On the Translation Topology of Confucian Words in C-E dictionary: Structural Comparison and Feature Analysis

Wenfei Hu
Sichuan International Studies University, China

Abstract—Confucian words in C-E dictionaries are significant for language learning and cross-cultural communication, and comparative lexicographical study is beneficial for the analysis of different bilingual dictionaries and especially helpful for the improvement of C-E dictionary compilation. The Feature of Topology in Bilingual dictionary (including topological equivalence, point-set topological hierarchical structure) provides theoretical framework for the present study. After stratified sampling and statistical analysis, the paper conducts comparative research on the translation structure and transformation pattern between Confucian words and Biblical words from translation topology. The research includes descriptive analysis, independent t-test and feature analysis. The findings indicate that the translation topology of Confucian words in C-E dictionaries is featured with simplification and discreetness, compared with Biblical words. Confucian words and Biblical words are heterogenic in distribution, assemblage, relevance and transformation strategy, concerning topological point, set and field, which in turn affects the appearance and reordering of initial event. The reasons are as follows: the difference of compilation principle and the over-dependence on the monolingual dictionary differentiate the language variables, leading to the structural difference in Confucian words of topological transformation. The paucity of parallel corpus changes the structure density of cultural topology set, and forms different transformation pattern and representation validity of culture-bound words.

Index Terms—Confucian words, translation topology, topology point/set/field, transformation strategy

I. INTRODUCTION

The definition of culture-bound words (including Confucian words) has gone through a great change before it is finally accepted by lexicography and translation field. Lexicographers (Zgusta, 1971, p.295; Hartmann & James, 2000, p.33) provided the definition from both physical and psychological world. The geographical factor of different region has been taken into account except other connotations involved (Zgusta, 1971) .Furthermore, culture-specific words were those words or phrases related to the lifestyle of one community using the same language (Hartmann &James, 2000, p.33). Different from Aixela's point to find equivalents in the target language or Zgusta's geographical point of view, some other lexicographer gave some definition on culture-specific words from conceptualism (Baker, 2000, p.21). This statement is like the point of Newmark (2001, p.94) who defined and specified on the main area of issues but ignored the other aspects.

Confucian words, as specific culture-bound words, referring to the core concepts, proper nouns and idioms in Confucian works (Zhao & Guo, 1988), are the main body to develop Chinese culture and inherit its magnificent Confucianism. They have aroused wide concern in academic field, as their conceptual representations are essentially important to the widespread and correct comprehension of Confucianism. As for the origin of Confucian words, we can date back to the Confucian terms in philosophy (Chan, 1986). Later, they have been extended to the related proper names and concepts appeared in the six classical Confucian works and subsequently collected in Chinese Confucian Terms Dictionary.

As a bridge between two different cultures, Confucian words exactly play a crucial role in the spread of Chinese traditional culture, and there is a growing interest in representation of Confucian words in Chinese–English dictionary (C-E dictionary in short) in both translation (Legge, 1872; Collie, 1970; Barry, 2011) and lexicographical fields (B éjoint, 2002; Svensén, 2009; Xu, 2002a, 2002b). Likewise, Biblical words are entitled to these key concepts, terms and proper names in Bible (Liang, 2015), and have grown into the research focus of western cultural studies in the past decades. So it's meaningful and significant to compare the representation of two culture-bound words and help improve the Confucian word compilation in C-E dictionary.

The comparative study of dictionary is the key point of comparative linguistics and asserts the increasing importance of the research in bilingual dictionaries. Actually, during the past decades, plenty of researches (Lemmens & Wekker, 1991; Bogaards, 2001; Dziemianko, 2011; Ptasznik, 2014) have been conducted, aiming to research the microstructure of learner's dictionary. For one thing, the early study of microstructure laid emphasis on the comparative paradigm, mainly with regarding to the grammatical information (Lemmens & Wekker, 1991), representation validity (Bogaards,1996) and labelling status (Dziemianko, 2011). For another, the comparative research and quantitative

analysis of *Big Five* have optimized the dictionary compilation and representation, like quantitative study about deictic words (Xu, 2005) and other research on high-frequency grammatical marker (Coffey, 2006). Besides, collocation is also the emphasis of comparative research in learner's dictionary (Walker, 2009; Dziemianko, 2014).

Therefore, the present study will adopt the theories of Confucian words and bilingual lexicography, trying to conduct a comparative analysis of representational structure of Confucian words and Biblical words, so as to improve and perfect the representation structure of Confucian words in C-E dictionary.

II. THE TOPOLOGICAL STRUCTURE OF BILINGUAL DICTIONARY

A. The Topology of Culture and Translation

The topology of culture enhances the complexity of the structural mapping of Confucian words (especially the culture-bound words). The multiple expressions of culture have constants in the deep structure, so it is very meaningful to consider the internal structure of culture as "topology" (Steiner, 2001, p.448-449).Culture has a relatively stable core or root. Therefore, the constants that constitute a particular culture keep their internal quality unchanged even in cross-cultural mapping and meaning extension, and enhance the complexity of the translation in Confucian words as there are invariants and constants underlying the manifold shapes of expressions in our culture (Steiner, 2001, p.444).

The application of topology in translation lays a solid foundation for the improvement of Confucian words in C-E dictionary. For one thing, the topological nature of culture provides a theoretical basis for the translation of Confucian words, because culture is a sequence of transformation based on language variables (Steiner, 2001, p.448-450). The various kinds of relationship in dictionary translation embody the "constants in transformation" in the structural extension, prove to be dynamic and innovative in nature. For another, the topological translation centers on the reordering of constant structure and reappearance of event component, concerning both culture and language. The manifold transformations and reordering of relation between an initial verbal event and subsequent reappearance of this event might best be seen as topological (Steiner, 2001, p.444). That is to say, the topological transformation of translation structure is based on the cultural constants and regards the linguistic variable as the carrier.

B. The Application of Topology to Bilingual Dictionary

(a). The Feasibility of Topology to Bilingual Dictionary

We apply the topology theory into the analysis of bilingual dictionary according to the following reasons.

Firstly, the structure of bilingual dictionary can be treated as topology as center on the topological equivalence and mapping transformation between two topological spaces. Bilingual dictionary in nature emphasizes translation (Zgusta, 1971), and seeking for equivalents is the fundamental aim of bilingual dictionary definition. Two topological spaces are topologically equivalent if there is a bijective function between them that yields a bijective correspondence between the open sets in the respective topologies (Egenhofer & Franzosa, 1991). Therefore, the theories and principles of "topological equivalence" can be adapted to bilingual dictionary representation.

Secondly, both point-set topology and tradition bilingual dictionary are featured with hierarchical structure and concerned with spatial relationship. Point-set topological theory illuminates the hierarchical feature of topology including their interior and boundary and other necessary components which in turn helps intertwine into a topological space. The translation in bilingual dictionary focuses on the mapping of culture constants in two topological spaces based on language transformation. Therefore, it's quite meaningful to apply topological paradigm to the new bilingual dictionary representation structure. Besides, the reordering of culture core in topological structure, especial the unchanged cultural constants, caters for the translation of culture-bound words and provides a manual principal for their translation.

(b). The Feature of Topology in Bilingual Dictionary

Both the theories of topology in culture and translation have been extended to dictionary study and provide a theoretical framework for the present study. According to the point-set topological relation (Egenhofer & Franzosa, 1991) which defines the topological point as the fundamental entity which composes the fundamental components of topological set. Actually, the point-set approach is the most general model for the representation of topological spatial regions (Egenhofer & Franzosa, 1991). The topological point and set are mainly about the distribution and portion of the language variables, while the field focused on the assemblage and relevance of representation structure.

Besides, the topological set integrates the topological points and accumulates them in order under the specific domain. The definitions of relations in terms of set operations use set theory to describe topological relations (Egenhofer & Franzosa, 1991). In this case, the domain which integrates the topological point and sets to form an event domain or topological field. Therefore, we can treat the microstructure of bilingual dictionary as topological structure since it is mainly concerned with the relations between equivalent, sense, example which indicate the semantic, logical and spatial relations among the micro-components, hierarchically organized and collected through separate topological point (from part of speech, equivalent, appended meaning), topological set (mainly concerning example) and topological field (based on sense division) individually.

Therefore, based on the topology of translation the present study will conduct an empirical study on Confucian words

and apply the point-set topological relation and mapping transformation framework into the analysis of Confucian words.

III. THE PRESENT STUDY

A. Research Objects

(a). The Selection of Dictionary

In this study, we will select five C-E dictionaries to investigate the compilation of Confucian words, including *Chinese-English Dictionary* 3rd edition, (henceforth CED3 in short, 2010), *New Century Chinese-English Dictionary* 2nd edition (NCCED2, 2013), *New Age Chinese-English Dictionary* 2nd edition (NACED2, 2014), *Modern Chinese-English Dictionary* (MCED, 2001) and *Chinese-English Dictionary* (CED, 2006). All of them are middle-sized and categorized into active dictionaries (with more than 100,000 lemmas), published in 21th century and can be regarded as the representatives of the best and most influential C-E dictionaries in China now.

To compare is to find the drawbacks and fill in the gap of dictionary compilation between Confucian words and Biblical words in Five E-C dictionaries (bilingualized *version of Big Five*). They are *Longman Dictionary of Contemporary English* (henceforth Longman in short)*, Macmillan English Dictionary for Advanced Learners* (Macmillan)*, Cambridge Advanced Learner's Dictionary* (Cambridge), *Oxford Advanced Learner's Dictionary* (Oxford) and *Collins Cobuild Advanced Learner's Dictionary* (Collins). *Big Five* enjoys a long history of dictionary-compiling practice, with good reputation among EFL learners around the world and dominating a large proportion of dictionary market share. Although C-E dictionary compilation has gone through a history over 200 years and achieved great progress, we need to scrutinize the representation approaches of Confucian words in C-E dictionary. Therefore, it is essential for us to make a comparison between the Confucian words and Biblical words so as to improve and optimize the treatment of the formers.

(b). The Selection of Confucian and Biblical Words

In order to select the Confucian words systematically and comprehensively, we conduct the present sampling based on the *Chinese Confucian Words Dictionary* (1988), the only thesaurus dictionary of Confucian words around the world. The dictionary contains 620 Confucian words in total, so we conduct a random sampling to select 110 Confucian words for the present study. In order to enforce the reliability and validity of research object, we check the Confucian words in *Contemporary Chinese Dictionary* (henceforth CCD) to make sure that all those sampled words have been collected in both dictionaries. Therefore, we adopt the method of isometric sampling and finally 55 Confucian words（including 52 conceptual words and 3 Proper nouns）have been selected to form the final object of the study.

Similar to the selection process of Confucian words, we sample the Biblical words from *Encyclopedic Dictionary of the Bible* (2015). Similarly, we follow the principle of isometric sampling and select 162 Biblical words firstly and again we check them in *Big Five* for its collection status. After the similar isometric samples, 54 biblical words (including 51 conceptual words and 3 Proper nouns) have been finally extracted according to the principle of stratified sampling.

B. Research Process

Once the research objects of the present study (55 Confucian words and 54 Biblical words) have been selected, we record the data of culture-bound words in every topological structure from five C-E dictionaries and five E-C dictionaries alternatively. Based on the theoretical framework of translation topology (Chen & Chen, 2016) and microstructure of bilingual dictionary (Svensén,2009), we will classify the representation model into 3 topological hierarchical structure, including topological point, topological set and topological field.

As for the statistical approach of topological structure, we integrate the demarcation and definition for topology in translation, culture and mathematics and illuminate them in the following practical way. To be more specific, the main topological structure of the Confucian words falls into 3 parts: topological point, topological set and topological field, and each of the components will be accounted (see section 2.2). For each of the components mentioned above, 1 point will be accounted in the process of data recording. As for the statistical method, we adopt the method of descriptive statistics and inferential statistics (t-test) to survey the difference between groups.

C. Research Question

Inspired by Steiner (2001), Dziemianko (2011) and Hu (2014), the present study aims to investigate the translation feature of Confucian words based on topological translation and comparative lexicography. *Big Five* will be adopted for the comparison of topological structure. To be more specific, the study tends to address the following research questions:

1) What is the distribution of topological points and topological sets in Confucian words compared with Biblical words?

2) What are the features of topological fields in Confucian words?

3) What's the transformation strategy of topological fields in Confucian words?

IV. DATA AND RESULTS

In this section, we will investigate the topological structure (including topological point, topological set and topological field) of Confucian Words by comparing them with those of Biblical words in five E-C dictionaries. Descriptive statistics and independent-sample t-test will be conducted to display their difference. Furthermore, a general discussion about the results and the possible causes will also be held based on the statistical analysis.

A. Topological Point Analysis

Table 1 indicates a general distribution of topological points between Confucian words and Biblical words. Furthermore, we also make a null hypothesis that there is no significant difference in topological points between Confucian and Biblical words.

TABLE 1
DESCRIPTIVE STATISTICS AND INDEPENDENT-SAMPLE T-TEST OF TOPOLOGICAL POINTS

Items \ Topological points	Objects	Average	Standard Error	Independent-Sample t-test (Sig)
Part of Speech	Confucian words	0.73	0.06	P<.05
	Biblical words	1.41	0.03	
Equivalent	Confucian words	4.44	0.33	P<.05
	Biblical words	6.09	0.35	
Appended Meaning	Confucian words	0.48	0.05	P<.05
	Biblical words	8.23	0.53	

Table 1 shows the following results. For one thing, the statistical data indicates that Biblical words contain more topological points (including part of speech (POS), equivalent and appended meaning) than that of Confucian words. Actually, Table 1 shows that the figure of POS in Confucian words is less than 1 on an average, which means that not all Confucian words contain part of speech labeling.

For another, table 1 implies that the difference between Confucian words and Biblical words is significantly striking in part of speech and appended meaning. Furthermore, we hold an Independent-Sample t-test to check the degree of difference. The figure shows that all topological points' significant level is 0.00 (namely P < 0.05). Therefore, the null hypothesis is invalid, and we can infer that there is a significant difference between Confucian words and Biblical words in topological points.

B. Topological Set Analysis

As for topological set, we will mainly survey the examples based on the theoretical framework of topology translation as examples extend the meaning of culture-bound words by realizing the potential relations between initial-verbal event and subsequent reappearance of this event (Stein, 2001). Table 2 gives a general description of topological sets in Confucian words and Biblical words respectively.

TABLE 2
DESCRIPTIVE STATISTICS OF TOPOLOGICAL SET

Items \ Topological set	Average	Standard Error	Independent-Sample t-test (Sig)
Confucian words	4.06	0.46	
Biblical words	5.45	0.35	P<0.05

The results indicate that the significant level of the difference in topological sets between Confucian and Biblical words is 0.02 (P < 0.05). Therefore, the null hypothesis is invalid, which means there is a significant difference between the two groups.

Example coverage ratio is a criterion for the example allocation analysis (Svensén, 2009). From Chart 1, we can easily conclude that there is a wide discrepancy in the example allocation between the two groups which in turn indicates the difference of topological sets between them. It also informs that the divergence of the example coverage in Confucian words (ranged from 45.45% to 94.55%) is more prominent than that of Biblical words (from 70.37% to 88.89%), which demonstrates again the fact that there is a striking difference about topological set between 2 groups.
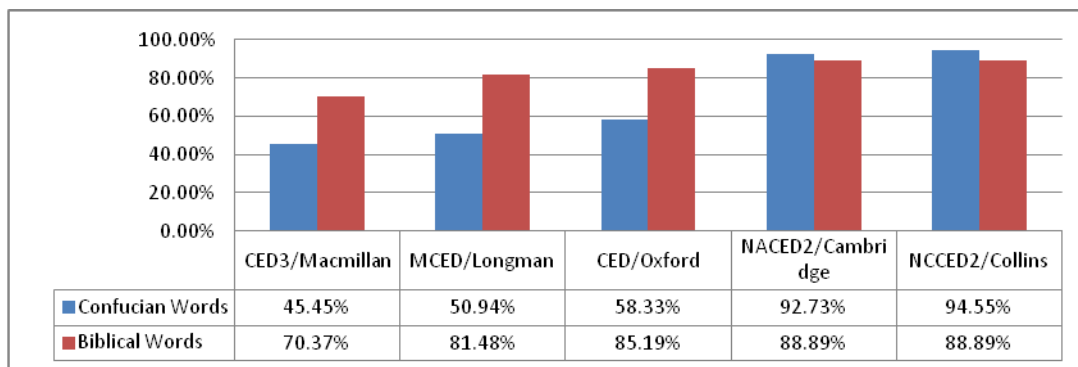
Chart 1 The Topological Set Based on Examples

C. Topological Field Analysis

The topological field is mainly an integration of topological points and sets, mainly concerning the underlying assemblages and relevance of functions and configuration (Stein, 2001, p.444). In this section, we will analyze the field from topological density and componential relevance.

(a). Statistical Feature of Topological Field

From table 3, we can find out that the average of topological fields based on the sense division in Biblical words is much higher than that of Confucian words (3.36>2.49). Furthermore, the independent-sample t-test (Table 3) shows the significant level of sense division is 0.00 (namely $P < 0.05$). So, there is a significant difference between Confucian words and Biblical words about topological field.

TABLE 3
DESCRIPTIVE STATISTICS OF TOPOLOGICAL FIELD

Items / Topological field	Average	Standard Error	Independent-Sample t-test (Sig)
Confucian words	2.49	0.18	$P<0.05$
Biblical words	3.36	0.19	

(b). Assemblage Analysis Based on Topological Field

As for the assemblage of topological field, we will mainly analyze the Confucian words and Biblical word comparatively. Considering the present study, we analyze the assemblage status of topological field from the two perspectives: Point/ Set Ratio and Field Density. The former mainly refers to the portion of topological points in a certain set which indicate the density of topological set while the latter is about the total number of topological point and set in a specific topological field on an average.

TABLE 4
ASSEMBLAGE ANALYSIS OF CONFUCIAN WORDS AND BIBLICAL WORDS

	Confucian Words	Biblical Words	Independent-Sample t-test (Sig)
Point / Set Ratio	1.39	2.89	p<.05
Field Density	4.89	7.30	p<.05

From table 4, we can conclude that both the Point/Set ratio and Field Density imply that the assemblage of Biblical words enjoys higher proportion than that of Confucian words. This can be confirmed from the Independent-sample t-test (p<.05) which indicates that Biblical words and Confucian words are significantly different in both ratio and density.

(c). Relevance Analysis Based on Topological Field

Relevance is mainly concerned about the relationship among the mediostructure components in and cross the topological field, especially the relevant items and relevance/field ratio (the proportion of relevant senses or lemmas in a specific topological field).

TABLE 5
RELEVANCE ANALYSIS OF CONFUCIAN WORDS AND BIBLICAL WORDS

	Confucian Words	Biblical Words	Independent-Sample t-test (Sig)
Relevant items	0.54	1.39	P<.05
Relevance/Field Ratio	0.16	0.56	P<.05

As table 5 indicates, the Biblical words contain more relevant items than that of Confucian words (1.39>0.54), and

the difference is statistically significant (P<.05) .The same feature and tendency can be verified in both relevant items and Relevance/Field ratio.

(d). Transformation Strategy Based on Topological Field

Based on the transformation strategy of topological shift (Steiner, 2001; Chen &Chen，2016) and bilingual translation structure (Zgusta, 1971; Bejoint, 2002; Svensén, 2009), the present study will conduct a comparative survey about the transformation strategy of Confucian words in C-E dictionary and Biblical words in *Big Five*. As for the strategy classification, we will adopt the criteria of Stein (2001) and Chen &Chen (2016), mainly analyze the 4 strategies including intertextuality strategy, analogy strategy, direct translation and Modification strategy. The former two strategies emphasize the cultural constants (or roots) in topological transformation, focusing on the inference competence of core cultural constants in source language, while the latter two strategies focus on the linguistic variables of target language in topological mapping. As for the statistical method, we marked all the cultural words (including the Confucian words and Biblical words) according to classification criteria (1 point for 1 strategy based on one sense). Later, we will figure out the percentage of transformation strategy so as to make a comparative study syntagmaticlly.

TABLE 6
TRANSFORMATION STRATEGY BASED ON TOPOLOGICAL FIELD

	Cultural Constants (%)			Linguistic Variables(%)		
	Intextuality	Analogy	Total	Direct Translation	Modification Translation	Total
Confucian words	42.68	38.14	80.82	11.86	7.32	19.18
Biblical words	40.13	36.41	76.54	13.47	10.99	24.46
Between-groups	P>.05			P<.05		

1) Totally speaking, table 6 shows that both Biblical words and Confucian words share the similar distribution model in topological transformation strategy. From table 6 we conclude that intertextuality is the dominant strategy in two groups, while the modification translation is less likely to be applied.

2) As for the difference between the two groups (Confucian words and Biblical words), Table 6 indicates that Confucian words are featured with more cultural constants (80.82>76.54) while Biblical words pay more attention to linguistic variables (24.46>19.18). Furthermore, the two groups' differences in linguistic variables are statistically significant (P<.05) but their differences in cultural constants remain insignificant (P>.05).

D. General Discussions

The data above indicates that, compared with Biblical words, Confucian words have heterogenic topological components，featured with simplification and discreteness. Actually, the simplification inevitably decreases the assemblage of topological components while discreteness of topological structure magnifies the irrelevance of topological mapping and influences the reappearance and reordering of an initial event concerning the culture-bound words. As for the reasons, the paucity of corpus and the overdependence on monolingual dictionary serve as the dominant and primary ones.

(a) The Topological components of Confucian Words in C-E dictionary and Bible words in E-C dictionary are heterogenic, and the former contains more simplified topological points and sets. To be more specific, Confucian words have simpler topological structure than that of Biblical words, and the two groups of culture-bound words have statistically significant differences in that aspect.

First, the labeling system in Confucian words only involves POS labeling and pragmatic labeling, while labels of Biblical words are more diversified and abundant, including word class, pragmatic labeling, collocation and syntactic structure as well. As for POS, dictionaries like MCED only tags the POS of monosyllabic lemmas such as "注"（zhù）, "理"(lǐ), "道"(dào) and "德"(dé). Moreover, we find many inconsistencies about POS tagging among 55 Confucian words. For example, "胎教" (Taijiao) was simply labeled as verb in NACED2, CED3 and NCCED2. Based on language intuition, we can easily enumerate its noun usage. Therefore, we make a survey about "胎教"(tāijiāo) in CCL[1] and CN[2] corpus. The results (see table 7) indicate that among the valid concordance of 76 items, only 7 of them are used as verb while the rest of 67 items are used as noun, which is quite different from the POS labeling in the current C-E dictionaries.

TABLE 7
SITUATIONS OF THE PART OF SPEECH OF "胎教"(TĀIJIĀO) BASED ON CCL AND CN CORPUS

	Verb	Noun
胎教(tāijiāo)	9	67

As for reasons, the paucity of corpus in dictionary compilation seems to be fundamental for this inaccurate labeling. From this table we can find that most of Confucian Words have been falsely labeled due to the lack of survey or

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[1]（http://ccl.pku.edu.cn:8080/ccl_corpus/
[2] (http://www.cncorpus.org/)

investigation on usage. Furthermore, the overdependence on the monolingual dictionary proves to be another reason for the homogeneity of topological structure between C-E dictionaries, and a case in point is the equivalent. It has been found out that except for NACED2 and NCCED2, there is a prominent homogeneity among MCED, CED and CED3. For example, in MCED and CED alone there are 40 lemmas demonstrating the exact same equivalent in the sampled 55 words, and the high proportion of same equivalent for Confucian word between different C-E dictionaries shows that there is a high overdependence among the two dictionaries.

Second, it has been clearly found from Table 1 that there is a huge gap about appended meaning (8.23>0.48) between the two groups. This simplification in topological point (especially the appended meaning) will influence the compositionality of topological field. Aside from the average, if we compare the proportion of entries with appended meaning (see chart 2), we can easily find the divergence between the two groups.

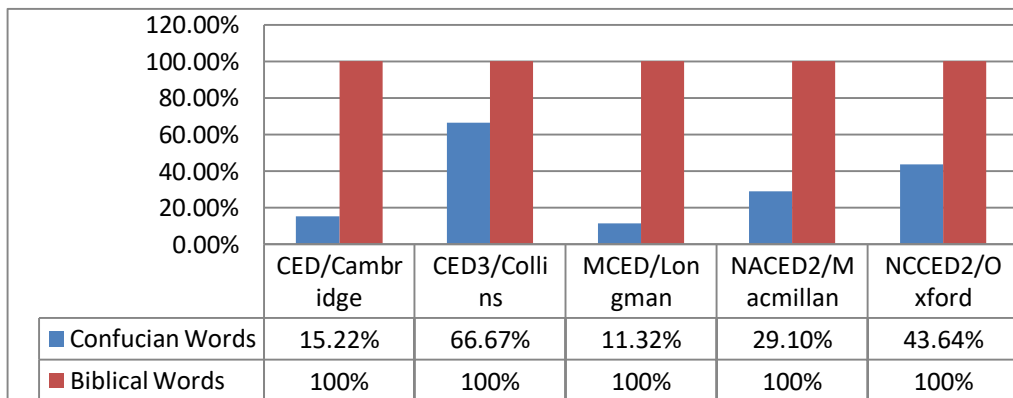|	CED/Cambridge	CED3/Collins	MCED/Longman	NACED2/Macmillan	NCCED2/Oxford
■ Confucian Words	15.22%	66.67%	11.32%	29.10%	43.64%
■ Biblical Words	100%	100%	100%	100%	100%

Chart 2 Proportion of Entries with Appended Mean

This chart clearly manifests that most Confucian words are suffering from the ignorance of the appended meaning in dictionaries. The shortage of the appended meaning will decrease the topological points and simplify the topological field eventually.

(b) Confucian words are inferior to biblical words in terms of structural integrity. Firstly, the topological sets based on coverage of examples will help users grasp their procedural and declarative knowledge by reordering the cultural constants from rich linguistic variables. Most of the Confucian words in Chinese-English dictionary aim at facilitating comprehension of Confucian words and have been suffering from the deficiencies of illustrated examples (see Chart 1). Furthermore, a large number of Confucian words borrow examples directly from the Chinese dictionaries (especially *CCD*) although they differ in proportion (see the table below), and "动静" (dòngjìng) is a case in point. "发现可疑动静" serves as a typical example in NCCED2, MCED and CED3 respectively while "一有动静就来报告" exists both in NACED2 and CED3.This has grown into a fundamental reason for the similarity and homogeneity of topological sets among the Confucian words.

TABLE 8
THE DEPENDENCY OF TOPOLOGICAL SETS IN CONFUCIAN WORDS BASED ON EXAMPLES

	MCED	NCCED 2	CED	CED3	NACED2
Examples Borrowed from *CCD*	34	69	40	26	61
Total Examples	146	215	123	137	216
Percentage （%）	23.29	32.09	32.52	18.98	28.24

By contrast, examples of Biblical words in *Big Five* originate from their own corpora, which in turn helps improve the diversity and density of examples and reduce the repetitions and homogeneity.

Secondly, topological fields based on sense division show that their shortage and limitation will weaken the representation validity. In the five C-E dictionaries, "先进" displays different topological fields based on disposition of sense in different dictionaries (see Example 1, hereinafter shortened as Ex.1).

Ex.1

【先进】xiānjìn advanced (MCED)

先进 advanced (CED)

先进 xiānjìn①形 advanced ②名 an advanced individual/collective (NACED2)

先进 xiānjìn 形 advanced; exceptional; foremost; excellent; exemplary; ahead of the times (opp. 落后)
(CED3)

【先进】xiānjìn ①<形> advanced; progressive ②<名> advanced individual or group (NCCED2)

From the above examples, it can be seen that MCED, CED and CED3 provide "先进"(xiānjìn) with one topological field, namely "advanced", while NACED2 and NCCED2 give two respectively, "advanced" and "advanced individual or group". The great difference among dictionaries expands the topological field discrepancy. So, we resort to CCL for

more details and it turns out that there are 52710 concordances of "先进" (xiānjìn) in the corpus. Due to the limited time and energy, we sample 1000 concordances, among which 908 concordances are valid.

TABLE 9
SENSE STRUCTURE OF "先进"(XIĀNJÌN) BASED ON CCL

Sense	advanced	advanced individual or group	advanced entity
Concordance(item)	877	29	2
Percentage(%)	96.58	3.2	0.22

Table 9 shows that "先进"(xiānjìn) is divided into three senses, among which *"advanced"* accounts for the largest proportion(96.58%) and the sense *"advanced individual or group"* ranks the 2nd (3.2%). This usage pattern supports the objective evidence for NACED2 and NCCED2 to entail the sense "advanced individual or group" in the entry of "先进"(xiānjìn). As for the reasons for the divergence of sense collection, the ignorance of corpus grows into the basic one. Corpus-based principle of sense collection will help us get a comprehensible output about the usage of Confucian words. Furthermore, it will ensure and solidify the presentation structure and topological field categorization.

(c) Confucian words and Biblical words are heterogenic in topology transformation, the former being more descriptive and attentive to analogy but limited on reappearance and reordering of initial event domain. Confucian words in C-E dictionaries are not only simplified on the translation topology, but also show differences in transformation strategy, compared with Biblical words in Big Five.

First, the transformation strategy survey shows that the translation model of Confucian words is primarily descriptive and comprehension-oriented, which in the long run affects the reappearance or related event of the translation structure. Descriptive definition neglects insertability of equivalent words, emphasizing the comprehension instead of structural compatibility (syntagmatic and paradigmatic) of the equivalent words. That's the reason why Confucian words pay more attention to cultural constants based on intertextuality and analogy (see table 6 for more details). Sampling displays that descriptive translation of Confucian words has an extremely high proportion (accounts for 40% or so). In contrast, translation model of Biblical words is mainly to provide the equivalent words with high insertability and productivity. Therefore, Biblical words in *Big Five* value structural compatibility on the topology transformation and emphasize more on linguistic variables based on direct and modification translation strategy (as table 6 indicates). Besides, some Confucian words overuse descriptive definition in representation model. A case in point is "太岁" (tàisuì) in the 5 C-E dictionaries (see example below). Only 2 of them provide insertable equivalents while other 3 dictionaries only offer descriptive explanation. On the contrary, Biblical words tend to provide more equivalents in the process of bilingualization and help improve the insertability and productivity.

Ex.2

太岁 tàisuì 名①<旧> Master of the Year; Jupiter ② God of the Year(a deity who was believed to change his dwelling on earth every year, and to allow no building wherever he happened to dwell, his every locations being set by the almanac) ③<贬>nickname for the most powerful man in a locality: 花花～ King of Lechers/ 镇山～Lord of the Mountain(a brigand chief) (CED3)

Second, transformation validity based on topology set indicates that the Confucian words in C-E dictionaries are mainly limited to phrase examples for related event domain, stressing analogy and intertextuality of topology but weakening the reordering of event component in macro context. The topological sets of Biblical words in E-C dictionaries consist predominantly of complete sentences, emphasizing direct and modification event or domain based on assemblage and relevance of topological sets. Confucian topological sets in C-E dictionaries focus on language information, such as collocation information and composite patterns, and attach importance to the expansion of the topology point. But the lack of context and irrelevance of topological components will affect the presentation of Confucian Words' meaning potential (including the reordering of related event). A representative example is Ex.3 in NACED2."人道"(réndào) has been supplied with "humanity; human sympathy", which is rich in lexical structure but lack of procedural knowledge and usage patterns. Furthermore, the etymological and historical connotation fade away and this will affect the reader's comprehension. Actually, we investigate the etymological meaning and find that "人道"(réndào) originally refers to the "general rule of Confucian about human affairs and social norm and regulations", correspond with " tiandào" , adopted from "天道远，人道迩"in《易传.系辞下》. The topological set based on phrasal example "in the name of humanity" reflects part of analogical and cultural meaning while deletes the reordering and reappearance of related event in source language.

Ex.3

【人道】réndào ①<名> humanity; human sympathy：以～的名义 in the name of humanity ②<形> human; humane inhumane ③<动> [usu used in the negative] have sex: 不能～ (of man) be impotent
(NACED2)

On the contrary, Biblical words are concerned about assemblage based on topological points and relevance of topological set. Taking topology set as carrier, those words are attentive to frame mapping, context reoccurrence as well as topological continuity. "Service" (in Ex.4) has rich sense structure because of its complete linguistic topological sets based on high frequency usage. Grounded on semantic field and framework, the compiler presents the topological field

"a religious ceremony" with the reappearance of related event based on topological sets, including "morning/evening service" and "funeral/marriage/memorial, etc. service". The prominence and homography of topological set will keep cultural constants and enrich the linguistic variables which in turn will improve the topological structure.

Ex.4

Service …10[C] a religious ceremony 宗教礼仪；宗教仪式: morning /evening service 晨祷、晚祷 to hold/attend a service 举行/参加礼拜 a funeral/marriage/memorial, etc. service 丧葬、结婚、追思等宗教仪式

(Oxford)

V. CONCLUSION

Based on the results displayed in above sections, we can sum up the translation topology of Confucian words in C-E dictionaries. Firstly, among all the components, the topological points and sets of Confucian words are simpler and discrete. The topological components of Confucian words are featured as simplified topological points (including POS labeling, equivalent and appended meaning) and topological sets (based on example) while discrete in topological transformation. Secondly, both the topological set and topological fields show that Confucian words are inferior to Biblical words in terms of structural integrity. Thirdly, Confucian words and Biblical words are heterogenic in topology transformation, the former being more descriptive and limited on reappearance and reordering of initial event domain.

All in all, the study indicates that Confucian words and Biblical words are heterogenic in simplification and discreteness. The reasons are as follows: the difference of compilation principle and the overdependence on the monolingual dictionary differentiate the language variables, which finally leads to the structural difference in Confucian words of topological transformation. The paucity of corpus changes the structure density of cultural topology sets, and forms different transformation pattern and representation validity of culture-bound word.

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Wenfei Hu is a Professor and PhD in Linguistics and Applied Linguistics of Sichuan International Studies University, whose research interests include Lexicography, Terminology and Corpus Linguistics. He has finished one research project funded by National Social Science Foundation and been an academic visitor in University of Arizona (2013). He has published two monographs and over 30 articles in both international and domestical journals including *Language Learning & Technology, Lexikos*, *Journal of Foreign Languages*，*Journal of Modern Foreign Languages*.