A Model for Translation Accuracy Evaluation and Measurement: A Quantitative Approach

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Abstract

Translation quality assessment (TQA) has been part of the translating process since Marcus Tullius Cicero (106-43BCE), and earnest studies on TQA have been conducted for several decades, but there has been no breakthrough in standardized TQA. Though the importance of TQA has been stressed, agreement on specific means of TQA has not been reached. As Chesterman and Wagner summarize, “Central to translation [ ],” “[q]uality assessment is so complicated — especially if it is to be objective and reproducible” (2002: 80-81). The approaches to TQA published throughout the past millennia, by and large, are qualitative. “Whereas there is general agreement on the requirement for a translation to be ‘good,’ ‘satisfactory,’ or ‘acceptable,’ the definition of acceptability and of the means of determining it are matters of ongoing debate and there is precious little agreement on specifics” (Williams, 2004: xiv). Most published TQA approaches are neither objective nor reproducible.

My study proposes a model for fuzzy standardized TQA through a quantitative approach, which expresses TQA results in numerical terms in a consistent manner. My model is statistics-based, practice-based and practice-oriented. It has been independently tested by eleven professors from four countries, fifteen senior United Nations translators, and fifty reader evaluators. My contrastive analysis of 23,000 pages of bilingual and multilingual texts has identified the unit of translation — the orthographic sentence in context, which is also verified by the results of an international survey among 66 professional translators, the majority of whom also confirm that they evaluate translations sentence by sentence in context. Halliday and Matthiessen’s functional grammar theory, among others, provides my model for quantitative TQA with its theoretical basis, while the international survey, the necessary data. My model proposes a set of six Fuzzy Functional Translation Grammar terms, a grammar concept general enough to cover all grammar units in the translated orthographic sentence. Each term represents one type of error which contains from one to three sub-categories. Each error is assigned a value — the mean of the professional markers’ deductions for relevant artificial errors and original errors. A marking scheme with sixteen variables under eight attributes is thus created. Ten marks are assigned to each unit of TQA, the sentence. For easy calculation, an arithmetic formula popularly used in statistics ($\frac{\sum X}{n}$) is adopted. With the assistance of a simple calculator, the evaluator can calculate the grade of a sentence, a

sentence group, and the overall grade for an entire TT, regardless of its length.

Perfect reliability or validity in any form of measurement is unattainable. There will always be some random error or noise in the data (McClendon, 2004: 7). Since it is the first of its type, I do not claim that my model is perfect. Variation has been found in the results of the testing performed by scholars and professional translators, but further testing based on two "easy" (markers' comment) sentences by the 50 reader evaluators respectively achieves 98% and 100% consistency, which indicates that markers' competence may equal constancy or that proper marker training and/or strict marker examination will minimize inconsistency among professional markers. My model, whose formulas withstand testing at the theoretical level and in practice, is not only ready for application, but it has profound implications beyond TQA, such as use in machine translation, and for other subjects like the role of the sentence in translation studies and translating practice.

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I thank each and every one of the 500 plus people for enabling me to make this little contribution to the field of translation studies and in turn to the human society.

Friendly reminder:

I have done the entire thesis by myself, but I use “we”, “our” and “us” instead of “I”, “my” and “me” in the thesis to acknowledge the important advice offered by Professor Christian Matthiessen and Dr. Canzhong Wu. The reader is kindly advised to interpret the plural pronouns as singular ones for the author, or PhD candidate, accordingly.

I, Junxiong Huang (Harry), declare that this thesis has not been submitted in full or part for a higher degree to any other university or institution. The work is entirely my own, and where sources have been quoted, acknowledgement has been made in full. All research conducted forming part of this thesis has been completed under Macquarie University Human Ethics Committee permit # HE24JUN2005-DO4195.

Signed: Date 08 / 30 /2007

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List of Abbreviations

Following is a list of commonly used abbreviations:

AA	Absolute accuracy
AB	Absolute balance
AccA	Acceptable accuracy
AccI	Acceptable inaccuracy
AI	Accuracy index
CI	Clause (independent) or independent clause
COSB:	Balance between *contenphysique*, *origispirit*, and *stylappearance*, or C.O.S. in Balance
CP	*Contenphysique*
EI	Error index
FFTG	Fuzzy Functional Translation Grammar
OS	*Origispirit*
PM	Presence of meaning
RA	Relative/realistic accuracy
RB	Relative balance
SA	*Stylappearance*
ST	Source language text or original text
STQA	Standardized translation quality assessment
SVU	Subjeme-vheme unit
TQ	Translation quality
TQA	Translation quality assessment
TT	Translated text, or target language text
UA	Unit of assessment
UT	Unit of translation
UTQA	Unit of translation quality assessment