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The Development of Multi-competence: L1 Japanese-L2 English Expression of Path Across L2 Proficiencies with Maintained L1 Residence

COLLECTION:
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RESEARCH

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ABSTRACT

Since Cook's (1992, 2016) initial conceptualization of multi-competence, research has attempted to characterize the L1 side of multi-competence (Cook, 2003). However, little is known about the developmental trajectory of the multi-competent L1 across L2 proficiencies (Aveledo & Athanasopoulos, 2016), with mixed findings especially among adults (Aveledo & Athanasopoulos, 2023; Munoz & Cadierno, 2019), and the limited available research is generally restricted to multi-competent speakers in immersive L2 contexts. Adopting a pseudo-longitudinal design, this study examined the development of multi-competence in a comparatively conservative context: among lower L2 proficiencies without L2 immersion. Utilizing Talmy's (2000) well-known distinction between verb- and satellite-framed languages, this study targeted Path expression in mono- and multi-competent English and Japanese, at CEFR-A2-B2 levels of L2 English proficiency, among adults still resident in the L1 Japanese community. Extending prior work (Brown & Gullberg, 2010, 2011), analyses of narrative descriptions of four motion events focused on lexical inventories of Path verbs and adverbials, frequencies of inclusion of Path, use of Path verbs, adverbials, and expressions overall, and specification of Source, Trajectory, and Goal Paths. Evidence of distinctions between mono- and multi-competent patterns was found in almost every analysis, with results suggesting effects of L2 proficiency both in multi-competent L2 and in multi-competent L1 performance. Overall, findings illustrate a dynamic "eco-system of mutual interdependence" (Cook, 2016, p. 7) of the L1 and L2 in multi-competent language users.

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1. INTRODUCTION

Cook's (1992, 2016) construct of multi-competence refers to the system(s) of knowledge of two or more languages co-existing within an individual mind. Cook juxtaposed multi-competence against interlanguage, distinguishing the latter with its focus on characterizations of the second language (L2) from the former with consideration of both the native language (L1) and the L2. This study continues that dual focus, with particular attention paid to the multi-competent L1.

Utilizing Talmy's (2000) well-known distinction between verb- and satellite-framed languages, researchers have exploited considerable cross-linguistic differences to investigate cross-linguistic influences in multi-competent expression of motion. Related to expression of Path of motion, many have documented effects of the L1 on the L2 (see overview in Cadierno, 2017) and development with proficiency (e.g. Cadierno & Ruiz, 2006; Filipovic, 2022; Eskildsen et al. 2015; Larrañaga et al., 2012; Özçalışkan, 2016). A smaller body of work has also suggested effects of the L2 on the L1 (Cook, 2003) in expression of Path among children resident in the L2 community, which may be moderated by L2 proficiency (Aktan-Erciyes, 2020; Aveledo, & Athanasopoulos, 2016), though findings for the effects of L2 proficiency on expression of Path among adults are mixed (Aveledo & Athanasopoulos, 2023; Emerson et al., 2021; Hohenstein et al., 2006; Özçalışkan, 2016; Pavlenko & Volynsky, 2015).

Building directly from prior research demonstrating multi-competent expression of Path and in particular shifts in L1 Japanese patterns among adults still resident in the L1 community with intermediate L2 proficiency (Brown & Gullberg, 2010, 2011), the current pseudo-longitudinal study investigates the developmental nature of the multi-competent system. The contribution of this paper is an examination of how multi-competent L1 and L2 expression of Path of motion is characterized at different levels of L2 proficiency – specifically CEFR-A2 and CEFR-B2 – among adult multi-competent L1 Japanese users of L2 English who maintain residence in the L1 community.

2. BACKGROUND

2.1 MONO-COMPETENT EXPRESSION OF PATH IN ENGLISH AND JAPANESE

Path (trajectory) of motion is considered in Talmy's (2000) framework to be the core component of a motion event around which languages can be organized based on their lexicalization patterns. The examples below illustrate a distinction between verb- and satellite-framing in Japanese (1) and English (2), respectively, with Path information underlined.[1]

(1) *Neko-ga* *sakamichi-wo* *korokoro-to* *ochiru*
Cat-NOM hill-ACC ROLL.ROLL.MIM-COMP descend
The cat descends the hill rolling.

(2) *The cat rolls down the hill.*

Verb-framed languages are characterized by typical packaging of Path in main verbs e.g. *ochiru* 'descend.' Consequently, other motion-related information, such as how a Figure (protagonist) moves, so-called Manner of motion, is typically packaged in elements other than main verbs, such as the Japanese mimetic adverbial *korokoro* 'roll.' In satellite-framed languages, typical packaging of Path is achieved outside main verbs in adverbial elements e.g. *down*, which can be stacked to describe complex trajectories and leave main verb slots to express Manner information, e.g. *roll*. Both languages also have alternative means for Path lexicalization, including adverbials, e.g. *made* 'to/until' in Japanese, and verbs, e.g. *descend* in English. However, basic typological differences are widely attested across languages (e.g. Berman & Slobin, 1994; Hickmann & Robert, 2006; Strömqvist & Verhoeven, 2004), including for Japanese and English (e.g. Allen et al., 2007; Brown, 2015; Brown & Gullberg, 2008, 2010, 2011, 2012, 2013; Inagaki, 2001, 2002).

From a cognitive linguistics perspective, the relative ease with which motion can be expressed across languages has consequences for the extent to which information is considered sufficiently salient and thus selected for verbalization, so-called 'event construal' (Slobin, 2004). Over time, habitual use of language-specific rhetorical configurations is argued to affect speakers'

1 A third category of equipotently-framed languages (Slobin, 2006) is not treated here, but see Brown (2015) for a three-way comparison involving the current dataset in mono- and multi-competent discourse.

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linguistic conceptualization of events, their "thinking for speaking" (Slobin, 1996), which may also have consequences for categorization and memory of events (see Athanasopoulos et al., 2015; Filipović, 2022, for discussion).

2.2 MULTI-COMPETENT EXPRESSION OF PATH

Studies of L2 production have concluded that the development of motion event expression in an L2 can be time-consuming and challenging, requiring immersion (e.g. Aktan-Erciyes, 2020; Daller et al., 2011; Pavlenko & Volynsky, 2015; but see also Larrañaga et al., 2012) and proficiency (e.g. Cadierno & Ruiz, 2006; Eskildsen et al., 2015; Filipovic, 2022; Larrañaga et al., 2012; Özçalışkan, 2016; see also Stam, 2015, for investigations including co-speech gesture), though a positive impact of specific types of instruction may be possible (Caluianu, 2016). In L2 performance, there is evidence both of developmental patterns and effects of the L1 (Han & Cadierno, 2010). These include less lexical richness, such as fewer Path or Manner verb or adverbial types in L2 as compared to L1 production, and L2-specific production and comprehension of Path expression, such as high levels of Path satellite use regardless of L1/L2 (e.g. Cadierno, 2004; Emerson et al. 2021; Inagaki, 2001, 2002; Navarro & Nicoladis, 2005). Distributional characteristics of L2 Path expression are also attested, such as redundant Path constructions (e.g. Aktan-Erciyes, 2020; Cadierno, 2010; Cadierno and Ruiz, 2006; Emerson et al., 2021; Hijazo-Gascon, 2018; see review in Cadierno, 2017). Further, patterns can vary depending on the direction of L2 acquisition, e.g. verb- to satellite-framing (e.g. Hasko, 2010; Filipovic, 2022), or within one framing type (Lewandowski & Özçalışkan, 2021).

In a recent investigation of L2 Spanish learners engaged in study abroad at different proficiencies (low, intermediate, upper intermediate – relative to an internal assessment), Munoz and Cadierno (2019) demonstrated comparatively infrequent use of Path verbs among L2 learners and no significant differences by proficiency. Further, no significant differences were reported among groups in frequency of Path satellites, though descriptive differences were perceptible, and qualitative analyses suggested some developmental patterns. Reversing language direction, Aveledo and Athanasopoulos (2023) examined L1 Spanish-L2 English users, also resident in the L2 community, correlating results with varied proficiency (intermediate to advanced, measured by the Quick Oxford Placement Test) and age of exposure (AoA: 3 to 26 years). In L2 English, multi-competent speakers used Path verbs more frequently than did mono-competent English speakers, but again with no effects of AoA or proficiency (though Manner expression did correlate with both). Additionally, descriptive differences were observed in information packaging, which the authors attributed to L2 development (and potentially L2 immersion).

Research examining the multi-competent L1 has provided evidence, though much less prevalent, suggesting influence of the L2 on the L1. Munoz and Cadierno's (2019) investigation of L1 English-L2 Spanish study abroad students above documented significantly more Path verbs used in L1 English by those with upper-intermediate L2 Spanish than monolingual English speakers, suggesting changes in the L1 with immersion and relatively high L2 proficiency. No differences were reported in frequency of satellite use. Aveledo and Athanasopoulos (2016) found that although five- to seven-year-old L1 Spanish-L2 English multi-competent speakers did not differ from age-matched Spanish-speaking monolinguals in the frequency of L1 Path verb production, seven- to nine-year-old multi-competent speakers with more immersive L2 exposure produced significantly fewer Path verbs than age-matched Spanish-speaking monolinguals, interpreted as arising from their immersive L2 English influence (see similar results for Turkish-English children in Aktan-Erciyes 2020). However, their follow-up investigation of adults (Aveledo & Athanasopoulos, 2023), teasing apart the effects of proficiency from AoA, did not reveal a multi/mono-competent L1 difference in overall frequency of Path verb use among L1 Spanish-L2 English users resident in an immersive L2 environment (though differences were observed in Manner expression, moderated by AoA/proficiency). Some distinctions were observed in specific contexts, i.e. boundary crossing events, and in preferred constructions, though these results were also not moderated by proficiency or AoA (see also Emerson et al., 2021; Hohenstein et al., 2006; Özçalışkan, 2016; Pavlenko & Volynsky, 2015, for a lack of multi/mono-competent L1 differences in some areas of Path expression).

Overall, prior research has revealed patterns specific to the multi-competent L2 in expression of Path, some of which appear traceable to the L1 and some to universal development, across proficiencies and with L2 immersion. In addition, despite less investigation, evidence also

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suggests patterns specific to the multi-competent L1 in some aspects of expression of Path among those immersed in the L2 community, although results regarding the effects of L2 proficiency remain mixed.

3. THE CURRENT STUDY

Given abundant evidence of L1 influences on L2 Path expression, but less clear findings regarding L2 effects on L1, especially concerning the impact of proficiency, this study investigates the effects of L2 proficiency levels on multi-competent L1–L2 Path expression in Japanese and English, where rich crosslinguistic differences exist. In prior research specifically with this population, Brown and Gullberg (2010, 2011) demonstrated that Path is typically lexicalized in verbs in mono-competent Japanese and adverbials in mono-competent English, but that multi-competent speakers, even at an intermediate L2 proficiency level and resident in either the L1 or L2 community, employed elements of both languages in their L1 and L2, yielding distinct multi-competent patterns. The current study extends this prior work by analyzing new data from participants at a lower L2 proficiency level with maintained residence in the L1 community. The following research questions are addressed:

(1) Among mono-and multi-competent speakers of Japanese and English who maintain residence in their L1 community,

- **a.** what is the lexical diversity in verb and adverbial expression of Path?
- **b.** to what extent is Path information expressed in the clause?
- **c.** what is the frequency of Path verb use in the clause?
- **d.** what is the frequency of Path adverbial use in the clause?
- **e.** how many Path expressions are included in the clause?
- **f.** how many Source, Trajectory, and Goal Path expressions are included in the clause?

(2) Do the above patterns vary with different levels of L2 English proficiency?

Within Cook's (1992, 2016) multi-competence framework, Figure 1 illustrates some of the attested and predicted outcomes of multi- versus mono-competent expression of Path of motion among L1 Japanese users of L2 English.

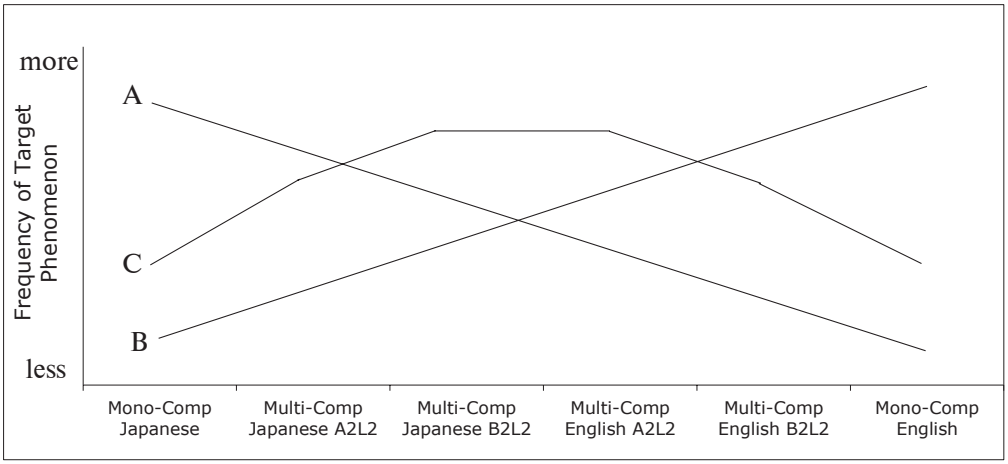

Figure 1 Schematic of attested and predicted mono- and multi-competent patterns among L1 Japanese users of L2 English.

Note that Figure 1 represents both a subset and extension of Pavlenko's (2011) characterizations of possible configurations of multi-competent performance. Lines A and B illustrate crosslinguistic differences in the mono-competent baseline, where multi-competent L1–L2 patterns lie between the mono-competent ones, captured in Pavlenko's categories of *influence of the L1 on the L2*, *influence of the L2 on the L1* and *convergence*. These outcomes are at least partly attested for Path verb and adverbial usage, and are predicted for the new data from lower proficiency multi-competent speakers. Line C indicates unique multi-competent patterns, but since there is no differentiation in the mono-competent baseline, such unique multi-competent patterns do not represent *in-between performance* and therefore, at least at face value, do not appear to constitute *influence of the L1 on the L2*, of the *L2 on the L1* or *convergence* (Pavlenko, 2011, p. 246–347, although see Brown & Gullberg, 2010, 2011, for the

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possibility of underlying convergence yielding unique patterns). Line C is attested for frequency of Path expressions overall and Goal of Path specifically (see Brown & Gullberg, 2010, 2011), and is again predicted for the new data at lower L2 proficiencies. Other patterns, such as the inverse of line C, are logically possible, but not attested in prior analyses and not predicted here.

4. METHOD

4.1 PARTICIPANTS

Data were elicited from 63 adults, distributed across four groups of mono- (Japanese versus English) and multi-competent (Japanese-English) speakers. Demographic and language use information was collected through a biographical survey (Gullberg & Indefrey, 2003). Previously analyzed data in Brown and Gullberg (2010, 2011) comprised the two groups of mono-competent speakers and one group of multi-competent Japanese speakers at a higher L2 English proficiency level. New data from a group of multi-competent Japanese speakers at a lower L2 English proficiency level are added here to enable analyses from a pseudo-longitudinal, developmental perspective. Original measures of L2 proficiency included self-ratings and the oral testing rubric for the Cambridge ESOL Exams, which placed both groups of multi-competent speakers at different levels of proficiency (see Brown & Gullberg, 2011, for original proficiency measures). In updated proficiency measures, Cambridge ESOL's equivalence mapping to the CEFR (Common European Framework of Reference for Languages) was employed along with re-rating participants' entire oral narrative data using the CEFR Global Rating Scale, e.g. B2: *Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party;* versus A2: *Can communicate in simple and routine tasks requiring a simple and direct exchange of information… Can describe in simple terms aspects of his/her .. immediate environment*.

The mono-competent Japanese speakers (n = 16, mean age 38, range 34–44, 14 females) were resident in Japan and reported exposure to English from the beginning of middle school (approx. age 12), but no active study or use of English or any L2 at the time of data collection. The mono-competent English speakers (n = 13, mean age 27, range 18–48, 4 females) were resident in the USA, reported grade school exposure to various L2s, but no active L2 study/use at the time of data collection. The previously analyzed multi-competent Japanese speakers (n = 15, mean age 36, range 19–47, 12 females) were resident in Japan. They reported initial middle-school AoA and daily use of English at the time of data collection (mean 3 hrs, range 0.5–8.5 hrs). Their L2 English proficiency was assessed at a CEFR-B2 Independent User level. Finally, the new group of multi-competent Japanese speakers (n = 19,[2] mean age 29, range 18–45, 16 females) were resident in Japan, also reported initial middle-school exposure to English and daily use of English at the time of data collection (mean 3 hrs, range 1–5 hrs). Their L2 English proficiency was assessed at a CEFR-A2 Basic User level. Both groups of multi-competent speakers reported minimal to no residence overseas.

4.2 STIMULI

The commonly employed "Canary Row" cartoon (Freleng, 1950), featuring Sylvester the cat, was utilized to elicit narrative descriptions of motion. Following prior analyses (Brown & Gullberg, 2010, 2011), analyses focused on descriptions of the following four target motion events, with Path components underlined:

- Sylvester climbs <u>through</u> a pipe.
- Sylvester rolls <u>down</u> a hill.
- Sylvester clambers <u>up</u> a pipe.
- Sylvester swings <u>across</u> a street.

4.3 PROCEDURE

Mono-competent speakers narrated in their L1 only. Multi-competent speakers narrated in L1, Japanese, and L2, English, with minimally three and maximally 30 days between testing, and

2 Note that L2 English data from one participant was excluded due to an audio error.

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language order counterbalanced across participants. Participants engaged in small talk with an L1 speaker of the language of testing to establish "monolingual mode" (Grosjean, 2001). For L2 English, multi-competent participants were introduced to low frequency and potentially unknown lexical items from the cartoon, e.g. *drainpipe, trolley*, excluding vocabulary related to Manner and Path of motion. Participants were shown and described each scene in the cartoon one by one to a listener with minimal intervention.

4.4 DATA CODING

Elicited narrative descriptions of target motion events were transcribed and segmented into clauses defined as "any unit that contains a unified predicate … (expressing) a single situation (activity, event, state)," (Berman & Slobin, 1994, p. 660). Speech expressing Path was identified using procedures described in Brown and Gullberg (2010, 2011), coded for lexicalization as verbs or adverbials, and further coded semantically as Source, Goal, or 'Trajectory' (Aveledo & Athanasopoulous, 2023) Paths. An example is given from a mono-competent English speaker in (3):

(3) [*so he's gonna climb inside the drainpipe*]
inside: Goal Path adverbial
[*he squeezes in*]
in: Goal Path adverbial
[*so he's going up there*]
going: Trajectory Path verb; *up*: Trajectory Path adverbial
[*he's coming up*]
coming: Trajectory Path verb; *up*: Trajectory Path adverbial

Following prior analyses of English (Brown & Gullberg, 2010, 2011), deictic verbs e.g. *go* were coded as Path (though are not in all studies, e.g. Aveledo & Athanasopoulos, 2023), as well as *inside, in, into* when they were used adverbially to express motion, e.g. *go in/inside/into*, and not location, e.g. *be in/inside*.

A parallel example from a mono-competent Japanese speaker is given in (4).

(4) *de* *korokorokoro-to* *korogatte* *itte*
and ROTATE-MIM roll-CON go-CON
And (the cat) goes rolling ROLL ROLL
itte: Trajectory Path verb
de *soko-ga* *tamatama* *nanka* *booringu* *jou-no*
and place-NOM by.chance like bowling alley-POS
naka *ni* *haitte* *itte*
inside to enter.CON go.CON
And (the cat) goes into what was by chance a bowling alley.
ni: Goal Path adverbial
haitte: Goal Path verb
itte: Trajectory Path verb
guruguru *gorogoro-to* *haitte* *itte*
ROTATE-MIM ROTATE-MIM-COMP enter.CON go.CON
And (the cat) enters by ROLL ROLL
haitte: Goal Path verb
itte: Trajectory Path verb

In contrast to English *climb,* which was considered a Manner verb, Japanese *noboru* 'climb' was considered a Path verb given its core meaning of upwards trajectory with no possibility of downwards trajectory (Brown & Gullberg, 2010, 2011). Furthermore, complex mono-clausal constructions in Japanese included motion verbs with a connective *~te* suffix followed by a deictic verb (Mastumoto, 1996), e.g. *nobotte iku* 'go climbing,' with each component coded separately. In addition, each component of compound motion verbs was coded separately, e.g. *toori~nukeru* "go.along~go.through."

Completion of the elicited narrative task in L2 was challenging especially for lower proficiency participants. Disfluencies and unclear semantics complicated transcription and coding of L2 data, as shown in (5) from a CEFR-A2 participant, which was produced comparatively slowly and with the aid of the vocabulary list.

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(5) *and Sylvester is um drop down hm dropped down to*
dropped: Trajectory Path verb
down: Trajectory Path adverbial
to: Goal Path adverbial
Sylvester is go out of drainpipe
go: Trajectory Path verb
out of: Source Path adverbial
he go down to slope like a ball
go: Trajectory Path verb
down: Trajectory Path adverbial
to: Goal Path adverbial
and entered into the bowling center
enter: Goal Path verb
into: Goal Path adverbial

False starts (e.g. *um drop down hm)* were kept inside the clause and not included in frequency counts of Path expression. Unfinished phrases (e.g. *dropped down to*) were treated case by case, here coded as a Path adverbial as it was accompanied by a deictic gesture indicating the missing noun phrase. Redundant items expressing Path, e.g *go down to slope*, were included in frequency counts. Tense or other errors, e.g. in line two, did not affect Path frequency counts. Finally, use of Japanese within the L2 English was counted if related to Path expression.

4.5 ANALYSIS

A mixed-methods analysis documented the repertoire of Path expressions across groups. For quantitative analyses, given that participants could describe events freely and thus contribute differentially to the data, mixed-effects linear and logistic regression models with subjects and items as random factors were applied using R through *jamovi* version 2.3 (The jamovi project, 2022; R Core Team, 2021; cf. Avelodo & Athanasopoulos, 2023; Muniz & Cadierno, 2019). Separate models were run for mono-/multi-competent L1 and L2 data, as well as repeated measures analyses for within-participant L1–L2 performance.

5. RESULTS

5.1 RQs 1(A) AND 2: PATH LEXICAL INVENTORIES

Table 1 displays the lexical items used to express Path in target motion event descriptions across groups.

Table 1 Lexical Repertoires for Path Across Groups.
~ – only in compound form in this dataset, v – verb use.

	MONO-COMPETENT JAPANESE SPEAKERS (n = 16)	MULTI-COMPETENT SPEAKERS IN L1 JAPANESE (CEFR-A2 L2 ENGLISH) (n = 19)	MULTI-COMPETENT SPEAKERS IN L1 JAPANESE (CEFR-B2) (n = 15)	MULTI-COMPETENT SPEAKERS IN L2 ENGLISH (CEFR-A2) (n = 18)	MULTI-COMPETENT SPEAKERS IN L2 ENGLISH (CEFR-B2) (n = 15)	MONO-COMPETENT ENGLISH SPEAKERS (n = 13)
Path Verb	**1.** *agaru* "rise" **2.** *hairu* "enter" **3.** *iku* "go" **4.** *~komu* "into" **5.** *kudaru* "descend" **6.** *kuru* "come" **7.** *noboru* "climb" **8.** *~noru* "onto" **9.** *ochiru* "fall" **10.** *shinnyuu-suru* "invade" **11.** *tai~suru* "go toward" **12.** *tooru* "go along" **13.** *tsutau* "go through" **14.** *tsutawaru* "go through" **15.** *utsuru* "move" **16.** *wataru* "cross" **17.** *~yaru* "be transmitted"	**1.** *agaru* "rise" **2.** *deru* "go out" **3.** *hairu* "enter" **4.** *iku* "go" **5.** *~komu* "into" **6.** *kuru* "come" **7.** *megakeru* "aim at" **8.** *noboru* "climb" **9.** *ochiru* "fall" **10.** *soru* "go along" **11.** *tadori~* "follow" **12.** *tooru* "go along" **13.** *tsuuka-suru* "do though" **14.** *~tsuku* "arrive" **15.** *tsutau* "go through" **16.** *utsuru* "move" **17.** *wataru* "cross" **18.** *~yaru* "be transmitted"	**1.** *agaru* "rise" **2.** *hairu* "enter" **3.** *idou-suru* "do move" **4.** *iku* "go" **5.** *~komu* "into" **6.** *kuru* "come" **7.** *mezasu* "aim for" **8.** *mukau* "go to" **9.** *noboru* "climb" **10.** *nukeru* "go out" **11.** *ochiru* "fall" **12.** *oriru* "get off" **13.** *shinnyuu-suru* "invade" **14.** *tadori~* "follow" **15.** *tooru* "go along" **16.** *~tsuku* "arrive" **17.** *tsutau* "go through" **18.** *tsutawaru* "be passed along" **19.** *ugokasu* "move" **20.** *utsuru* "move"	**1.** *come* **2.** *drop* **3.** *enter* **4.** *fall* **5.** *get* **6.** *go* **8.** *hairu* "enter" **9.** *land* **10.** *leave* **11.** *pass* **12.** *reach*	**1.** *approach* **2.** *arrive* **3.** *come* **4.** *enter* **5.** *get* **6.** *go* **7.** *move* **8.** *reach* **9.** *through (v)* **10.** *up (v)*	**1.** *come* **2.** *get* **3.** *go*

(Contd.)

	MONO-COMPETENT JAPANESE SPEAKERS (n = 16)	MULTI-COMPETENT SPEAKERS IN L1 JAPANESE (CEFR-A2 L2 ENGLISH) (n = 19)	MULTI-COMPETENT SPEAKERS IN L1 JAPANESE (CEFR-B2) (n = 15)	MULTI-COMPETENT SPEAKERS IN L2 ENGLISH (CEFR-A2) (n = 18)	MULTI-COMPETENT SPEAKERS IN L2 ENGLISH (CEFR-B2) (n = 15)	MONO-COMPETENT ENGLISH SPEAKERS (n = 13)
Path Adverbial	**1.** *he* "to" **2.** *kara* "from" **3.** *made* "until/to" **4.** *ni* "to"	**1.** *he* "to" **2.** *kara* "from" **3.** *made* "until/to" **4.** *ni* "to"	**1.** *he* "to" **2.** *kara* "from" **3.** *made* "until/to" **4.** *ni* "to"	**1.** *away* **2.** *down* **3.** *from* **4.** *in* **5.** *inside* **6.** *into* **7.** *out of* **8.** *through* **9.** *to* **10.** *up*	**1.** *along* **2.** *around* **3.** *down* **4.** *from* **5.** *in* **6.** *inside* **7.** *into* **8.** *over* **9.** *through* **10.** *to* **11.** *toward* **12.** *up*	**1.** *across* **2.** *along* **3.** *behind* **4.** *beyond* **5.** *down* **6.** *from* **7.** *in* **8.** *inside* **9.** *into* **10.** *on* **11.** *out of* **12.** *over* **13.** *through* **14.** *to* **15.** *up*

As reported previously (Brown & Gullberg, 2010, 2011), verbs and adverbials can be employed to express Path in English and Japanese, though Table 1 demonstrates clear crosslinguistic differences in repertoire sizes. In L1 Japanese, repertoires were largely comparable among mono- and multi-competent speakers, regardless of L2 English proficiency level. In L2 English, L1 influence and L2 development may both be observed. Multi-competent speakers employed descriptively more Path verb types and fewer Path adverbial types than did mono-competent English speakers, resembling their L1, Japanese. Further, CEFR-B2-level speakers employed slightly more Path adverbial types and slightly fewer Path verb types than did CEFR-A2-level speakers, although these differences should be interpreted with caution given their modest size and given differences in group sizes. L2-specific patterns are also discernable, with the borrowing of a Japanese verb, *hairu* 'enter,' by a CEFR-A2-level speaker, and the adverbials *through* and *up* used as verbs by CEFR-B2-level speakers, which may indicate attempts to fit L2 lexical items into L1 lexicalization patterns (Brown & Gullberg, 2011).

5.2 RQs 1(B) AND 2: INCLUSION OF PATH PER CLAUSE

Examples (6)–(10) illustrate frequent inclusion of Path across groups, predicted given the centrality of Path in motion event typology (Talmy, 2000).

(6) Mono-competent English:
he swung across the street

(7) Mono-competent Japanese:
korogatte *itte*
roll.CON go.CON
(he) goes rolling

(8) Multi-competent L1 Japanese (CEFR-A2 level L2)[3]:
inu-ga *paipu-wo* *tsutatte*
dog-NOM pipe-ACC go.through.CON
The dog goes through the pipe

(9) Multi-competent L2 English (CEFR-B2):
he climbed up

(10) Multi-competent L2 English (CEFR-A2):
*so that tweety is in uh the cat the cat uh hm the cat is going was going**
*Initial disfluency and repetition, with the final production coded.

Figure 2 displays the extent to which participants mentioned Path in their clauses describing motion.

3 Due to space constraints, examples from multi-competent L1 Japanese with CEFR-B2 level L2 can be found in Brown & Gullberg (2011).

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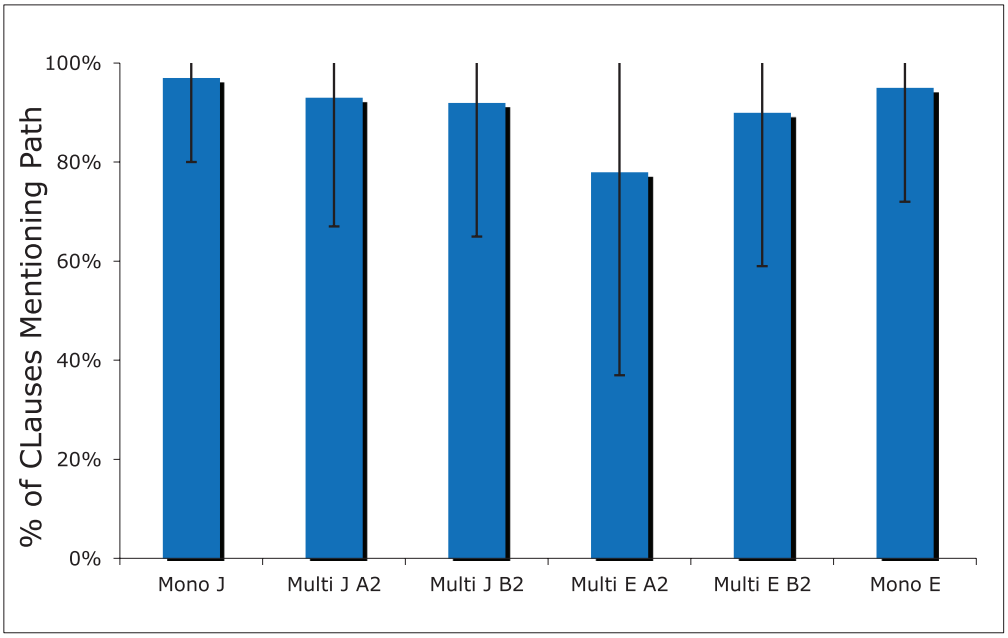

Figure 2 Mention of Path in Clauses Describing Motion Across Groups.

As predicted, in their L1, all groups were at ceiling in inclusion of Path. In the L2, CEFR-A2 multi-competent speakers included Path somewhat less often than did other groups, and L2 speakers were generally more variable. One mixed-effects between-subjects analysis of L1 performance, with group as a fixed effect and subject and stimulus item as random effects, revealed no significant differences among groups in inclusion of Path in clauses (X^2 (3, N = 432) = 3.25, p = 0.355). A second mixed-effects between-subjects analysis of mono-competent and multi-competent speakers in L2 revealed a significant difference among groups (X^2 (3, N = 412) = 16.6, p < 0.001). Post hocs revealed that multi-competent CEFR-A2 speakers included Path significantly less often than mono-competent English (p = 0.008) and mono-competent Japanese (p < 0.001) speakers, and marginally significantly less often than did multi-competent CEFR-B2 speakers (p = 0.058). Multi-competent CEFR-B2 speakers also included Path significantly less often than mono-competent Japanese speakers (p = 0.034). Final repeated-measures analyses comparing multi-competent L1–L2 performance showed significantly more Path mention in L1 than in L2 among CEFR-A2 level speakers (z = 3.063, p = 0.002), but no significant differences among CEFR-B2 level speakers (z = 0.685, p = 0.493).

5.3 RQs 1(C) AND 2: NUMBER OF PATH VERBS PER CLAUSE

As shown in Table 1, mono- and multi-competent Japanese speakers exhibited a rich repertoire of Path verb types, and a comparatively large collection of Path verb types was also employed by multi-competent L2 English speakers. Examples (11)–(15) illustrate.

(11) Mono-competent English:
he decides to go up the pole

(12) Mono-competent Japanese:
neko-ga agatte kita
cat-NOM rise.CON come.PAST
the cat came rising

(13) Multi-competent L1 Japanese (CEFR-A2 level L2):
neko-wa sono paipu-no naka-wo nobotte itta
cat-TOP that pipe-NOM inside-ACC climb.COM go.PAST
the cat went climbing inside of that pipe

(14) Multi-competent L2 English (CEFR-B2):
and finally he entered the ah bowling ball center

(15) Multi-competent L2 English (CEFR-A2):
he he he not not drog ehto he uh cat cat went haitte ('enter')

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Figure 3 displays the number of Path verbs present in clauses describing motion across groups.

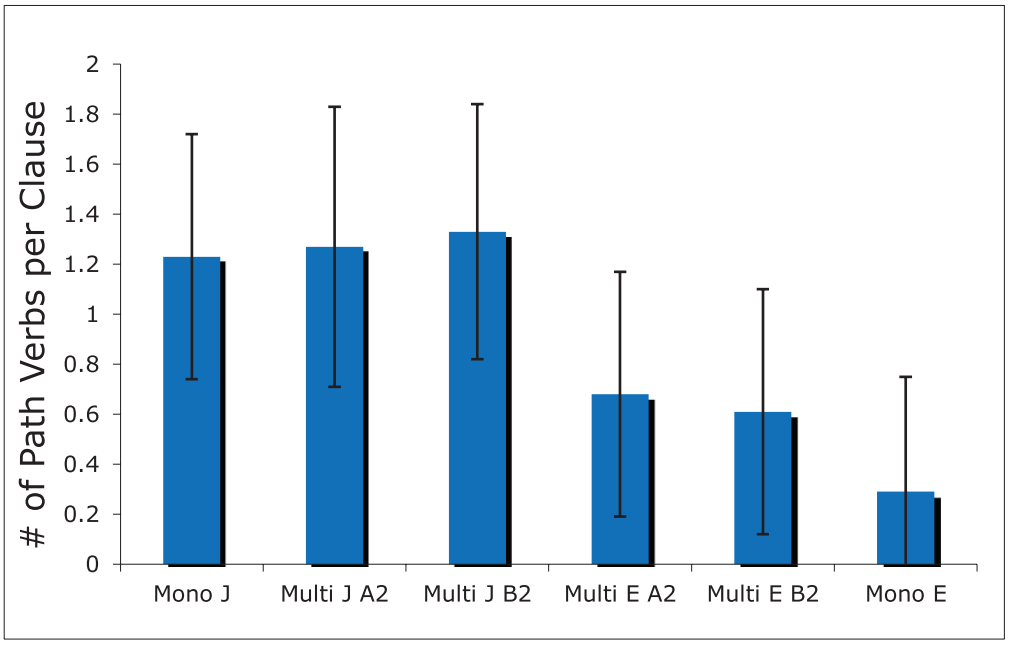

Figure 3 Number of Path Verbs in Clauses Containing Path Across Groups.

Clear crosslinguistic differences can be observed in Path verb frequency, with higher levels in Japanese as compared to English overall. Further, while results look similar in mono- and multi-competent Japanese, multi-competent English speakers used more Path verbs than their mono-competent counterparts. The first mixed-effects between-subjects analysis of L1 performance (group as a fixed effect; subject/item as random effects) revealed a significant difference among groups ($F[3, 62.4] = 68.8$, $p < 0.001$). Post hoc analyses showed that mono-competent English speakers employed significantly fewer Path verbs per clause than mono-competent Japanese speakers as well multi-competent CEFR-A2 and B2 speakers in L1 Japanese (all $p < 0.001$), with remaining pairwise comparisons non-significant. The second mixed-effects between-subjects analysis of mono-competent and multi-competent speakers in L2 revealed a significant difference among groups ($F[3, 57.5] = 42.9$, $p < 0.001$), with CEFR-A2 and B2 L2 English users using significantly fewer Path verbs per clause than mono-competent Japanese speakers but more than mono-competent English speakers (all $p < 0.001$). No significant differences were found between groups of L2 users. Final repeated-measures analyses comparing multi-competent L1–L2 performance showed significantly more Path verbs in their L1 as compared to L2 among CEFR-A2 speakers (t (419.3) = 8.468, $p < 0.001$) and CEFR-B2 speakers (t (410.5) = 10.312, $p < 0.001$).

5.4 RQs 1(D) AND 2: NUMBER OF PATH ADVERBIALS PER CLAUSE

Parallel to the preceding section, multi-competent speakers employed more Path adverbials in their L2 English than L1 Japanese, a pattern mirrored in the mono-competent baseline. Important here is the availability of Path adverbial stacking in both languages. Examples (16)–(20) illustrate.

(16) Mono-competent English:
Sylvester decides to crawl inside the drainpipe up to the windowsill

(17) Mono-competent Japanese:
soko kara naka ni neko-ga haitte itte
there from inside to cat-NOM enter.CON go.CON
the cat goes entering from there to the inside

(18) Multi-competent L1 Japanese (CEFR-A2 level L2):
paipu-no naka kara biru ni agatte ikoo-to shite
pipe-GEN inside from building to rise.CONgo.try.to do.CON
(he) tries to go rising from the inside of the pipe to the building

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(19) Multi-competent L2 English (CEFR-B2):
*but ah rolling around all over the road through the bowling place toward towards towards toward the bowling place**
*Repetition, with the final production coded.

(20) Multi-competent L2 English (CEFR-A2):
and he he go up through [consult vocabulary notes] *drainpipe* [slow production]

Figure 4 displays the number of Path adverbials across groups.

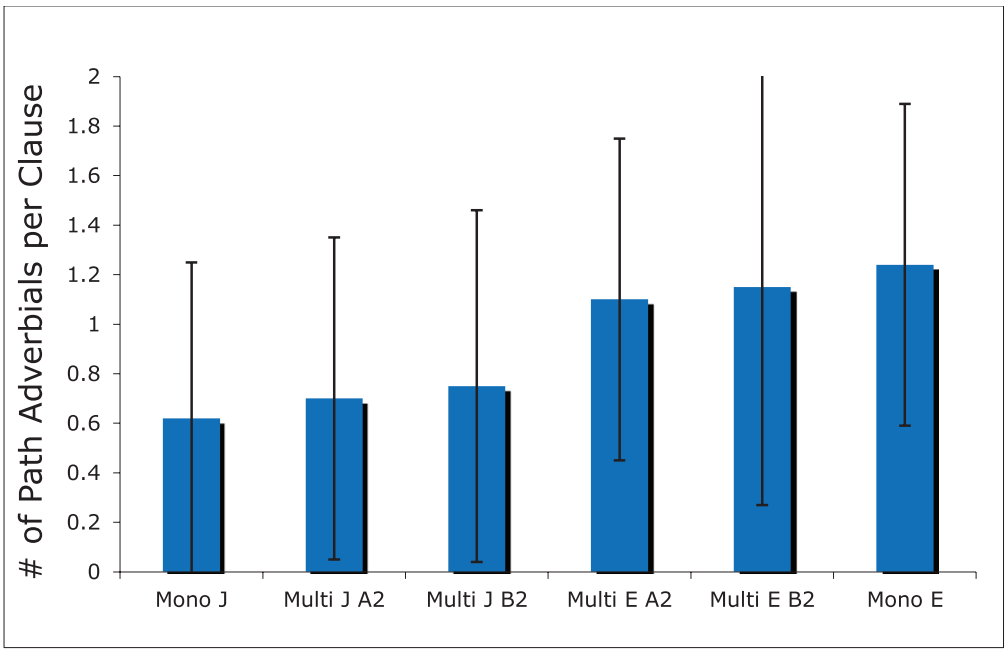

Figure 4 Number of Path Adverbials in Clauses Containing Path Across Groups.

In the use of Path adverbials, crosslinguistic differences and subtle developmental trends are visible. In addition to the difference in the mono-competent baseline, in their L1, Japanese, multi-competent speakers employed slightly more Path adverbials than mono-competent Japanese speakers, with CEFR-B2 L2 users outpacing A2 users. In their L2, English, multi-competent speakers employed slightly fewer Path adverbials than mono-competent English speakers, with patterns across L2 proficiencies comparable to those in L1.

A mixed-effects between-subjects analysis of mono- and multi-competent L1 (group as fixed effect; subject/item as random effects) revealed a significant difference among groups ($F[3, 400] = 14.4$, $p < 0.001$). Post hoc analyses showed that mono-competent English speakers employed significantly more Path adverbials per clause than mono- and both groups of multi-competent Japanese speakers (all $p < 0.001$), with remaining pairwise comparisons non-significant. A second mixed-effects between-subjects analysis of mono-competent L1 and multi-competent L2 also revealed a significant difference among groups ($F[3, 364] = 14.8$, $p < 0.001$), with post hocs showing that mono-competent Japanese speakers used significantly fewer Path adverbials per clause than mono-competent English as well as CEFR-A2 and B2 level L2 English users (all $p < 0.001$). No significant differences were found among mono- and multi-competent English speakers. Final repeated-measures analyses comparing multi-competent L1–L2 production showed that CEFR-A2 speakers used significantly more Path adverbials in their L2 as compared to L1 (t (421.8) = –3.92, $p < 0.001$) and likewise for CEFR-B2 speakers (t (414.1) = –3.92, $p < 0.001$).

5.4 RQs 1(E) AND 2: NUMBER OF PATH EXPRESSIONS PER CLAUSE

Use of verbs and/or adverbials allow the stacking of Path expressions within a single clause, as shown in examples (21)–(25).

(21) Mono-competent English:
he's just going to swing across into the window from one building to the next

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(22) Mono-competent Japanese:
tonari-no tatemono ni sonomama haitte itte
next-POS building to in.that.way enter.CON go.CON
in that way, (he) goes entering to the next building

(23) Multi-competent L1 Japanese (CEFR-A2 level L2):
Sylvester-ga shita kara agatte kite
Sylvester -NOM bottom from rise.CON come.CON
Sylvester comes rising from the bottom

(24) Multi-competent L2 English (CEFR-B2):
that ah Sylvester is coming up through the drainpipe

(25) Multi-competent L2 English (CEFR-A2):
so uh mm hmm he's going down to ground again [slow production]

Figure 5 displays the number of Path expressions of any kind present in clauses describing motion and including Path across groups.

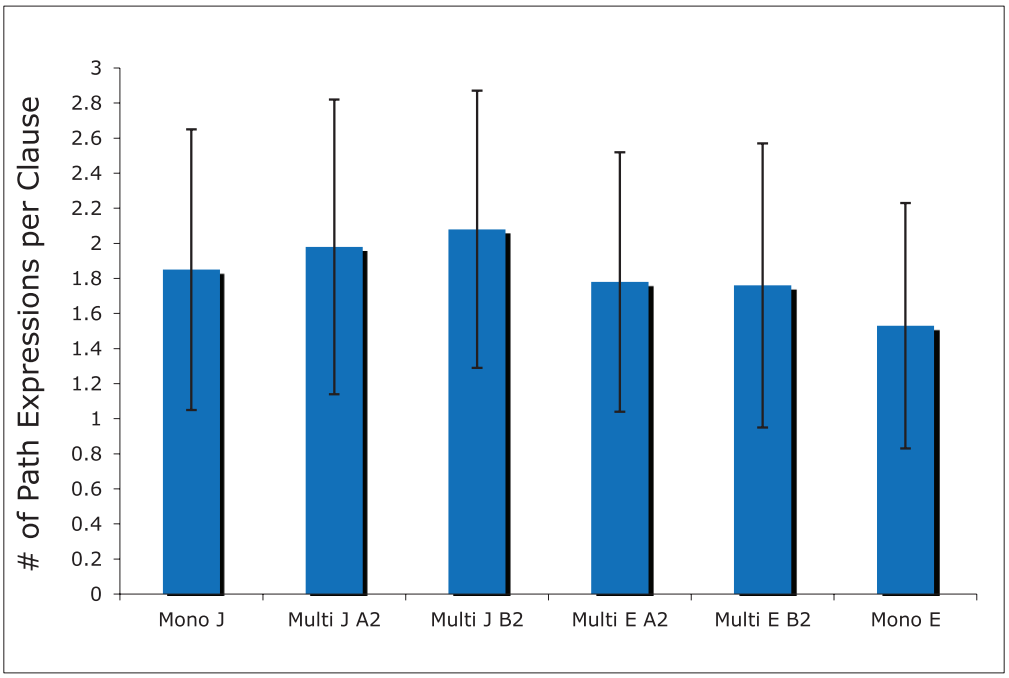

Figure 5 Number of Path Expressions in Clauses Containing Path Across Groups.

In L1 Japanese, both groups of multi-competent speakers descriptively employed more Path expressions per clause than did mono-competent Japanese and English speakers, with CEFR-B2 speakers outpacing all. Also notable was that multi-competent speakers in their L2 employed more Path expressions per clause than did mono-competent English speakers.

A mixed-effects between-subjects analysis of mono- and multi-competent L1 (group as fixed effect; subject/item as random effects) revealed a significant difference among groups ($F[3, 402] = 7.59$, $p < 0.001$). Post hocs showed some difference in the monolingual baseline with monolingual Japanese speakers employing significantly more Path expressions than monolingual English speakers ($p = 0.012$). More striking was that CEFR-B2 multi-competent speakers employed significantly more Path expressions in L1 Japanese than did mono-competent English ($p < 0.001$) and Japanese ($p = 0.035$) speakers, and A2-level multi-competent speakers employed significantly more Path expressions in L1 Japanese than did mono-competent English speakers ($p < 0.001$), with remaining pairwise differences not statistically significant. A second mixed-effects between-subjects analysis of mono-competent and multi-competent speakers in L2 approached but did not reach a statistically significant difference among groups ($F[3, 55] = 2.23$, $p = 0.095$). Final repeated-measures analyses comparing multi-competent L1–L2 performance showed that CEFR-B2 users, employed significantly more Path expressions per clause in their L1 than L2 (t (415.2) = 2.946, $p = 0.003$), with a result approaching statistical significance among CEFR-A2 users (t (422.7) = 1.828, $p = 0.068$).

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5.5 RQs 1(F) AND 2: PATH SEMANTICS IN THE CLAUSE

Finally, examples (26)–(30) illustrate the semantics of Path information, specifically expression of Source, Trajectory, or Goal Paths. Notable is that mono- and multi-competent speakers in their L1 exhibited inclusion of Source, Trajectory and Goal of Path within a single clause, but multi-competent speakers in their L2 did not, expressing at most two out of the three components.

(26) Mono-competent English:
he's just going to swing across into the window from one building to the next
Source: *from*
Trajectory: *across*
Goal: *into, to*

(27) Mono-competent Japanese:
soko kara haitte ikouto
there from enter.CON try.to.go
(he) tries to go entering from there
Source: *kara*
Trajectory: *ikouto*
Goal: *haitte*

(28) Multi-competent L1 Japanese (CEFR-A2 level L2):
paipu-no naka kara biru ni agatte ikoo-to shite
pipe-GEN inside from building to rise.CON try.to.go do.CON
(he) tries to go rising from the inside of the pipe to the building
Source: *kara*
Trajectory: *agatte*, *ikouto*
Goal: *ni*

(29) Multi-competent L2 English (CEFR-B2):
but next this time he went into the drainpipe
Source: NA
Trajectory: *went*
Goal: *into*
and ah just like Tarzan he wanted to swing from one building to the Tweety's window
Source: *from*
Trajectory: NA
Goal: *to*

(30) Multi-competent L2 English (CEFR-A2):
Sylvester is go out of drainpipe
Source: *out of*
Trajectory: *go*
Goal: NA
so eh turn into ehhh went went he went to the bowling center
Source: NA
Trajectory: *went*
Goal: *to*

Results for the number of Source, Trajectory, or Goal Path expressions per clause are shown in Figures 6–8, respectively.

Figure 6 illustrates the relatively infrequent and highly variable use of Source Path constructions across groups. Despite infrequent use, a now familiar pattern is discernable such that the multi-competent L1 and L2 occupy mid-positions between mono-competent L1s. In a mixed-effects between-subjects analysis of mono-competent and multi-competent speakers in L1 (group as fixed effect; subject/item as random effects), a difference approaching statistical significance was found ($F[3, 59.2] = 2.51$, $p = 0.068$). A significant difference was found in analyses of mono- and multi-competent L2 ($F[3, 63] = 3.88$, $p = 0.013$), with mono-competent Japanese speakers including Source significantly more frequently than did mono-competent English ($p = 0.005$), and multi-competent B2-level English speakers ($p = 0.006$), with no other significant pairwise differences. Final repeated-measures analyses of multi-competent L1–L2 showed

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that CEFR-B2 speakers employed significantly more Source Paths in their L1 than L2 (t (412.9) = 2.739, p = 0.006), with a difference approaching statistical significance for CEFR-A2 speakers (t (420.2) = 1.878, p = 0.061).

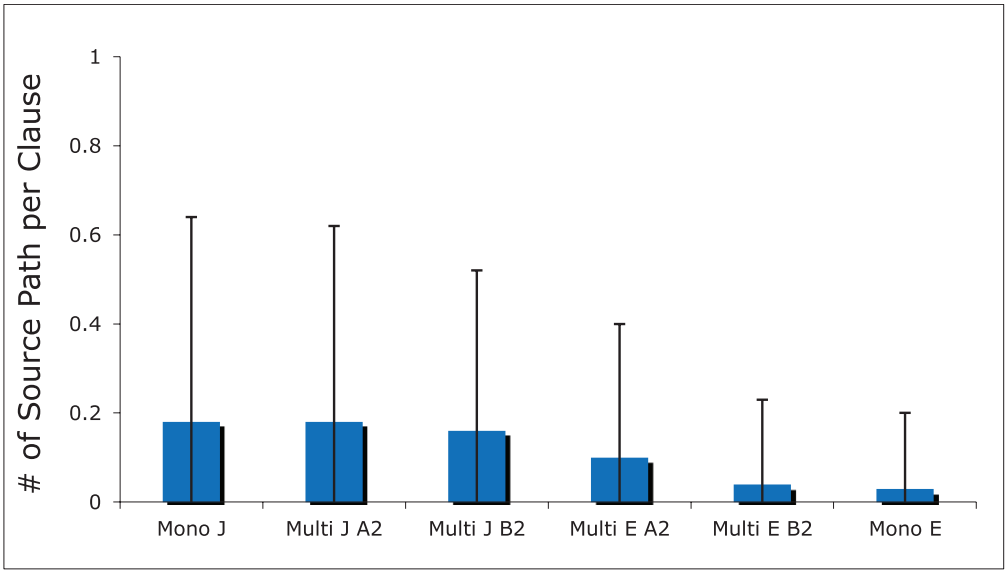

Figure 6 Number of Source Path Expressions in Clauses Containing Path Across Groups.

Figure 7 demonstrates that use of Trajectory Paths was relatively common and comparable across all groups, though also variable within groups.

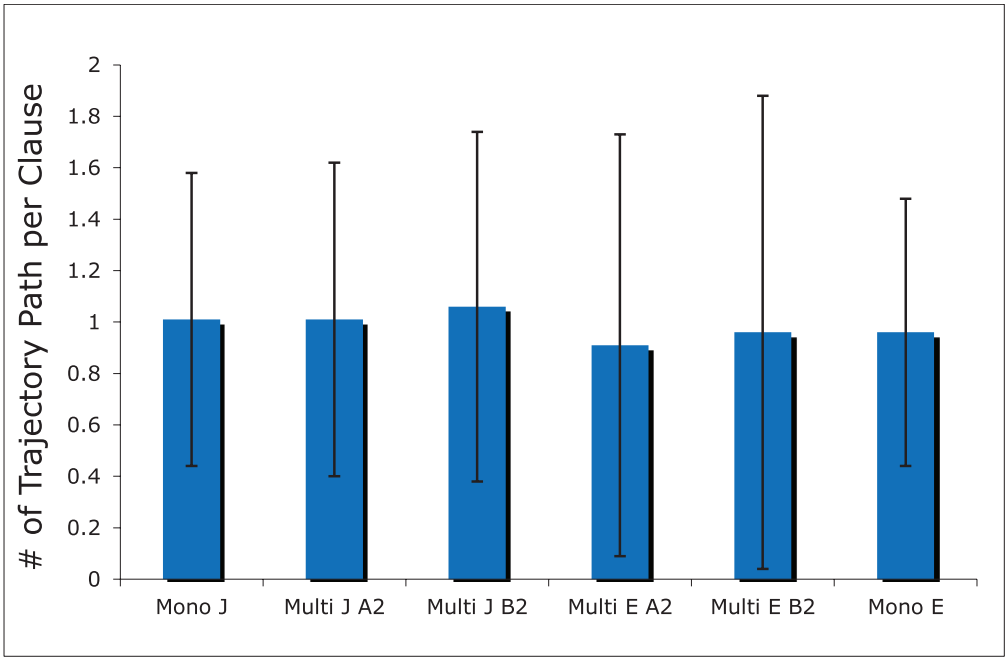

Figure 7 Number of Trajectory Path Expressions in Clauses Containing Path Across Groups.

In L2, multi-competent CEFR-A2 speakers used slightly fewer Trajectory Paths than did other groups. However, no significant differences were found among groups in mixed-effects between-subjects analyses of mono-competent and multi-competent L1 (F[3, 60.5] = 0.127, p = 0.943) or L2 (F[3, 52.3] = 0.137, p = 0.938). Repeated measures analyses comparing multi-competent L1–L2 showed no significant differences among CEFR-A2 (t (418.3) = 0.797, p = 0.426) or CEFR-B2 speakers (t (408.8) = 0.697, p = 0.486).

Finally, Figure 8 shows moderate use of Goal Paths across groups, again with high variability. Notable here, was the uniquely higher positioning of the multi-competent L1 and L2 as compared to the mono-competent baselines. However, no significant differences were found among groups in mixed-effects between-subjects analysis of mono- and multi-competent L2 (F[3, 57.4] = 1.91, p = 0.138), although the result for L1 approached statistical significance (F[3, 61.7] = 2.36, p = 0.08). Repeated-measures analyses comparing multi-competent L1–L2 showed no significant differences among CEFR-A2 (t (418.8) = 0.371, p = 0.711) or CEFR-B2 speakers (t (409.1) = 1.323, p = 0.187).

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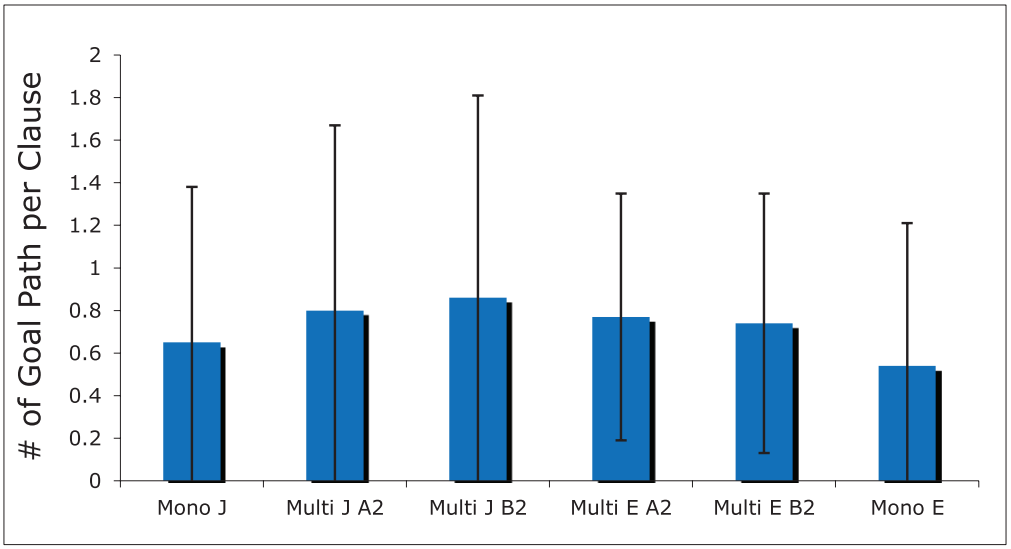

Figure 8 Number of Goal Path Expressions in Clauses Containing Path Across Groups.

6. DISCUSSION

Since Cook's (1992, 2016) conceptualization, research has attempted to characterize the L1 side of multi-competence (Cook, 2003), but with little attention to the developmental trajectory of the multi-competent L1 across L2 proficiencies (Aveledo & Athanasopoulos, 2016) especially among adults (Aveledo & Athanasopoulos, 2023; Munoz & Cadierno, 2019), and available research is generally restricted to multi-competent speakers in immersive L2 contexts. This study examined the development of multi-competence in a comparatively conservative context: among lower L2 proficiencies without L2 immersion. Investigations focused on Path expression in mono- and multi-competent English and Japanese, with CEFR-A2-B2 levels of L2 proficiency, among adults still resident in the L1 community. Extending prior work (Brown & Gullberg, 2010, 2011), analyses of narrative descriptions of four motion events focused on lexical inventories of Path verbs and adverbials, frequencies of inclusion of Path, use of Path verbs, adverbials, and expressions overall, and specification of Source, Trajectory, and Goal Paths. In several areas, mono- and multi-competent patterns matched the schematic in Figure 1, with evidence suggesting bidirectional crosslinguistic influences and development of both the multi-competent L2 and L1.[4]

Regarding RQs 1(a) and 2, analyses revealed comparable lexical inventories for Path verb and adverbial types in mono- and multi-competent Japanese, a larger inventory of Path verb types though a smaller inventory of Path adverbial types in multi- as compared to mono-competent English. Further, subtle differences were perceptible by proficiency level, with CEFR-B2 L2 English slightly closer to mono-competent English patterns and no evidence of L1 borrowings. These results suggest influences of L1 Japanese on L2 English, but also L2 development.

In investigation of RQs 1(b) and 2, high levels of Path inclusion found across groups were unsurprising given the status of Path as a core component of motion (Talmy, 2000). Yet L2 development was still visible, with multi-competent L2 speakers, especially at the lower CEFR-A2 level, mentioning Path slightly less often and with more variability than other groups. As Path is often encoded adverbially in English, it may have been syntactically challenging at lower levels consistently to include it, especially packaging it alongside expression of Manner; thus, some L2 clauses described only Manner of motion (see Brown & Gullberg, 2013, for unique multi-competent clausal packaging of Manner and Path in L2 English among the intermediate-level multicompetent speakers).

Regarding the frequency of lexicalization patterns in RQs 1(c) and 2, results for L1 revealed that Path lexicalization in verbs – the prototypical form in verb-framed languages like Japanese – was consistent across mono- and multi-competent Japanese L1. In L2, multi-competent English speakers used significantly more Path verbs than mono-competent English speakers but significantly fewer than mono-competent Japanese speakers, which again suggests an L1 to L2 influence. Simultaneously, though non-significant, a slight difference between CEFR-A2

4 Results here differ to some extent from those in Brown & Gullberg (2010, 2011) due to the removal of a group of multi-competent speakers resident in the US as well as updated mixed-effects analyses.

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and B2-level speakers was discernable, with the latter more resembling mono-competent English speaker, again suggesting L2 development in this area.

Turning to adverbial usage patterns in RQs 1(d) and 2 – the prototypical lexicalization form in satellite-framed languages like English – we begin to see a divergence emerging between mono- and multi-competent speakers following the linear stepwise configuration of Figure 1, line B, with the following developmental trajectory observed in raw frequency of use: mono-competent Japanese > lower L2 proficiency multi-competent L1 Japanese > higher L2 proficiency multi-competent L1 Japanese > lower L2 proficiency multi-competent L2 English > higher L2 proficiency multi-competent L2 English > mono-competent English. Although differences among mono- and multi-competent speakers in L1 Japanese were not statistically significant, differences among mono and multi-competent speakers in L2 English were statistically significant. The trajectory observed at least descriptively here is entirely in line with predictions, such that at a broad level, multi-competent production in L2 and L1 lies midway between mono-competent production, an outcome described in Pavlenko's (2011) framework. At a granular level, results suggest that as language users acquire more L2 proficiency, not only does the multi-competent L2 develop in Path expression but strikingly this development extends simultaneously to their L1, where differentiation by L2 exposure starts to become visible.

Stronger statistical evidence of the existence of multi-competence in the L1 as well as the critical impact of L2 proficiency can be seen in results for the number of Path expressions per clause, RQs 1(e) and 2, which resemble the upside-down U-shaped configuration of Figure 1, line C. Stacking of Path verbs and adverbials was observed in multi-competent L1 and L2 production, reflecting abundant Path marking in multi- as compared to mono-competent discourse. Simultaneously, replicated from previous analyses (Brown & Gullberg, 2010), the new analyses also show that CEFR-B2 speakers produced significantly more Path expressions per clause in L1 Japanese than did both groups of mono-competent speakers, while significant differences were not yet visible between the new group of CEFR-A2 and mono-competent Japanese speakers. Despite the lack of significant difference between the two groups of multi-competent speakers in L1 Japanese, their statistically differential positioning relative to the mono-competent speakers indicates a stepwise progression in the expected direction, such that as proficiency in L2 English increases, multi-competent speakers move further away from mono-competent speakers within the L1. Results for the L2 are intriguing. Although differences by proficiency did not reach statistical significance, a corresponding pattern may be discernable such that with increasing proficiency in the L2, the B2 level users become slightly closer to mono-competent English speakers. However, the minimal size of the distinction by L2 proficiency raises the question of whether multi-competent L1-Japanese-L2-English speakers would maintain this frequency of Path expressions with more L2 proficiency. This is an area where further research on advanced multi-competent production contrasting residence in the L1 versus L2 community would be enlightening, since potentially at advanced levels, immersion may prompt shifts to more mono-competent L2 patterns while those without immersion may maintain unique L2 patterns in expression of Path (see Brown, 2010, 2011, for a lack of impact of L2 immersion on multi-competent performance at an intermediate level of proficiency as well as Larrañaga et al., 2012; but also Aktan-Erciyes, 2020; Aveledo & Athanasopolous, 2016; Daller et al., 2011, for an impact of immersion).

Finally, regarding RQs 1(f) and 2 concerning Path semantics, we see multi-competent patterns resembling the linear line A and upside-down, U-shaped line C from Figure 1 for frequency of Source and Goal Paths, respectively. Source expressions were fairly infrequent overall, which may reflect a bias for perception and encoding of Goal over Source (e.g., Lakusta & Landau, 2005). Replicated from Brown and Gullberg (2011), a baseline difference was observed in utilization of Source Paths between the mono-competent groups. Further, CEFR-B2 speakers in L2 English significantly differed from mono-competent Japanese but not mono-competent English speakers, while CEFR-A2 speakers did not significantly differ from any group, indicating their mid-position in the developmental trajectory (see line A in Figure 1). In frequency of Goal Paths, though results only approached statistical significance, descriptively the groups of multi-competent speakers included more Goal Paths in their L1 and L2 than both groups of mono-competent speakers, suggesting more within-language than between-language differences (Brown & Gullberg, 2011), with the predicted upside-down, U-shaped patterning visible by L2 proficiency (see line C in Figure 1).

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Overall, the results from this study are broadly in line with but also add to those in prior research on adults. Evidence was presented here of a developmental trajectory in bidirectional cross-linguistic influence, with statistically differential performance in L2 by proficiency for inclusion of Path information and expression of Source Paths alongside a statistical change in the L1 coinciding with increased proficiency in the L2 in the frequency of Path marking in the clause. Similarities are observed in Munoz and Cadierno's (2019) results among L1-English-L2-Spanish speakers, where a statistically significant effect of L2 proficiency was found for L1 Path verb use, although interestingly no statistical differences by proficiency in L2 Path verb use. Aveledo and Athanasopoulos (2023) found statistically significant effects of L1 Spanish on L2 English also in Path verb use, but also no statistical differences by proficiency or AoA, while in L1, effects of the L2 appeared to be restricted by domain of Path expression (boundary crossing), but again without moderation by proficiency or AoA.

A lack of broad L2 proficiency effects in the L1 in the research cited above is perhaps unsurprising, given that effects of the emerging L2 on the established L1 can be expected to be subtle (see also Emerson et al., 2021). However, a lack of proficiency effects in the L2 is unexpected, though research has documented the difficulty of L2 acquisition in motion event expression. The disparities in results may be explained in part methodologically. Aveledo and Athanasopoulos (2023), for example, elicited short descriptions of motion, analyzing only first verbs as a reflection of "attentive preference" (p. 21). Here, longer narratives were elicited with all clauses describing motion analyzed. Furthermore, the focus of Aveledo and Athanasopoulos (2023) was intermediate to advanced proficiency, while the focus here was CEFR-B2 intermediate to CEFR-A2 elementary proficiency, although without reference to CEFR levels across studies, proficiencies cannot be directly compared. Munoz and Cadierno (2019) examined the acquisition of a verb-framed language by satellite-framed language speakers, whereas the reverse framing direction was examined here. Finally, the participants in both Munoz and Cadierno (2019) and Aveledo and Athanasopoulos (2023) were in an L2 immersion context. The participants observed here were in a non-immersion context in an attempt to capture the early effects of multi-competence with little to no likelihood of the existence of L1 attrition. As noted, proficiency and immersion matter, and the unique contribution of the current study is to demonstrate the potential for bidirectional cross-linguistic influences, moderated by L2 proficiency, even among lower proficiency multi-competent speakers without L2 immersion. That said, descriptive differences by proficiency generally in predicted directions were visible in all studies, suggesting that more data might yield more robust findings.

With respect to the specifics of the domain, 'redundant' Path marking has been observed in L2 production as well as in early L1 development (Cadierno, 2004, 2017; Cadierno & Ruiz, 2006). As shown here, abundant Path marking may also be a feature of the adult multi-competent L1. Thus, it is conceivable that some multi-competent varieties may be differently positioned relative to their mono-competent counterparts on the Path salience continuum (Ibarretxe-Antunano, 2009), and potentially characterized as high-Path-salient.

Furthermore, within Path semantics, expression of and attention to Goal has been linked to the grammaticalization of aspect, and English speakers have been shown to pay relatively little attention to and talk relatively little about endpoints (e.g. see discussion in Athanasopoulos & Albright 2016). Both English and Japanese can grammaticalize aspectual distinctions, and the mono-competent English and Japanese speakers here used Goal Paths to comparable degrees and at lower levels than use of Trajectory Paths. However, the higher levels of both Goal and Source Paths among multi-competent speakers warrant further investigation to determine the root of these patterns, e.g. convergence in lexicalization systems, and to investigate whether multi-competent verbal encoding of Goal translates into non-verbal, visual attention to Goal (see discussion of the relationship between levels of representation in Aveledo & Athanasopoulos, 2016).

A number of limitations in this study offer opportunities for further research. The study focused only on Path expression, but findings regarding bidirectional crosslinguistic influences in Manner expression moderated by proficiency (Aveledo & Athanasopoulos, 2016, 2023; Munoz & Cadierno, 2019) indicate a need to extend the current investigation to Manner expression. Second, the study included only one language pairing, with additional language pairings needed to corroborate claims regarding bidirectional crosslinguistic influences (Jarvis, 2000). Finally, the study was pseudo-longitudinal, examining different multi-competent speakers at different L2 proficiency levels. In order truly to capture the developmental trajectory of

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multi-competence, longitudinal studies of L1 and L2 development from the same individuals, however time- and resource-intensive, are needed.

In conclusion, furthering Cook's (1992, 2016) critical formulation of multi-competence – the system(s) of knowledge of two or more languages co-existing within an individual mind – we focus here on its developmental trajectory, using a conservative testing context with respect to (low) L2 proficiency and (lack of) immersion. The results suggest that, in descriptions of Path of motion, even late multi-competent speakers still resident in the L1 community combine the linguistic options offered by their languages into one repertoire at frequencies that increase over L2 development. These findings illustrate the dynamism of the "eco-system of mutual interdependence" (Cook, 2016, p. 7) of the L1 and L2 in multi-competent language users.

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