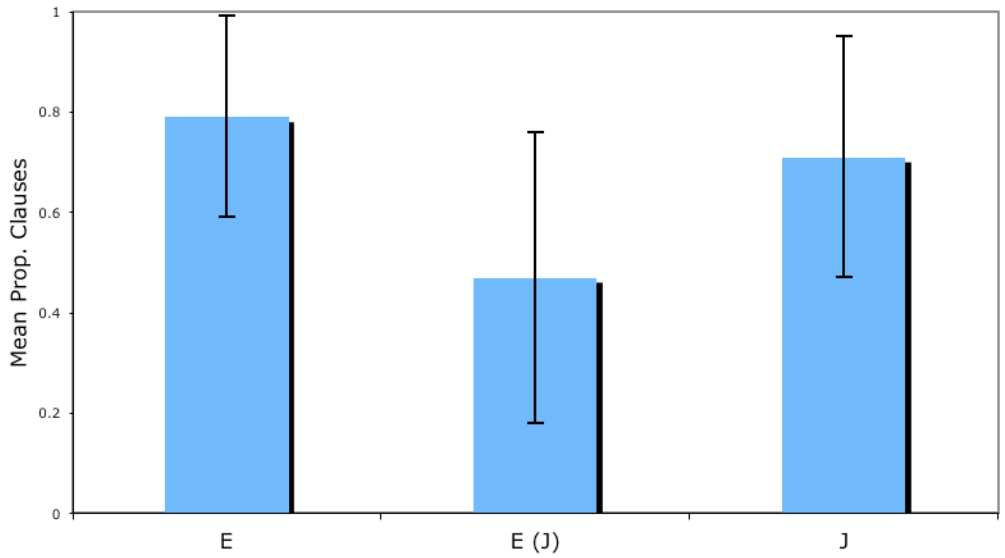

Figure 2: Mean proportion of clauses containing both Manner and Path in L1 and L2 groups: E (monolingual English), E (J) (native Japanese speakers in their L2, English), and J (monolingual Japanese).