Iconicity is fundamental to language

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That linguistic form is *arbitrarily* linked to meaning is generally taken as a fundamental feature of language. However, iconic (non-arbitrary) form-meaning mappings are also widely present across languages, particularly signed languages. In some sign language studies, iconicity appears to affect processing. For example, picture-sign matching in American Sign Language (ASL) is facilitated when iconic properties of signs are salient in a corresponding picture (Thompson et al., 2009) and iconicity also affects phonological decisions (does the sign have straight or bent fingers) in British Sign Language (BSL, Thompson, et al. 2010). Other studies, however, question the role of iconicity; Bosworth and Emmorey (2010) find no effect of iconicity in ASL lexical decisions: semantic priming was not affected by the iconicity of the prime.

Here we present two studies in which iconicity is shown to affect processing in BSL. In a Picture-Naming Study, participants (23 Deaf adults) produced signs as quickly as possible, naming pictures presented on a computer monitor. Picture naming is regarded as one of the most automatic linguistic task recruiting both semantic and phonological codes (Levelt, 1989) and therefore does not rely on strategic processes that may have affected previous iconicity studies. Further, iconicity effects have never been tested in a production task. If iconicity plays a role in language production, then signers should be faster to name more iconic signs compared to less iconic ones. Response latencies were analyzed using mixed-effects models with crossed random effects for subjects and items (n=92) entering a measure of phonological complexity and norms for familiarity, age of acquisition (AoA) and iconicity (using a 7-point scale) as possible predictors. Iconicity was found to be a significant predictor such that more iconic signs tended to elicit faster responses than less iconic signs.

Further, in a Language Acquisition Study, we assessed whether iconic signs tend to be comprehended and/or produced earlier than non-iconic signs (for children between 11-30 months old). If iconicity provides a bridge between meaning and form, as we hypothesize, then it may be particularly important at early stages of language acquisition when building links is critical. Based on parental reports using the MacArthur Bates Child Development Inventory (CDI) protocol for BSL (Woolfe, et al., 2010) separate regression analyses were conducted with comprehension or production as the dependent variable and entering child’s age, phonological complexity and norms for iconicity, familiarity and English AoA into the model as possible predictors. Again, the partial effect of iconicity was found to be significant both for comprehension and production, with iconic signs both comprehended and produced earlier than less iconic signs.

Overall, the data support a role for iconicity both in language processing and acquisition, with iconicity serving to bridge the gap between conceptual representations and linguistic form. In the studies reported here we capitalize on the high degree of iconic form-meaning mappings in signed languages compared to many spoken languages. However, effects of iconic mappings should occur regardless of language modality, with emerging evidence showing that iconicity has a role to play in signed and spoken languages alike, serving the critical role of bridging between linguistic form and human experience.


