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A corpus-based study of syntactic complexity of translated and non-translated chairman's statements

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Abstract: The chairman's statement of the corporate annual report plays an important role in informing the decision-making of investors. Thus, it is often targeted at an international audience. The present study compares the syntactic complexity of translated chairman's statements (Chinese to English) and non-translated ones (English), to determine the role that translation plays in conveying the chairman's message. The results show that translated chairman's statements are significantly simpler in subordination as well as overall sentence complexity, using fewer verbal phrases and T-units than the non-translated ones. However, translated chairman's statements have longer length of production units, use more coordinate phrases and complex nominals than their non-translated counterparts. The findings indicate that simplification exists in half of the 14 syntactic complexity measures, providing some evidence for the simplification universal. They also reveal that in addition to translation universals, social factors also affect the complexity level of translated and non-translated chairman's statements. The findings of the present study contribute to a systematic understanding of syntactic features of translated and non-translated chairman's statements, enrich the present knowledge of translation universals and provide pedagogical implications for translation teaching and training in the context of Chinese-English translation.

Keywords: Chairman's statement; syntactic complexity; translation universals; simplification; corpus-based translation studies

1. Introduction

The chairman's statement is an important component given at the beginning of a corporate annual report. It presents not only a descriptive review of the organization's business performance and achievements during the year (Thomas, 1997), but also the company's corporate strategy and forecast of business performance for the future as well (Nickerson & De Groot, 2005). The chairman's statement "is the most widely read […] part of the corporate report" (Jones, 1988, p. 299) and is alternatively referred to as the "Chairman's/

President's letter" or "letter to the stakeholders". Poncini and Hiris (2012) highlight the importance of the chairman's statement for it represents the position of the chief authority of the company. Chairman's statements play a crucial part in informing investors' decision making (Bartlett & Chandler, 1997; Bhatia, 2010; Canniffe, 2003). Given the importance of the chairman's statement, much emphasis has been laid on its linguistic features (e.g. Bhatia, 2013; Hildebrandt & Snyder, 1981; Li et al., 2019; Thomas, 1997; Wang et al., 2012). Most of these studies have focused on lexical and grammatical features of chairman's statements, with syntactic features being underexplored. Moreover, most studies are conducted with original texts of chairman's statements. However, the translated chairman's statement is also an important part of company annual reports and is worth investigating (Jeanjean, Lesage, et al., 2010; Jeanjean, Stolowy, et al., 2010). Studies show that translated chairman's statements have different linguistic features from the source version and those differences may alter the effectiveness of communication (Huang & Wang, 2020; Liao, 2021) and may be explained by translation universals, since some differences are unique to translations (Baker, 1993). Studies on translation universals mainly foucs on literary-texts, news, academic writing (Blum-Kulka & Levenston, 1983; Laviosa, 1998; Liu & Afzaal, 2021; Vanderauwera, 1985; Xiao, 2010; Xu & Li, 2021), but very few studies have probed into translation universals in translated chairman's statements, in particular the universal of simplification. The present study fills these research gaps by examining the syntactic complexity of translated and non-translated chairman's statements and exploring whether simplification is true in translated chairman's statements. The study investigated 14 syntactic complexity indices in a comparable corpus consisting of the chairman's statement of companies from both the Chinese mainland and Hong Kong listed on HKEX (Hong Kong Exchanges and Clearing), and from American companies listed on the New York Stock Exchange (NYSE) and National Association of Securities Dealers Automated Quotation (NASDAQ). It is hoped that the study will enrich our understanding both of the simplification hypothesis of translation universals in terms of syntactic complexity, as well as depict linguistic features that can be deployed for effective communication between companies and investors through the chairman's statement. It is also our hope that the findings can offer pedagogical insights for translation in the Chinese context.

2. Analyzing chairman's statements: A linguistic perspective

2.1 Linguistic features of chairman's statements

The chairman's statement is a text that the company uses to entice its readers to invest to some degree in the company, such as buying stocks, or boosting the confidence of current shareholders and their interest in the company's activities. With the rapid development of China's economy and globalization, more and more Chinese corporations are entering the international market. Besides obtaining capital from internal investors, Chinese firms also have to attract international investors to be competitive in this result-oriented age (Ngai & Singh, 2014). As a consequence, companies have to lay more emphasis on the effectiveness of communication and interaction in the chairman's statement in English, since English is a *lingua franca*. Analysis of linguistic features can manifest how well the goal of communication has been achieved (Wu et al., 2020).

Previous studies on linguistic features of chairman's statements mainly focus on the lexical and grammatical features of the original and non-translated statement. Hildebrandt and Snyder (1981) investigated the relationship between using positive and negative lexical expressions of chairman's statements reporting on financial performance. Their study unveiled that the words in chairman's statements were positive regardless of the financial status of the company and negative words were less frequently used in financially weak years than strong years. Thomas (1997) examined diachronic textual features of the chairman's statements from one organization to explore whether the textual differences revealed the financial performance of the company. She similarly found that the overall tone of chairman's statements appeared to be positive no matter whether the firm's financial performance was good or bad.

Some studies found that, in general, the frequency of positive phrases was higher than that of negative ones in chairman's statements (e.g., Bhatia, 2013; Wang et al., 2012). Also, it has been found that pronoun frequency is higher in the chairman's statement than other sections of annual corporate reports and the frequent use of first-person pronouns functions to shorten the communication distance between a company and its readers (Wang et al., 2012). On the other hand, the use of passive constructions can help attain an objective style of chairman's statements (Garzone, 2004), and such a feature is found to be more pervasive in the chairman's statements of Latin American companies than those of US companies which generally discourage the use of passive voice in business communication (Conaway and Wardrope, 2010). Li et al. (2019) have investigated the tone changes of chairman's statements from companies in Hong Kong and used machine learning models to make predictions of the stock price. Their study found that the tone changes in the chairman's statement could be effective in predicting the stock price in the long-term but were less able to predict financial crises. Liao (2021) adopted a multi-dimensional approach to analyzing chairman's statements in annual reports of Advanced Equipment Manufacturing corporations from China and the United States. It is found that the chairman's statements of American companies are interactive with their readers, pay attention to the present actions, while those of Chinese companies are "more informational, narrative and abstract, but less dependent on context and lower in on-line informational elaboration" (Liao, 2021, p. 161).

It can be seen from these examples that this line of research has emphasised the linguistic features of chairman's statements at the lexical and grammatical levels, leaving syntactic features underexplored. In addition, few have studied translated chairman's statements, and this is also a crucial part of corporate annual reports which is worthy of inquiry (Jeanjean, Lesage, et al., 2010; Jeanjean, Stolowy, et al., 2010). However, the translations of annual reports are often criticized for lacking in their communication effectiveness, as they may convey less precise information to international investors (Jeanjean, Lesage, et al., 2010). Critics have stated that the quality of translated annual reports may lead to poorer readability and increase the cost for global investors (Campbell et al., 2005; Courtis & Hassan, 2002). Translation studies have discovered that translated texts are different from non-translated ones in various aspects (Hu et al., 2016; Kajzer-Wietrzny & Ivaska, 2020; Kruger & van Rooy, 2016, Liu & Afzaal, 2021). Thus, it is important to investigate the translated chairman's statement in a comprehensive manner and discover how they align with or differ from the non-translated chairman's statement. It is of crucial importance to examine translated chairman's statements using a syntactic complexity approach. Meanwhile the study might contribute to insights for future

translations of Chinese-English chairman's statements and thus enhance investor relations and economic outcomes.

2.2 Simplification in translation

The concept of translation universals was initially proposed by Baker (1993) and was defined as "the features which typically occur in translated text rather than original utterances and which are not the result of interference from specific linguistic systems" (p. 243). Those features are unique to the target text and they are neither affected by the source language nor the target language. The concept of simplification is a widely debated topic among translation professionals and researchers (Liu & Afzaal, 2021). It aims to enhance the readability of a text, with translators unconsciously simplifying the language or message or both (Baker, 1996, p.176). Early studies on simplification were primarily based only on the manual analysis of individual texts or small collections of texts. For example, Blum-Kulka and Levenston (1983) identified lexical simplification in Hebrew and English pairs, with Hebrew as the source language and English as the target language. Vanderauwera (1985) focused on stylistic and syntactic simplification and discovered that translation texts tended to make complicated syntactic structures simpler by using finite clauses to take the place of the non-finite ones. However, because the sample sizes were small and statistical methods were not employed, the results of those studies in this period lacked generalizability.

With the development of corpus and computational linguistics, research into translation universals began to be done in a quantitative way by using statistical procedures. Laviosa (1998) employed lexical density, lexical frequency, and average sentence length in English translations of narrative prose. The study deployed part of the English Comparable Corpus (ECC) and found that the translated English texts differ from the non-translated English ones in the following four respects: lower lexical density, with fewer content words but higher portions of grammatical words than the non-translated texts; more high frequency words than the non-translated texts; higher repetition of the most frequently used words; and fourthly, the most frequently used words in translated texts had smaller numbers of lemmas than the non-translated texts, or in Laviosa's words "the list head of translated texts contains fewer lemmas" (Laviosa 1998, p. 563). Olohan (2004) deployed lexical diversity as an index to compare translated English target language fiction with English source language fiction. The study found that translated fiction used fewer color synonyms than the non-translated ones. Pastor et al. (2008) used natural language processing tools, readability formulas and some other indices to probe simplification. They found that non-translated texts had higher lexical richness and lexical density than the translated texts (Pastor et al., 2008). Their study provided evidence to confirm the simplification hypothesis. Some scholars use machine learning methods to investigate translation universals and have given additional support for simplification (Ilisei et al., 2010; Volansky et al., 2015). Although a lot of studies have been done on simplification, it is controversial compared to other translation universals (Liu & Afzaal, 2021). Some studies showed contradictory findings, such as longer mean sentence length (Laviosa, 1998; Xiao & Yue, 2009) and higher frequency of modifiers (Jantunen, 2004) in translated texts.

Less interest has been shown in exploring simplification at the syntactic and discourse levels of language in translation. One exception has been the study by Liu & Afzaal (2021) which used a series of syntactic complexity measures to investigate the differences between translated texts and non-

translated texts and offered some support for the simplification hypothesis. Their study also found that genre plays an important part in influencing the degree of syntactic complexity of translated texts (Liu & Afzaal, 2021). Previous research into simplification has included literary texts, news, academic writing (Blum-Kulka & Levenston, 1983; Laviosa, 1998; Liu & Afzaal, 2021; Vanderauwera, 1985; Xiao, 2010), while relatively little has been done with business texts. Focusing on the syntactic complexity of the translated chairman's statement could help reveal whether simplification universals exist in this genre, thus offering a textured understanding of translation universals.

2.3 Syntactic complexity

Syntactic complexity generally refers to the diversity and degree of complexity of the syntax displayed in a certain text (Housen & Kuiken, 2009; Ortega, 2003; Pallotti, 2009). It has been regarded as a crucial part of measuring the readability of written texts and assessing writing (e.g., Bi & Jiang, 2020; Casal & Lee, 2019; Jin et al., 2021; Zhang & Lu, 2022).

Being an important construct closely related to the language production units and grammatical structures, syntactic complexity is considered a significant aspect of language acquisition and thus is primarily used in ESL (English as a Second Language) and EFL (English as a Foreign Language) learning, especially in writing and reading. Syntactic complexity reflects a language learners' ability to produce complicated utterances. Scholars are interested not only in the students' development patterns, but also those factors that impact syntactic complexity in writing, such as the learner's L1 (first language) and educational background (Bulté & Housen, 2014; Lu, 2011; Lu & Ai, 2015). Besides EFL writing, syntactic complexity has also been explored in studies pertinent to EFL reading, which have shown that it serves as a vital indicator of reading text difficulty and an important element in teaching material adaptation (Frantz et al., 2015; Jin et al., 2020).

Measures of syntactic complexity were also used in studying academic writing, through the identification of salient syntactic structures in this genre (Brown & Yule, 1983; Halliday & Martin, 2003; Wu et al., 2020). Further studies have focused on differences in terms of syntactic complexity between research articles written by emerging and expert international researchers (Yin et al., 2021).

Earlier studies of syntactic complexity in translated texts have proven the two translation universals of 'simplification' and 'explicitation'. Comparing syntactic complexity in translated and non-translated texts, Liu & Afzaal (2021) found that translated texts have statistically lower syntactic complexity than non-translated texts, supporting the simplification hypothesis. Two studies that evidence the explication hypothesis include Al-Jabr (2006), who found that syntactical shifts may produce more explicit target texts than source texts; and Xu and Li (2021), who identified a correlation between syntactic explicitation in translations with their formality.

3. Research gaps and questions

In light of the literature reviewed, two research gaps have been identified:1) a scarcity of research into the syntactic features of chairman's statements; and, 2) a lack of research into translation universals in translated chairman's statements. In order to fill these gaps in chairman's statement research, the present study aims to examine syntactic complexity in chairman's statements of companies

from the Chinese mainland and from Hong Kong listed in the Hong Kong stock exchange, as well as chairman's statements of American companies listed in the American stock exchanges. The stock exchange market of Hong Kong was chosen because Hong Kong is one of most important global business and financial centers and its stock exchange provides abundant linguistic resources for Chinese and English translation studies because of its special historical status and geographic location (Huang & Wang, 2020; Jeanjean, Lesage, et al., 2010). Many firms in the Chinese mainland active in the international market create their annual reports in their mother tongue and then hire translation professionals or practitioners to translate the original version into English (Liao, 2021). The annual reports of Hong Kong corporations were originally written in English (Wang, 2014), since the Hong Kong stock exchange system is embedded in western economics and the city itself has long been bilingual (Setter et al., 2010). Thus, both source and target chairman's statements are readily available for analysis. The study addressed the following research questions:

1. Are there significant differences in syntactic complexity of chairman's statements between companies from mainland China and Hong Kong listed on HKEX, and companies from the United States listed on NYSE and NASDAQ? If so, what are these differences?
2. To what extent can the simplification hypothesis be confirmed in translated chairman's statements?

4. Methodology

The present study adopts a corpus-based approach to examine chairman's statements of companies from the Chinese mainland, Hong Kong, and the United States. This approach is suitable because of its capacity for "processing large amounts of textual data (semi)-automatically" (Liu & Zhu, 2021, p. 364), enabling quantitative analysis.

4.1 Corpus

Table 1: The three subcorpora of COCS

Subcorpus	Number of texts	Number of words	Mean word count	Year range	Information
USC	100	181,102	1,811	2018-2020	American companies listed on NYSE and NASDAQ
HKC	100	119,895	1,199	2018-2020	Hong Kong companies listed on HKEX
CMC	100	147,320	1,473	2018-2020	Mainland Chinese companies listed on HKEX

Note: The texts in the USC and HKC subcorpora are originally written in English, while the texts in the CMC subcorpus are English translations of chairman's statements originally composed in Chinese.

We compiled the Corpus of Chairman's Statements (COCS), which contains 300 texts of chairman's statements, totaling 448,317 words. COCS consists of three subcorpora: 1) chairman's statements of American companies listed on

NYSE and NASDAQ (USC); 2) chairman's statements of Hong Kong companies listed on HKEX (HKC); 3) chairman's statements of companies from the Chinese mainland listed on HKEX (CMC). In order to maximize the representativeness, we collected 100 chairman's statements from the annual reports of 100 companies for each subcorpus. Two experienced researchers screened the texts to ensure that the texts included in HKC are originally written in English and the texts included in CMC are translated from Chinese into English. Table 1 above presents the information of the three subcorpora.

4.2 Instrument and data analysis

Reported as a reliable instrument of syntactic complexity (Lu, 2010; Lu & Ai, 2015), the L2 Syntactic Complexity Analyzer is used in the present study to measure 14 syntactic variables in the English chairman's statements texts. These variables include the five subconstructs, namely "length of production unit, amount of subordination, amount of coordination, phrasal complexity and overall sentence complexity)" (Liu & Afzzal, 2021, p. 6). Table 2 shows the descriptions and descriptive statistics of the 14 measures.

Statistical methods for comparing the means/mean ranks of the above 14 dependent variables were conducted, while the subcorpora served as the fixed factor in this study. The non-parametric Kruskal-Wallis Test was selected since the dependent values are not normally distributed. Three Mann-Whitney U tests were run as the post-hoc tests, with the initial alpha level set at .05 in conjunction with a Bonferroni correction.

Table 2: Descriptive statistics for the 14 syntactic complexity measures

Measure	USC		HKC		CMC	
	Mean	SD	Mean	SD	Mean	SD
Length of production unit						
Mean length of clause (MLC)	14.9	2	20.2	4.4	22.4	4
Mean length of sentence (MLS)	24.7	3.8	28	4.7	28.8	5.2
Mean length of T-unit (MLT)	22.6	3.5	27.6	5.3	27.9	4.7
Amount of subordination						
Clauses per T-unit (C/T)	1.5	0.2	1.4	0.2	1.3	0.2
Complex T-units per T-unit (CT/T)	0.4	0.1	0.3	0.1	0.2	0.1
Dependent clauses per clause (DC/C)	0.3	0.1	0.3	0.1	0.2	0.1
Dependent clauses per T-unit (DC/T)	0.5	0.2	0.4	0.2	0.3	0.1
Amount of coordination						
Coordinate phrases per clause (CP/C)	0.6	0.1	0.7	0.3	1	0.3
Coordinate phrases per T-unit (CP/T)	0.9	0.2	0.9	0.3	1.2	0.4
T-units per sentence (T/S)	1.1	0.1	1	0.1	1	0.1
Degree of phrasal sophistication						
Complex nominals per clause (CN/C)	1.8	0.3	2.6	0.6	3	0.6
Complex nominals per T-unit (CN/T)	2.7	0.6	3.6	0.8	3.7	0.7
Verb phrases per T-unit (VP/T)	2.4	0.3	2.2	0.4	2.1	0.3
Overall sentence complexity						
Clauses per sentence (C/S)	1.7	0.2	1.4	0.2	1.3	0.2

5. Results

Table 3 shows the results of Kruskal-Wallis Test. There are statistically significant differences among the three subcorpora in all the 14 measures of syntactic complexity, with p-values being all lower than .001.

Table 3: Kruskal-Wallis Test results for the syntactic complexity measures

Measure	Kruskal-Wallis H	df	Asymp. Sig.
Length of production unit			
MLC	149.351	2	<.001
MLS	43.043	2	<.001
MLT	74.533	2	<.001
Amount of subordination			
C/T	81.282	2	<.001
CT/T	88.058	2	<.001
DC/C	99.613	2	<.001
DC/T	97.047	2	<.001
Amount of coordination			
CP/C	98.539	2	<.001
CP/T	53.13	2	<.001
T/S	53.423	2	<.001
Degree of phrasal sophistication			
CN/C	156.045	2	<.001
CN/T	92.705	2	<.001
VP/T	32.61	2	<.001
Overall sentence complexity			
C/S	99.309	2	<.001

The post-hoc pairwise comparisons using Mann-Whitney U tests were conducted after the Kruskal-Wallis Test and are presented in Tables 4 and 5 for USC and CMC, then HKC and CMC, respectively.

Table 4 below reveals significant differences between USC and CMC in all the 14 measures of syntactic complexity, a difference that is demonstrated in the mean rank results. CMC is higher in seven measures (MLC, MLS, MLT, CP/C, CP/T, CN/C, CN/T) and lower in the other seven measures than USC. Specifically, CMC has longer length of production unit but is less complex in overall sentence complexity and subordination than USC. For the two subconstructs of coordination and phrasal sophistication which contain three measures respectively, the results are mixed. In the coordination subconstruct, CMC is higher in two measures (i.e., coordinate phrases per clause and per T-unit) and lower in one measure (i.e., T-units per sentence), showing a trend towards lexical instead of syntactic coordination. In phrasal complexity, CMC is more complex in terms of using more complex nominals per clause and per T-unit, but less complex in the use of verb phrases indicated by VP/T (verb

phrases per T-unit), demonstrating a heavy use of complex noun phrases instead of verb phrases.

Table 4: Mann-Whitney U Tests of syntactic complexity between USC and CMC

Measure	USC VS CMC (N=200)				
	Mean rank		U	Z	p
	USC	CMC			
Length of production unit					
MLC	54.98	146.02	448	-11.122	<.001*
MLS	76.5	124.5	2600	-5.864	<.001*
MLT	68.5	132.5	1800	-7.819	<.001*
Amount of subordination					
C/T	137.1	63.91	1340.5	-8.942	<.001*
CT/T	138.13	62.88	1237.5	-9.193	<.001*
DC/C	139.97	61.04	1053.5	-9.643	<.001*
DC/T	139.79	61.21	1070.5	-9.601	<.001*
Amount of coordination					
CP/C	60.7	140.31	1019.5	-9.726	<.001*
CP/T	71.41	129.6	2090.5	-7.109	<.001*
T/S	122.31	78.69	2819.5	-5.33	<.001*
Degree of phrasal sophistication					
CN/C	54.56	146.45	405.5	-11.226	<.001*
CN/T	64.19	136.81	1369.5	-8.871	<.001*
VP/T	123.85	77.15	2665	-5.705	<.001*
Overall sentence complexity					
C/S	139.63	61.38	1087.5	-9.56	<.001*

*Note: *significant (<.0167) after Bonferroni correction (p<.05/3)*

Table 5 below demonstrates that there are also significant differences between HKC and CMC for nine out of the 14 values measured by the Mann-Whitney U test. CMC is higher in four measures (mean length of clause, coordinate phrases per clause, coordinate phrases per T-unit, complex nominals per clause), but lower in five others (clauses per T-unit, complex T-units per T-unit, dependent clauses per clause, dependent clauses per T-unit, clauses per sentence). The results show that CMC uses less subordination, as presented by all the significant differences and the mean ranks of all the four subordination measures. By contrast, CMC uses more coordinate phrases per clause and per T-unit than HKC, while there is no significant difference between them in T-units per sentence.

Table 5: Mann-Whitney U Test results showing syntactic complexity between HKC and CMC

Measure	HKC VS CMC (N=200)				
	Mean rank		U	Z	p
	HKC	CMC			
Length of production unit					
MLC	84.72	116.28	3422	-3.856	<.001*
MLS	96.72	104.28	4622	-0.924	0.356
MLT	98.51	102.5	4800.5	-0.487	0.626
Amount of subordination					
C/T	118.58	82.43	3192.5	-4.417	<.001*
CT/T	121.15	79.86	2935.5	-5.045	<.001*
DC/C	122	79.01	2850.5	-5.252	<.001*
DC/T	121.5	79.51	2900.5	-5.13	<.001*
Amount of coordination					
CP/C	74.74	126.27	2423.5	-6.295	<.001*
CP/T	79.97	121.03	2947.5	-5.015	<.001*
T/S	94	107.01	4349.5	-1.593	0.111
Degree of phrasal sophistication					
CN/C	81.48	119.52	3098	-4.647	<.001*
CN/T	92.5	108.5	4200	-1.955	0.051
VP/T	107.46	93.55	4304.5	-1.699	0.089
Overall sentence complexity					
C/S	113.21	87.79	3729	-3.106	0.002*

*Note: *significant (<.0167) after Bonferroni correction (p<.05/3)*

Table 6 summarizes the pairwise comparison results between USC and CMC, and between HKC and CMC for each measure. CMC is lower than both USC and HKC in subordination and overall sentence complexity, however, CMC has a higher length of production unit than USC in all three measures and is higher than HKC for mean length of clause. As for the coordination, CMC is higher than USC and HKC in coordinate phrases per clause and per unit, but CMC is lower than USC in T-unit per sentence. The other two subconstructs show mixed results. In terms of the degree of phrasal sophistication, CMC uses more complex nominals and uses fewer verb phrases.

Table 6: Mann–Whitney U test results for differences between USC and CMC, and between HKC and CMC

Measure type	Measure	USC vs. CMC	HKC vs. CMC
Length of production unit	MLS	<	-
	MLT	<	-
	MLC	<	<
Amount of subordination	C/T	>	>
	CT/T	>	>
	DC/C	>	>
	DC/T	>	>
Amount of coordination	CP/C	<	<
	CP/T	<	<
	T/S	>	-
Degree of phrasal sophistication	CN/C	<	<
	CN/T	<	-
	VP/T	>	-
Overall sentence complexity	C/S	>	>

Note: > indicates the former is statistically higher than the latter; < indicates the former is statistically lower than the latter; - indicates there are no significant differences

These findings confirm the simplification hypothesis in half of the 14 syntactic complexity measures (number of clauses per T-unit, number of complex T-unit per T-unit, number of dependent clauses per clause, number of dependent clauses per T-unit, number of T-units per sentence, number of verb phrases per T-units and number of clauses per sentence). This means that simplification of syntactic complexity can only partially be confirmed. Specifically, simplification is not confirmed in the length of production units, the number of coordinate phrases nor the complex nominals of translated chairman's statements. However, in terms of subordination, verb phrases, number of T-units and overall sentence complexity, simplification exists in the translated chairman's statements.

6. Discussion

Our analysis revealed substantive findings regarding the differences in syntactic complexity measures of translated and non-translated chairman's statements. In this section, we relate our findings to the relevant previous studies on translation universals and consider the implications of our findings for translation and business English research as well as pedagogy. These findings are partially consistent with those in Liu and Afzaal (2021) and Xu and Li (2021), which used similar syntactic complexity measures to probe translation universals. Together, these indicate that genre exerts an impact on the degree of complexity of translated texts and the simplification hypothesis of translation is therefore not simple (Xiao, 2012). Thus, the complexity of translated and non-translated texts needs to be investigated from multiple dimensions.

The present study discovered that the translated texts have statistically longer mean sentence length than their non-translated counterparts, which is in line with the findings in Laviosa (1998) and Xiao and Yue (2009), all of which indicate that the simplification universal noted in translations in general does not emerge in the feature of mean sentence length. Although there is a possibility that mean sentence length has some power in predicting the translation status of a text with some degree of accuracy (see Iliser et al., 2010; Volansky et al., 2015), it is a contrary indicator of simplification in translation. Rather than predicting simplification, the mean sentence length index merely points to the absence of simplification. Thus, the validity of using the mean sentence length as a feature of simplification should be checked in both translated and non-translated texts before using machine learning to test the simplification hypothesis, to ensure an investigation is rigorous and robust.

Apart from translation universals, the complexity levels of chairman's statements are also affected by social factors. The Plain English Movement initiated by the U.S Securities and Exchanges Commission (SEC) in 1998 has had a great impact on financial and business disclosures. The movement encouraged simple language in order to facilitate clear and successful communication with investors. Long sentences, weak verbs and abstract nominalisations were all discouraged by the SEC, who provided methods for avoiding them (SEC, 1998). When companies wrote their chairman's statement, they followed the regulations of SEC by shortening the average sentence length and average clause length, as well as avoiding nominalization. They used verb and verb phrases instead of using their corresponding nouns and nominal groups to make their financial disclosures more accessible to their investors and shareholders. Besides, the stylistic variations of the chairman's statements between the three regions may be due to cultural and political differences which have a significant impact on business communication (Hu & Tan, 2020). Hu and Tan found that the CEOs of Mainland Chinese companies were reluctant to interact with the public by employing an official and authoritative tone in their writing. It should be noted that China has higher power distance index than the United States (Hofstede *et al*., 2010) and "the hierarchy of power and the authority of leaders in Chinese companies" (Hu & Tan, 2020, p. 72) might have a bearing on the textual profiling of the chairman's statements.

The findings of the present study also highlight pedagogical implications for business translation teaching in Chinese contexts. As an increasing number of Chinese companies are going global, knowledge of different genres of Business English texts gains increasing importance (Ren & Lu, 2021) and knowledge of differences in business text writing among companies from mainland China, Hong Kong and the United States plays an important role in helping translators facilitate effective communication between companies and their shareholders. When learner translators are translating the chairman's statement, it would be beneficial for teachers to raise students' awareness of the syntactic differences between translated texts and non-translated ones. As was noted by House (2006, p. 356), translation should be seen as recontextualisation which involves "taking a text out of its original frame and context and placing it within a new set of relationships and culturally conditioned expectations." Teachers can make good use of the corpus data to guide students to understand the writing norms of business communication in the English-speaking world and to adopt proper translation strategies based on the context. On some occasions, learner translators can be encouraged to use shorter sentences and clauses to make the texts more effective for intercultural business communication. Furthermore, since corpus-assisted teaching methods have

been proved to be rather effective for training learner translators (Bernardini & Ferraresi, 2011; Liu, 2020), students can also be taught relevant corpus skills to explore the corpus of chairman's statements by themselves.

6. Conclusion

The present study has compared and contrasted syntactic complexity between translated and non-translated chairman's statements. The findings reveal the potential of deploying multiple syntactic complexity measures to probe into the simplification hypothesis of translation universals. The translated chairman's statement is significantly simpler in subordination as well as overall sentence complexity and uses fewer verbal phrases and T-units than its non-translated counterpart. However, the translated chairman's statement has longer length of production units and uses more coordinate phrases and complex nominals than the non-translated one. These findings suggest that simplification exists in half of the syntactic complexity measures and provide some support for the simplification hypothesis. The study also finds that apart from the translation universals, social factors also affect the complexity levels of translated and non-translated chairman's statements. In addition, it presents syntactic features that corporations can use to simplify their chairman's statement so that they are more accessible for their readers and can thus help establish strong relationships with their investors. The findings of the study enrich the present knowledge of translation universals of financial disclosures and provide pedagogical implications for translation teaching and training in the context of China.

As with many studies, our study also has some limitations due to the constraints of the research design and parameters. The findings suggest that future research can explore additional translation universals, multiple linguistic dimensions, and alternative language-pair translations. Besides, as this study used the comparable corpus approach (e.g., Kruger & van Rooy, 2016) to investigate stylistic variations between translated and non-translated chairman's statements, some of findings might need further investigation and validation through the parallel corpus approach so as to detect possible interference from the Chinese source language.

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