Analysis of Human Versus Machine Translation Accuracy

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The purpose of this study was to determine whether significant differences exist in Chinese-to-English translation accuracy between moderate to higher-level human translators and commonly employed freely available machine translation tools. A Chinese-to-English language proficiency structure test and a Chinese-to-English phrase and sentence translation

test were given to a large sample of machine (n=10) and human translators (n=133) who are native Chinese speakers with at least 15 years of familiarity with the English language. Results demonstrated that native Chinese speakers with this minimum level of English proficiency were significantly better at translating sentences and phrases from Chinese to English, compared to the ten freely available online machine translation applications, which unexpectedly showed a considerable degree of variation in translation accuracy among them. These results indicate that humans with at least a moderate level of exposure to a non-native language make far fewer translation errors compared to machine translation tools. This outcome is understandable, given the unique human ability to take into account subtle linguistic variants, context, and capricious meaning associated with the language and culture of different groups.