

# A Cross-cultural Study of Huawei's and Apple's Corporate Social Responsibility Reports: A Keyness Approach

Qishan Li

School of English for International Business  
Guangdong University of Foreign Studies  
People's Republic of China  
lee\_qishan@126.com

**Abstract**—Corporate social responsibility (CSR, hereafter) reports serve as key communicative tools through which companies convey their values and commitments to stakeholders. Given their strategic role in corporate communication, this study conducts a keyness analysis of Huawei's and Apple's CSR reports using Wmatrix 6.0 to identify key semantic domains and explore the Hofstede's cultural dimensions reflected in them. The major findings are as follows: Firstly, Apple's and Huawei's CSR corpora share five key semantic domains, including Y2 "Information technology and computing", S8+ "Helping", W5 "Green issues", I2.2 "Business: Selling", and A3+ "Existing". Second, an analysis of five key semantic domains in the two corpora reveals four underlying cultural dimensions. In comparison with Apple, Huawei exhibits greater collectivism ("Green issues", "Work and employment: Generally"), higher power distance ("Government" and "Politics"), greater uncertainty avoidance ("Law and order"), and a long-term orientation ("Time: beginning"). These findings contribute to understanding how cultural factors shape corporate discourse in CSR reports and offer practical insights for multinational companies aiming to adapt their CSR communication strategies across cultural contexts.

**Keywords**—CSR reports; Key semantic domains; Cross-cultural studies; Corpora

## I. INTRODUCTION

With the release of the epidemic, the trend of globalization is strengthening once again, in which transnational operation has become a necessary approach for companies to incorporate into the global economy. In this process, companies are inevitably evolved in different cultures. Those do not possess enough cultural knowledge may even encounter conflicts during international trade. Therefore, in the era of globalization, a comprehensive understanding of cultural differences and their influences on international business will be beneficial to a smooth and successful business expansion in the fierce international competition.

Corporate social responsibility (CSR) reports can be one of reflections of cultures adored by their company because they are "voluntary disclosures available on the company's website without any specific legal requirements" (Ditlev-Simonsen & Wenstøp, 2012). Even though there may be some advancing standardization, companies have considerable discretion over the content and form of CSR reports (Fuoli, 2018). CSR reports have received increasing attention as the percentage of the world's large companies issuing CSR reports rose from 12% in the early 1990s (KPMG, 2005) to 80% in recent years (KPMG, 2020).

Meanwhile, since 2018, the world has accelerated the construction of 5G, and thus it is hard to escape hyperventilation about 5G communication system. In the global market, Apple and Huawei have come to be two outstanding 5G mobile phone suppliers and competitors. Given their prominence in the 5G sector, Apple and Huawei can serve as representatives of American and Chinese corporate cultures, respectively.

This study aims to conduct a keyness analysis of the CSR reports of Apple and Huawei by fourth-generation corpus tools Wmatrix (Rayson, 2008, 2009). Keyness analysis is an effective method for identifying words, clusters, parts of speech or semantic domains that are significantly more frequent in a target corpus than in a reference corpus, allowing researchers to uncover the distinctive linguistic patterns that characterize corporate discourse. Among various ways to operationalize keyness, this study focuses on "key semantic domains" (Rayson, 2008) as a means to capture broader thematic categories in the texts, and examines how Hofstede's cultural dimensions (Hofstede et al., 2010) are reflected in these key semantic domains.

The research questions guiding this study are as follows:

1. What are the similarities and differences in the use of key semantic domains between CSR reports of Apple and Huawei?
2. How do these key semantic domains reflect Hofstede's cultural dimensions?

## II. LITERATURE REVIEW

### A. *Definition of CSR Reports*

A large body of research has been conducted to offer various definitions of CSR, and the evolving conceptualizations of CSR over the decade is the reflection of its inherent intricacies (Maignan et al., 2005). An official definition of CSR report is proposed as “the responsibility of enterprises for their impact on society” and “a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders on a voluntary basis” (European Commission, 2011: 6). Thus, the CSR report is also called the “sustainability report,” “corporate citizen report,” “environmental report,” and “corporate responsibility report.” Traditionally, social and environmental disclosures have been included in annual reports (Gray et al., 1996). However, it is nowadays a common practice for companies to announce an exclusive CSR report (KPMG, 2020).

### B. *Linguistic Studies on CSR Reports*

The CSR report is generally regarded as a hybrid genre combining informative and promotional elements (Malavasi, 2011; Bondi, 2016), and thus some existing literature has concentrated on the description of generic structures of CSR reports based on Swales's (1990) and Bhatia's (2004) frameworks (e.g., Bhatia, 2012). For example, genre analysis is used to analyze the move structures of CSR reports (including the self-presenting section and the performance-reporting section) (Catenaccio, 2012), and to examine how the linguistic and rhetorical resources exploited in this reporting genre help reveal the extent to which such disclosure practices meet the expectations of various stakeholders (Bhatia, 2013).

In addition, some studies have been committed to examining the lexico-grammatical resources applied in the CSR report with results indicating that the linguistic resources companies utilize for promoting socially responsible actions are means of constructing a positive corporate image. Malavasi (2011) observed the word lists of CSR texts from two companies and analysed the predominant language patterns revealing pervasive corporate values. Bondi (2016) investigated the keywords and phraseologies related to prediction or commitment statements, which are used to legitimise corporate activities and enhance impression management. With 630 Chinese and American CEO letters in CSR reports as corpus, Hu et al. (2024a) investigated genre-specific conceptual metaphors to comparatively explore the variations in identity construction, discovering their differences in the economic and environmental dimensions.

Among those lexico-grammatical resources, stance resources related to expressions of attitudes and evaluations have been much discussed in the studies of corporate image (e.g. Fuoli, 2012, 2018; Lin, 2021). To be specific, Fuoli (2012) addressed the appraisal

resources informed by systemic functional linguistics (SFL) in the CSR reports of IKEA and BP, concluding that they employed interpersonal resources to portray a trustworthy corporate image. Later, Fuoli (2018) investigated the stance expressions proposed by Biber et al. (1999) in European- and US-based CSR reports, focusing on their efforts to establish committed, caring, and honest corporate images. Informed by legitimation theory, Lin (2021) examined the discursive strategies adopted in CSR reports of UK and China to legitimize negative news. Socio-cultural factors accounting for linguistic variations were discussed, which contributed to the improvement of crisis management strategies used by large companies.

From the cognitive linguistics perspective, some studies have examined the cognitive images that companies intend to build up at the level of conceptual structure (Sun et al., 2018; Yu, 2020). For instance, Sun et al. (2018) investigated metaphor use as a discursive and cognitive strategy for cultivating corporate images in Chinese and American CSR reports from the perspective of corpus-based conceptual metaphor analysis, particularly based on the concept of genre-specific metaphors, which is conventionally used to construe notions for a certain communicative purpose achieved by a particular discourse community. Similarly, Yu (2020) explored a corpus of 180 CSR reports published by Chinese, US, and Italian companies with the framework of critical metaphor analysis combined with genre analysis, with an aim to approach metaphor use from a cross-cultural perspective. His study highlighted both universal metaphors (manager, protector, and traveler) and culture-specific metaphors (the bee metaphor in Chinese, the steward metaphor in English, and the fighter metaphor in Italian) across three languages, which are used to represent the company's good intentions, caring attitude, and responsible behavior, contributing to building an environmentally responsible corporate image.

### C. *Cross-cultural Studies on CSR Reports*

Most scholars investigated CSR reports based on the relationship between culture and business. Gallén & Peraita (2018) analyzed the relationship between the Hofstede's cultural dimensions and the sustainability disclosure with the GDP per capita (GDPPC) of 44 countries, finding that five of the six Hofstede's cultural dimensions negatively affect sustainability disclosure in countries with middle GDPPC. Based on institutional and stakeholder theory, Esteban et al. (2017) observed the influence the cultural system has on the degree of responsibility of business behaviour and examined how normative isomorphism influences the CSR practices at the country level, concluding that companies worldwide adopt similar patterns of CSR practices, but their degree of development is strongly determined by the normative institutional characteristics. Ganescu et al. (2014) measured responsible corporate behaviour towards consumers in EU countries by defining an index of responsible corporate behaviour towards consumers and to

measure the impact of Geert Hofstede's cultural dimensions on the responsible behaviour of organizations towards consumers.

Others conducted comparative research on CSR reports (e.g. Hu et al., 2024b; Liu, 2015; Wu, 2020; Yu & Bondi, 2019). Liu (2015) made a contrastive study of two oil companies in terms of four cultural dimensions to analyze the cultural influences on attitudes and actions of corporations and the functioning of culture in causing those divergences. Selecting the CSR reports of 10 listed Chinese and American enterprises in the manufacturing industry, Wu (2020) employed Carroll's CSR pyramid theory as the theoretical framework to analyze the differences between the two countries from a cross-cultural perspective. Taking metadiscursive nouns as the research objects, Hu et al. (2024b) analyzed the US and Chinese CEO letters in CSR reports, presenting that US adopted the interactive metadiscursive nouns twice more than Chinese did. They concluded that the difference mainly lied in the preference for high or low context. In a similar vein, using a corpus of 90 Chinese, English, and Italian CSR reports and a subcorpus annotated with the "previewing future performance" move, Yu & Bondi (2019) combined genre-related contextual features and rhetorical patterns of CSR reports with a corpus-based study of future markers, revealing some cross-cultural variations in the distribution of the moves.

From the brief review above, despite of the extensive literature on CSR reports, only a few studies have paid attention to cross-culture analysis while most of them have concentrated on corporate identity construction through the analysis of generic structures or evaluative resources. But in fact, CSR reports are recognized as an important vehicle through which companies influence public perceptions of their organizations and legitimate their activities and interests. By providing evidence of their socially responsible behavior, companies seek to establish alignment between their actions and society's values. Therefore, through CSR reports, different cultures can be discerned, which is a justification for this study from culture dimensions perspective inspired by Shi & Shan (2019), which analyzed Chinese and American cultures through the websites of banks.

Furthermore, there are only few studies examining the CSR reporting practices of Chinese companies, such as Bhatia (2013) and Yu & Bondi (2019). More attention should be given to CSR reporting of the second largest economy and comparing it with that of the largest economy for the sake of improving cooperation and competition in the world, and understanding cross-cultural differences.

Therefore, this paper is going to make a comparison between Chinese and American values through CSR reports of Apple and Huawei from Hofstede's Cultural Dimension perspective.

### III. THEORETICAL FOUNDATION

Geert Hofstede's (1984) *Culture's Consequences*, one of the most cited sources in the Social Science Citation Index, is the most influential work to date in the study of cross-cultural management. The hallmark of this work is Hofstede's four dimensions of national cultural variability, i.e. power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity, derived from his unique and extensive empirical investigations at IBM subsidiaries in 53 countries. Later, he completed his theoretical system by absorbing the fifth dimension-long- and short-term orientation, also known as Confucian dynamism, which is the most controversial one criticized by many other scholars. The newest dimension that is the sixth dimension is called "indulgence versus restraint" (Hofstede et al., 2010).

#### A. Individualism versus Collectivism

Individualism is the extent to which people are integrated into groups and feel independent of others within their community. In countries with a high index of individualism, their values emphasize individuality and independence, because of which individual decisions are expected and self-consciousness is more respected than collective consciousness. In other words, in a society that highly values individualism, people normally pay much more attention to self-development than the growth of a community they belong to. They are thus more self-conscious and rarely judge other people based on their own values. However, in countries enjoying a low index of individualism or a high index of collectivism, the society pays more attention to the interdependence and cooperation between people, and attaches more importance to the realization of collective goals. People in a collectivism-guided society have to be absolutely loyal to the benefits of their community. The face of the community is paramount and everything is supposed to be sacrificed for the contributions to the whole community. When there is a conflict between individual and collective interests, people tend to submit to collective interests first.

#### B. Power Distance

Power Distance refers to the degree to which the less influential members of organizations and institutions accept and tolerate a hierarchical and unequal power distribution. It deals with the strength of social hierarchy and evaluates the extent to which people at the lower class of the hierarchy tolerate the fact that power and social stance are inequitably distributed in society. Usually, people in countries with high power distance are willing to obey almost all the rules laid down by their leaders, and vice versa. Thus, higher power distance countries treasure ranking system and modesty and they value classes more than truth. For instance, if a boss made a mistake, people in such countries would seldom point it out directly in front of the boss. While in lower power distance countries, people care much more about the welfare of the vulnerable and make judgments in accordance

with rules and laws instead of ranks or titles. Therefore, their social environment is more relaxing and comfortable.

*C. Masculinity versus Femininity*

Masculinity considers the extent to which society supports the use of force and prefers achievement and competition. Thus, masculinity refers to male traits such as assertiveness, arbitrariness, competitiveness and aggression while femininity is the opposite. The representation of female qualities includes being modest, caring, loving and considerate (Li, 2009). In a society that has an air of femininity, women are more respected so they are more likely to gain access to education and well-paid employment. They are also braver to fight for their rights and have extremely high tolerance for topics--such as sex, race, ethnicity and religion--that are normally considered as sensitive in masculine societies.

*D. Uncertainty Avoidance*

Uncertainty Avoidance is about how well people can tolerate or cope with uncertainty and ambiguity. In the face of unconventional threats or uncertain events, various cultures show different degrees of avoidance. The higher the index of uncertainty avoidance of a certain culture is, the more measures its members will adopt to deal with uncertainty, so as to relieve anxiety and fear aroused by it. Besides, people in the uncertainty-avoiding society are less likely to adapt to new changes and prefer everything keeping unchanged. Hence, they always seek an ultimate truth or one-size-fits-all solution. However, people in uncertainty-accepting environment have a propensity for alterations and newness, and thus they are more tolerant of deviant behaviors and less anxious or stressed with their embracing mindset and accepting attitudes towards uncertainty.

*E. Long- and Short-term Orientation*

Long-term orientation deals with the degree of tolerance of temporary pains or sufferings in pursuit of long-term benefits. People who are in favour of long-term orientation advocate tenacity and constantly prepare for the future while cultures that prefer short-term orientation place a premium on the achievement of short-term benefits, adoring the rapid realization of value. Specially, long-term orientation requires people to pursue values such as "perseverance", "thrift" and "ordering relationships" and have a "sense of shame", represses themselves for delayed gratification in materials, emotions and social demands (Li, 2009), and encourages them to achieve self-discipline.

*F. Indulgence versus Restraint*

Indulgence stands for a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun while restraint stands for a society that controls gratification of needs and regulates it by means of strict social norms. That is to say, people in a restraint-directed society maintain "delayed gratification" and have

stricter norms. In reverse, indulgence spurs people to focus more on leisure and instant satisfaction. Mostly, they just enjoy life and have a high demand for freedom of speech.

IV. RESEARCH DESIGN

A. Corpus Construction

In order to address the research questions, Huawei's and Apple's CSR reports were collected. To be specific, CSR reports from 2018 to 2023 were collected to construct the corpora, as 2018 marks the acceleration of 5G development. The two corpora are named as Apple's CSR Reports (ACSRR) and Huawei's CSR Reports (HCSRR). All CSR reports were collected from Huawei's and Apple's official websites in PDF format. For Huawei, Huawei Corporate Sustainability Report is equal to its CSR Report while Apple Supplier Responsibility Progress Report is the equivalent of the CSR Report for Apple. All CSR reports in PDF format were converted into DOC format, and then further into TXT format after these corpora were cleaned.

B. Corpus Tool

To ensure the reliability of research results, a corpus-driven discourse analysis approach is adopted. It relies on the corpus analytic tool Wmatrix 6.0<sup>1</sup>, which is an online software for corpus analysis and comparison with annotation tools and standard corpus linguistic methodologies (Rayson, 2008, 2009). It can undertake the automatic semantic analysis of texts with the UCREL (Figure 1) semantic analysis system (USAS) by classifying the English words into 21 major discourse fields based on Tom McArthur's Longman Lexicon of Contemporary English (McArthur, 1981), which can be revised in light of the practical tagging problems met in the course of investigation. For the sake of fine-grained analysis, the tag set is further sub-divided into 232 category labels.

<b>A</b> general and abstract terms	<b>B</b> the body and the individual	<b>C</b> arts and crafts	<b>E</b> emotion
<b>F</b> food and farming	<b>G</b> government and public	<b>H</b> architecture, housing and the home	<b>I</b> money and commerce in industry
<b>K</b> entertainment, sports and games	<b>L</b> life and living things	<b>M</b> movement, location, travel and transport	<b>N</b> numbers and measurement
<b>O</b> substances, materials, objects and equipment	<b>P</b> education	<b>Q</b> language and communication	<b>S</b> social actions, states and processes
<b>T</b> Time	<b>W</b> world and environment	<b>X</b> psychological actions, states and processes	<b>Y</b> science and technology
<b>Z</b> names and grammar			

Fig. 1. 21 major discourse fields in UCREL

C. Procedure

This study is divided into the following three steps. First and foremost, these two corpora were uploaded into Wmatrix 6.0 to automatically annotate and semantically tag to produce detailed information about the specific use of different semantic categories in these texts. The second step is to compare one corpus

with another parallel corpus or a general reference corpus to identify key semantic categories (SMCs), that is, semantic categories which are statistically more frequent in the subject corpus than in the parallel or reference corpus. The semantic category analysis is very essential to identify the theme of the corpus. For the present research, both the ACSRR and HCSRR corpora will be compared to one general corpus—the British National Corpus (hereafter BNC) sampler written corpus. Last but not least, the ACSRR and the HCSRR corpus will be compared with each other so as to identify the cultural preferences from the perspective of Hofstede's Cultural Dimensions. To further illustrate the discrepancies between Huawei and Apple, the keywords and their concordances in the two sub-corpora were taken into consideration.

## V. RESULTS AND ANALYSIS

Table 1 illustrates the top 10 key semantic domains of HCSRR and ACSRR after comparing with the BNC sampler written corpus, respectively. The semantic items indicate that the grouping words in them are in the same semantic fields by virtue of generality of the mental concepts to some extent. To determine statistical significance, log-likelihood (LL hereafter) is adopted because it "makes no assumption of a normal distribution" (McEnery & Hardie, 2012, p. 52). To be specific, if the absolute value of LL scores is greater than or equivalent to 3.84 with 1 degree of freedom, p-values is lower than or equal to 0.05, inferring statistical significance (McEnery et al., 2006). In other words, higher LL value refers to more statistical significance. The semantic items are ranked from high to low based on the LL value in Table 1.

As can be seen from Table 1, Y2 "Information technology and computing", S8+ "Helping", W5 "Green issues", I2.2 "Business: Selling" and A3+ "existing" are shown in the top 10 key semantics categories in these two corpora. Those shared semantic categories indicate that there are some similarities in the CSR reports of Apple and Huawei. It can be inferred that both these two companies are loving mobile phone

suppliers with a sense of environmental protection. To have a better understanding of how those semantic categories are compatible with cultural dimensions proposed by Hofstede et al. (2010), this research then extracted eight related semantic categories from the two corpora. Among the 6 cultural dimensions, only 4 can be found in them, i.e. individualism versus collectivism, power distance, uncertainty avoidance as well as long- and short-term orientation.

### A. Individualism versus Collectivism

In this study, semantic categories related to individualism and collectivism are extracted from "Green issues" and "Work and employment: Generally".

In terms of "Green issues", LL value of Huawei is 780.49 while that of Apple is 592.50. But it can be found that in ACSRR, there is other semantic categories that is also relevant to "Green issue", which is "Color and color patterns" with 190.27 as its LL value. Thus, the total LL value related to environmental protection for Apple is equal to 780.77, a little bit higher than that of Huawei. Traditionally, a company possessed of collectivism will attach more importance to corporate social responsibility, including environmental responsibility, social responsibility and market responsibility. Relatively low LL of "Green issues" of Huawei echoed an idea that the quantity and quality of CSR information disclosure in China were very limited, because the CSR information disclosure in China was still at the trial and groping stage (Huang et al., 2009).

As for "Work and employment: Generally", LL of Huawei is 294.52 while that of Apple accounts for 1388.50. Words of HCSRR in these semantic categories are more related to the cooperation with others, which is a typical representation of collectivism. In contrast, personal development and working environment occur more frequently in semantic domains of ACSRR, showing the preference for individualism.

TABLE I. TOP 10 KEY SEMANTIC CATEGORIES OF ACSRR AND HCSRR

Rank	HCSRR			ACSRR		
	Item	LL	SMCs	Item	LL	SMCs
1	Y2	1674.0	Information technology and computing	I2.2	2612.27	Business: Selling
2	S8+	898.97	Helping	I3.1	1388.50	Work and employment: Generally
3	W5	780.49	Green issues	Z1	744.01	Personal names
4	Z8	614.15	Pronouns	O1	671.18	Substances and materials generally

5	I2.1	600.44	Business: Generally	W5	592.50	Green issues
6	I2.2	554.84	Business: Selling	A1.1.1	486.14	General actions / making
7	T2++	512.96	Time: Beginning	Y2	437.75	Information technology and computing
8	Y1	479.86	Science and technology in general	A3+	395.81	Existing
9	X9.1+	466.46	Able/intelligent	I4	381.84	Industry
10	A3+	444.36	Existing	S8+	377.14	Helping

(1) Huawei is **working** with environmental protection organizations and partners on projects that aim to explore the use of ICT. (HCSRR)

(2) These **employee** education programs with the 2022 launch give participants the skills they need. (ACSRR)

The above two examples are selected from the HCSRR and ACSRR, respectively. The word “working” in Example (1) indicates the eagerness of Huawei to cooperate with environmental protection organizations and partners to work out projects, which shows a sense of collectivism; In Example (2), Apple sets up programs for its employees to cultivate their skills, and thus Apple gives priority to personal development of its employees. This also echoed the research of Shi & Shan (2019) that American banks pays more attention to employees’ career development and working environment.

#### B. Power Distance

Semantic categories that are pertinent to power distance lie on “Government” and “Politics” in this study.

When it comes to “Government”, this kind of semantic categories appears more frequently in Huawei CSR reports than that in Apple CSR reports, with a total number of 107 and 49 words, respectively. Those words under Power Distance semantic categories are included “official”, “government” in Huawei’s CSR report. From this, it can be discerned that Huawei pays more attention to government and thinks more highly of the policies put forward by them, and thus Huawei possesses a higher power distance than Apple. This result is consistent with the finding of Shi & Shan (2019), which proved that there was statistical significance of the use of “government” in the websites of Chinese and American banks.

And the similar situation also occurs in the semantic categories of “Politics”. Through comparison, it can be discovered that both HCSRR and ACSRR mainly employ “human rights” in this semantic category, but the frequency in the former is

much less than that in the latter. The difference of LL between them is 172.97. There is no doubt that a company values human rights would recognize the inherent value of each person, regardless of his or her background or appearance. Instead, this company would make evaluations on the basis of principles of dignity, equality and mutual respect, which are shared across different culture or hierarchy. Thus, more attention to human rights can be a representative of lower power distance. This is also another evidence indicating that Huawei adores higher power distance than Apple.

#### C. Uncertainty Avoidance

In this study, semantic categories relevant to uncertainty avoidance are extracted from “Danger”, “Change” as well as “Law and order”.

Under the head and collocation of “Danger” in both ACSRR and HCSRR, it can be seen that “risks” takes up the most frequent occurrence, with the number of 89 and 60, respectively. Besides, these risks mostly come from production or sales. In other words, both Apple and Huawei put the production risks as the propriety and make every endeavour to prevent tragedies. Nevertheless, the LL of “Danger” in ACSRR is 282.05 while that of Huawei is 95.74. Thus, it can be known that Apple is more cautious about the risks may happen during the production or sales and tries to prevent them at full stretch, so as to protect the rights of workers and customers. The following sentences are two typical examples from the HCSRR and ACSRR, respectively.

(3) We have established a comprehensive ISO 28000-compliant implements hierarchical device security management, trusted supply chain security management system to identify and device connections, distributed access control, and a security control security **risks** in the end-to-end process from incoming collaboration platform to protect the security of consumers. (HCSRR)

(4) An online service including a **risk** assessment of routine and non-which provides prompt responses to worker. (ACSRR)

"Risks" in example (3) refers to the potential danger that Huawei seeks to control through a comprehensive security management. Similarly, "risk assessment" in example (4) is the function of Apple's online service, which can facilitate timely feedback. Both of these two examples are the evidences of these two companies' great safety consciousness.

Differently, in terms of "Change", LL of Huawei is 95.31 while that of Apple is 42.90. Under the head of "Change" in both ACSRR and HCSRR, it can be found that "development" is the predominance, which mainly refers to the improvement of their products and services. The following sentences are two typical examples from the HCSRR and ACSRR, respectively.

(5) We are working with our partners worldwide to **develop** a more robust digital talent ecosystem and share ICT knowledge and skills. (HCSRR)

(6) Our goal is to one and create **change** for broader global communities. (ACSRR)

The word "develop" in Example (5) shows that Huawei is prepared to embrace the uncertainty of digital talent ecosystem. Similarly, Example (6) presents Apple's confidence in the face of the uncertainty of global communities. It seems to conflict with the notion that western countries prefer lower uncertainty avoidance compared with eastern ones (Hofstede, 2010), but this finding is in line with the research by Hsee & Weber (1999). It shows that Chinese people are more adventurous than Americans in the economic field. Definitely, IT industries belong to digital economy.

"Law and order" is another shared semantic domain of HCSRR and ACSRR, with LL values of 416.67 and 15.55, respectively. Through concordances of "Law and order", it can be found that the most frequently used words in HCSRR is "law and regulation" (see example 7) which amounts to 193, while that in ACSRR is "code" (see example 8), whose number is only 12.

(7) We have adopted **laws and regulations** to strengthen the quality of products and services to help customers. (HCSRR)

(8) The Apple Supplier **Code** of Conduct and Supplier Responsibility Standards outline our requirements for our supply chain. (ACSRR)

Example (7) presents the way in which Huawei releases detailed rules covering sales, production, human resources to enhance the quality of products and services. In contrast, "code" in Example (8) refers to the standards for suppliers. Through these two examples, it can be seen that Huawei imposes regulations and rules in a more comprehensive and detailed way than Apple does, which is an approach to mitigate the potential risks or danger. Therefore, in

comparison with Apple, Huawei has a higher degree of uncertainty avoidance with a difference in LL value of more than 400.

#### D. Long- and short-term Orientation

In this study, the semantic category relevant to long-term orientation is extracted from "Time: beginning". LL of HCSRR is 512.96 while that of ACSRR is 58.73. Under this semantic category, the key word in HCSRR is "sustainable" whereas that of ACSRR is "continue". The following sentences are two typical examples from the HCSRR and ACSRR, respectively.

(9) Committee guides the company's business units in setting annual and mid-and **long-term sustainability** goals, as well as overseeing the attainment of these goals in accordance with our four sustainability strategies

(10) While we will **continue** to work closely with and monitor individual facilities, this new assurance process has 100% UL Zero Waste certification achieved for final the potential to significantly accelerate the adoption assembly sites in China metric tons of plastic reduced by of ULs most stringent zero waste standards across 2015 recycling plastic trays used during Apples supply chain.

The phrase "long-term sustainability" in Example (9) reveals Huawei values long-term orientation because it sets annual and mid-and long-term sustainability objectives, instead of only pursuing the present goals wholeheartedly. Example (10) shows that Apple has a preference for short-term orientation since it places a premium on the existing goal and makes every endeavour to fulfill it in the first place.

## VI. CONCLUSION

This study, based on Hofstede's cultural dimensions, made a comparative analysis of CSR reports of Apple and Huawei, with Wmatrix 6.0 as the corpus tool for tagging semantic domains, exploring what cultural dimensions are reflected through these semantic categories.

For a start, when it comes to the distribution of semantic domains in CSR reports of Apple and Huawei, it can be found that Y2 "Information technology and computing", S8+ "Helping", W5 "Green issues", I2.2 "Business: Selling" and A3+ "existing" are shown in the top 10 key semantics categories in these two corpora, which indicates that both Apple and Huawei are two loving mobile phone suppliers with a sense of environmental protection.

Besides, there are six semantic categories that can reflect four cultural dimensions. Firstly, in terms of individualism, "Green issues" shows that Huawei are learning to shoulder more social responsibility, which is evidence of collectivism. "Work and employment: Generally" also indicates that Huawei prefers individualism whereas Apple values collectivism. Second, as for power distance, both "Government"

and "Politics" reflect that Huawei adores higher power distance than Apple. Third, as regards uncertainty avoidance, "Law and order" indicates that Huawei has a higher tendency towards uncertainty avoidance than Apple since Huawei imposes more comprehensive regulations to avoid potential risks. Fourthly, when it comes to long-term orientation, "Time: beginning" presents that Huawei shows preference for long-term orientation while Apple values short-term orientation since the former puts the mid- or long-terms objectives as priorities while the latter values the present ones.

In general, with the CSR reports of Apple and Huawei as the corpus, this study reveals the cultural differences between them and further illustrate cultural differences between China and America. Besides, the discussion of semantic categories of CSR reports also sheds some light on the writing of CSR reports, giving suggestions and references for editors to apply different discourses appropriately in the writing of CSR reports through the contrastive analysis. Further study can gather more CSR reports of these two companies in the past to make a diachronic comparison.

#### REFERENCES

- [1] Bhatia, A. (2012). The corporate social responsibility report: The hybridization of a "confused" genre (2007-2011). *IEEE transactions on professional communication*, 55(3), 221-238.
- [2] Bhatia, A. (2013). International genre, local flavour: Analysis of PetroChina's corporate and social responsibility report. *Revista signos*, 46(83), 307-331.
- [3] Bhatia, V. (2004). *Worlds of written discourse: A genre-based view*. Continuum.
- [4] Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. Pearson Education Limited.
- [5] Bondi, M. (2016). The future in reports: Prediction, commitment and legitimization in corporate social responsibility (CSR). *Pragmatics and Society*, 7(1), 57-81.
- [6] Catenaccio P. (2012). *Understanding CSR discourse: Insights from linguistics and discourse analysis*. Arcipelago edizioni.
- [7] Ditlev-Simonsen, C. D. & S. Wenstøp. (2012). *Companies' ethical commitment: An analysis of the rhetoric in CSR reports*. Issues in Social and Environmental Accounting.
- [8] Esteban, V. A., Villardón, M. P. G., & Sanchez, I. M. G. (2017). Cultural values on CSR patterns and evolution: A study from the biplot representation. *Ecological indicators*, 81, 18-29.
- [9] European Commission. (2001). Green paper. Promoting a European framework for corporate social responsibility. Available at [http:// europa.eu/ rapid/ press-release \\_DOC-01-9 \\_ en. pdf](http://europa.eu/rapid/press-release_DOC-01-9_en.pdf).
- [10] Fuoli, M. (2012). Assessing social responsibility: A quantitative analysis of Appraisal in BP' s and IKEA' s social reports. *Discourse & Communication*, 6(1), 55-81.
- [11] Fuoli, M. (2018). Building a trustworthy corporate identity: A corpus-based analysis of stance in annual and corporate social responsibility reports. *Applied linguistics*, 39(6), 846-885.
- [12] Gallén, M. L., & Peraita, C. (2018). The effects of national culture on corporate social responsibility disclosure: a cross-country comparison. *Applied Economics*, 50(27), 2967-2979.
- [13] Ganescu, C., Gangone, A., & Asandei, M. (2014). Assessing the impact of the national cultural framework on responsible corporate behaviour towards consumers: an application of Geert Hofstede's cultural model. *Amfiteatru Economic Journal*, 16(35), 351-367.
- [14] Gray R, Owen D, Adams C. (1996). *Accounting & accountability: changes and challenges in corporate social and environmental reporting*. Prentice hall.
- [15] Hofstede, G. (2010). The GLOBE debate: Back to relevance. *Journal of international business studies*, 41(8), 1339-1346.
- [16] Hofstede, G., Hofstede, G.J. & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind. Revised and Expanded*, 3rd Edition, McGraw-Hill.
- [17] Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). Sage.
- [18] Hsee, C. K., & Weber, E. U. (1999). Cross-national differences in risk preference and lay predictions. *Journal of Behavioral Decision Making*, 12(2), 165-179.
- [19] Hu, C., Zhang, A., & Xu, Y. (2024a). Metaphor, stance, and identity: A corpus-based study of CEO letters in Chinese and American corporate social responsibility reports. *IEEE Transactions on Professional Communication*, 67(1), 47-62.
- [20] Hu, C., Zhao, Z., & Lu, C. (2024b). Metadiscursive nouns in corporate communication: A cross-cultural study of CEO letters in the US and Chinese corporate social responsibility reports. *English for Specific Purposes*, 76, 28-40.
- [21] Huang, Q., Peng, H., Zhong, H., & Zhang E. (2009). Zhongguo Yibaiqiang Qiye Shehui Zeren Fazhan Zhuangkuang Pingjia (Evaluation of the Development of Corporate Social Responsibility of the Top 100 Enterprises in China). *Chinese industrial economy*. (10): 23-35.
- [22] KPMG. (2005). The time has come: the KPMG Survey of sustainability reporting 2005. Retrieved from [http:// www. theiafm. org/ publications/](http://www.theiafm.org/publications/)

243\_International\_Survey\_Corporate\_Responsibility\_2005.pdf.

[23] KPMG. (2020). The Time Has Come: the KPMG Survey of Sustainability Reporting 2020. Retrieved from [https:// assets. kpmg. com/ content/ dam/ kpmg/ xx/ pdf/ 2020/11/the-time-has-come.pdf](https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf).

[24] Li, W. (2009). Hofstede Wenhua Weidu Yu Kuawenhua Yanjiu (Hofstede's Cultural Dimensions and Cross-Cultural Studies). *Social Sciences*, (12): 126 -129 +185.

[25] Lin, Y. (2021). Legitimation strategies in corporate discourse: A comparison of UK and Chinese corporate social responsibility reports. *Journal of Pragmatics*, 177, 157-169.

[26] Liu, N. (2015). *Jiyu Hofstede Wenhua Weidu Lilun De Shiyou Qiye Shehui Zeren Baogao Duibi Yanjiu (A Comparative Study of the Corporate Social Responsibility Reports of Petroleum Enterprises Based on Hofstede's Cultural Dimensions Theory)*. Southwest Petroleum University.

[27] Maignan, I., Ferrell, O. C., & Ferrell, L. (2005). A stakeholder model for implementing social responsibility in marketing. *European journal of marketing*, 39(9/10), 956-977.

[28] Malavasi, D. (2011). "Doing well by doing good": A comparative analysis of Nokia's and Ericsson's Corporate Social Responsibility Reports. *Linguistic Insights*, 134, 193-212.

[29] McArthur T. (1981). *Longman Lexicon of Contemporary English*. Longman Group Limited.

[30] McEnery, T., & Hardie, A. (2012). *Corpus Linguistics: Method, Theory and Practice*. Cambridge University Press.

[31] McEnery, T., Xiao, R., & Tono, Y. (2006). *Corpus-based Language Studies: An Advanced Resource Book*. Routledge.

[32] Rayson, P. (2008). From key words to key semantic domains. *International Journal of Corpus Linguistics*, 13(4), 519–549.

[33] Rayson, P. (2009) Wmatrix: a web-based corpus processing environment, Computing Department, Lancaster University. Retrieved from <http://ucrel.lancs.ac.uk/wmatrix/>.

[34] Shi, X., & Shan, X. (2019). Jiyu Yuliaoku Tanta Zhongguo Qiye Yingwen Wangzhan de Kuawenhua Shiying Shuiping (Exploring the Cross-Cultural Adaptation Level of Chinese Enterprises' English Websites Based on Corpus). *Chinese Foreign Language*, 16 (02): 71-80.

[35] Sun Y, Jin G, Yang Y, et al. (2018). Metaphor use in Chinese and American CSR reports. *IEEE Transactions on Professional Communication*, 61(3), 295-310.

[36] Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge university press.

[37] Yu, D., & Bondi, M. (2019). A genre-based analysis of forward-looking statements in corporate social responsibility reports. *Written Communication*, 36(3), 379-409.

[38] Wu, Y. (2020). *Yi Kuawenhua Shijiao Fenxi Zhongmei Shangshi Qiye Shehui Zeren Baogao de Chayi (A Cross-cultural Analysis of the Differences in Corporate Social Responsibility Reports of Chinese and American Listed Companies)*. University of International Business and Economics.

#### NOTES

<sup>1</sup> Wmatrix 6.0 was taken place by wmatrix 7 on March, 2025, which can be employed on the website: <https://ucrel-wmatrix7.lancaster.ac.uk/>.