Conceptualization and formulation of motion event sentences in L2.
Matias Morales, Martin Pickering, Holly Branigan (University of Edinburgh).

Speakers encode message-level representations based on the preferences of the language they speak (Levelt, 1996; Slobin, 1996). This implies that bilinguals may use different encoding strategies while planning their utterances depending on whether they use their L1 or L2. We address this issue by looking at the way bilinguals linguistically encode conceptual information that is strongly preferred in their L2, but not in their L1. Thus, we (1) investigate how bilinguals select and distribute this information in L2 (exp.1), and 2) examine the level of representation for this information in bilinguals and whether this affects their L2 sentence formulation (exp.2-4). We use the well-studied cross-linguistic variation for motion events that indicates speakers of different languages show different preferences in the lexicalization of manner and path information (Talmy, 2000). For example, for the event (A) 'a penguin skiing into an igloo', English speakers typically encode manner in the main verb (e.g., *A penguin is skiing into an igloo*), while Spanish speakers usually encode path (e.g., *Un pingüino está entrando en un iglú*, 'A penguin is entering an igloo'). Therefore, we focus on two analyses: (1) the probability participants use a manner verb in their motion event descriptions, and (2) the probability they use manner-dominant descriptions (for examples, see Table 1).

In Exp. 1, monolingual L1 English speakers (N=24, *L1 English*) and late proficient L1 Spanish-L2 English bilinguals tested in their L2 (N=24, *L2 English*) freely described animations depicting boundary-crossing motion events like (A) (see Fig.1), and their utterances were compared to Spanish descriptions by late proficient L1 Spanish-L2 English bilinguals tested in their L1 (N=24, *L1 Spanish*). L1 English and L2 English speakers were more likely to use a manner verb compared to L1 Spanish speakers (92% vs. 33%; p<.001 and 57% vs. 33%; p<.05) (see Fig. 2A). Additionally, L1 English speakers were more likely to produce manner-dominant sentences than L1 Spanish speakers (95% vs. 70%, p<.001), but L2 English participants did not differ from L1 Spanish participants in this respect (see Fig. 2B). These results indicate that L2 speakers used the lexical preferences, but not the structural choices of their L2 for motion events.

In Exp. 2, L1 English (N=48) and L2 English (N=48) speakers described the same set of animations after reading aloud a prime sentence that described an unrelated event either with a manner or a path interpretation (e.g., *The man is skiing skilfully* vs. *The nurse is entering quietly*, see Table 2). Crucially, prime sentences contained a lexical overlap with the target (i.e. the verb was repeated across prime/target). L2 speakers were more likely to use manner verbs and manner-dominant descriptions after manner primes vs. path primes (70% vs. 50%; p<.001 and 79% vs. 62%, p<.001). L1 speakers did not show either of these differences.

Exp. 3 was a version of exp. 2 with the critical difference that prime sentences contained a conceptual overlap with the target event (i.e. the verb was not repeated across prime and target) (e.g., *The girl is crawling happily* vs. *The boy is circling senselessly*). Results indicate that neither L1 nor L2 speakers were more likely to use manner verbs after manner vs. path primes.

Exp. 4 was another version of exp.2 with only L2 speakers (N=72). Critically, we added a baseline condition with sentences that described non-motion events (e.g. *The pirate is whispering loudly*) to test whether the effect found in exp.2 was due to a lexical effect (i.e. participants just repeated the prime verb) or a conceptual priming effect. Results indicate that L2 speakers were more likely to use manner verbs after manner primes vs. baseline (70% vs. 55%, p<.001), but not after a path prime vs. baseline (56% vs. 55%, p>.05). Additionally, they were more likely to produce more manner-dominant responses after manner primes vs. baseline (85% vs. 77%, p<.05), but not after path primes vs. baseline (79% vs. 77%, p>.05).

Overall, results show that L2 speakers were primed by the manner information contained in the verb of prime sentences, and that the locus of these representations was lexical and not conceptual. In addition, this lexical priming affected the formulation of L2 sentences in bilinguals in ways that do not reflect their L1 preferences, suggesting that the encoding strategies in L2 were language-specific.

Figure 1. Example of a target motion animation representing the event *A penguin skiing into an igloo* used in all experiments: (1) start, (2) middle , and (3) end of the video.

Target utterances	Analyses
*A penguin is **skiing**.*	manner verb and manner-dominant.
*A penguin is **skiing** <u>into</u> an igloo.*	manner verb and manner-dominant.
*A penguin **on skis/skiing** <u>is entering</u> an igloo.*	manner-dominant.

Table 1. Examples of target responses that entered in the analyses of manner verb use and manner-dominant utterances (i.e. responses that included manner content only or manner preceding path information). Manner content is in bold, while path information is underlined in target utterances.

Target Event: *A penguin skiing into an igloo.*	Manner Prime	Path Prime
Experiment 2: Lexical overlap	The man is **skiing** skillfully.	The nurse is **entering** quietly.
Experiment 3: Conceptual overlap	The girl is **crawling** happily.	The boy is **circling** senselessly.

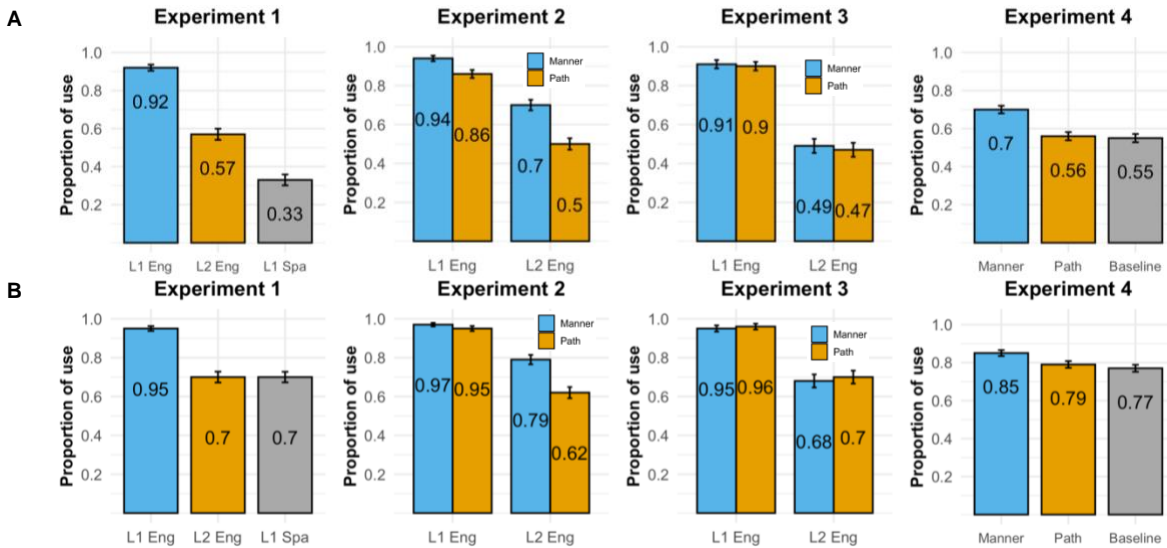Table 2. Examples of prime sentences used in Experiments 2 and 3.

Figure 2. Mean proportion of manner verbs (panel A) and manner-dominant responses (panel B) across all experiments.

References.

Levelt, W. J. (1996). Perspective taking and ellipsis in spatial descriptions. In P. Bloom, Peterson, M.A., Nadel, L., Garrett, M.F. (Ed.), *Language and space* (pp. 77-107): MIT Press.

Slobin, D. I. (1996). From "thought and language" to "thinkingfor speaking". In J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking Linguistic Relativity* (pp. 70-96): Cambridge University Press.

Talmy, L. (2000). *Toward a cognitive semantics: Typology and process in concept structuring* (Vol. 2): MIT Press.