Corpus-based Approaches to Grammar, Media and Health Discourses
Systemic Functional and Other Perspectives
The M.A.K. Halliday Library Functional Linguistics Series

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About the Series

The M.A.K. Halliday Library Functional Linguistics Series focuses on studies concerning the theory and application of Systemic Functional Linguistics (SFL). As a functional theory of language, SFL was initially developed by Professor M.A.K. Halliday and his colleagues in London during the 1960s, and since then its influence has spread all over the world.

Systemic Functional Linguistics distinguishes itself as a functional theory by the emphasis placed on system in relation to structure. It has also been particularly concerned with modelling language in context. The theory is especially well-known for the work on discourse analysis, cohesion, genre and register, appraisal and so on, which have been taken up by scholars working in other fields.

Since Halliday’s early work on Chinese and English, systemic functional linguists around the world have been increasing the coverage of the description of different languages over the decades, including French, Spanish, Portuguese, German, Danish, Finnish, Persian, Thai, Vietnamese, Japanese, Korean, Tagalog, Bahasa Indonesian, Gooniyandi and others.

Systemic Functional Linguistics is also characterized as an “aplicable” linguistics theory. It is well-known for its application in a variety of fields, including education, translation studies, computational linguistics, multimodal studies, healthcare, and scholars are exploring new areas of application.

The M.A.K. Halliday Library Functional Linguistics Series is an open series. Monographs included in this series will cover studies on language and context, functional grammar, semantic variation, discourse analysis, multimodality, register and genre analysis, educational linguistics, etc. Manuscripts are selected, based on quality and significance, in consultation with an editorial board which consists of leading linguists in the SFL field.

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Introduction

Bingjun Yang and Wen Li

1 Systemic Functional Linguistics: Interaction, Methodology, and Appliability

Systemic functional linguistics (SFL) has been developing for more than 60 years since the publication of Halliday’s (1956) “Grammatical categories in modern Chinese” in Transactions of the Philosophical Society. The development of more than half a century has witnessed its constant development and greater width and depth in theory and application. It is always developing.

Internally, SFL has experienced through several stages of development, and different “dialects” have been proposed. The developmental stages of SFL may include the preliminary stage for Chinese language (in 1950s), the scale and category stage (in early 1960s), the systemic functional grammar stage (from late 1960s to early 1970s), the stage of language as social semiotics (from late 1970s to 1990s), and SFL as appliable linguistics (from 2000 on) (Zhang 2018: 38–41). Through constant interaction, “dialects” have also been developed and widely accepted, among which are Martin’s discourse semantics and Fawcett’s Cardiff Grammar in particular. Externally, SFL has been widely applied to many fields, and increasing research results worldwide have been seen in such fields as language development, discourse analysis, multimodality, literacy studies, stylistics, machine translation, and translation theory, to name a few. This is very good evidence for the strength of SFL in targeting language-related issues.

The internal development in theory and the external applications together demonstrate the vitality of SFL, to which SFL’s openness to other theories, employment of scientific method (e.g., corpus-based approach), and social accountability are contributable.
SFL is open to other theories, and it incorporates a large number of useful thoughts and ideas. For example, Halliday followed scholars with different theories from China, Europe, and America in the initial stage (Hu et al. 2005). To some extent, SFL was founded on the basis of synergy and incorporation. A lot of great ideas have been absorbed and then grow as the leaves and branches of the SFL tree. Covering many aspects of language, SFL offers a great potential for the dialogue with other linguistic theories. Up to now, it has been predominantly interacting with such linguistic theories as cognitive linguistics (e.g., Tavernier forthcoming), corpus linguistics (CL) (e.g., Thompson and Hunston 2007), and computational linguistics (e.g., Fawcett 1980).

In terms of research methodology, SFL has always been emphasizing on authentic linguistic data obtained from the society. More importantly, it shares similar theoretical stance with corpus linguistics (see He and Wang 2019: 217). In other words, SFL is complementary with corpus linguistics, and they are enriching each other. This tradition starts from Firth’s research and was continued in Halliday (1955, 1956), particularly in the case study of Nigel’s language development (see Halliday 1979). The latest two editions of An Introduction to Functional Grammar (Halliday and Matthiessen 2004, 2014) were far more attuned to recent developments in corpus linguistics, and language facts were observed by using such corpora as LOB, LLC, and UTS/Macquarie Corpus.

In terms of social accountability, SFL has been applied in many ways. Halliday advocates the term “appliable” rather than “applicable” because the latter “refers to one particular purpose, whereas ‘appliable’ means having the general property that it can be put to use in different operational context” (Halliday 2006: 19). SFL as appliable linguistics is “theoretical robust” and “serviceable”: “capable of being put to use in addressing a range of problems and tasks” (Halliday 2010: 19). This can be seen from the successful application of SFL in such fields: discourse analysis (see Martin 2011), pedagogy (e.g., Christie and Martin 2007), translation (e.g., Halliday 2001, 2009), multimodality (e.g., O’Halloran 2004), and semiotics (e.g., Fawcett et al. 1984), to name just a few.

This volume brings together corpus-based studies of topics including English grammar and discourses of media, academic, and health. Most of the studies in this volume take the perspective of SFL. Some others take perspectives of philosophy, statistics, and critical discourse analysis (CDA). Different as they are in theoretical perspectives, these studies all focus on language use in social activities (health, academic, and media in particular) by means of corpus-based approaches. It is expected that this volume will help promote the understanding of SFL and its link with other linguistic theories. The corpus-based approaches will enhance our observation into real-life linguistic facts and activities.
2 Overview of This Volume

Fourteen papers were selected for this volume and divided into three parts according to the topic: grammar (Chaps. “A Corpus-based Study of Transfers in English Gerunds”, “Corpus Linguistics as Contextual Prosodic Theory (CPT) and Subtext: A New and Final Linguistic Theory” and “Idiomaticity in Intercultural Communication in English as Lingua Franca: A Corpus-based Study of Verb-Object Combinations”), media and academic discourse (Chaps. “Participating and Expressing Attitudes in New Media: A Case Study of Comments on President Xi Jinping’s Speech at UN”, “Register Variation in Hellenistic Greek: Factor Analysis of Quantitative Linguistic Patterns”, “Synergising Corpus, Functional, and Cultural Approaches to Critical Discourse Studies: A Case Study of the Discursive Representation of Chinese Dream”, “The Discourse of Nkrumaism: A Corpus-informed Study”, “Concordancing China’s Friend, Foe and Frenemy: A Corpus-based CDA Analysis of Geopolitical Actors (Re)presented at China’s Interpreter-mediated Political Press Conferences”, “Citation Functions in the Opening Phase of Research Articles: A Corpus-Based Comparative Study”, “Engagement Resources in Chinese College Students’ Argumentative Writings” and “Interpreter’s Role in Discourse and Context: A Corpus-based Study from an SFL Perspective”), and health discourse (Chaps. “A study of Intersubjective Representations of Inferential Information in Health Crisis News Reporting”, “Creativity and Television Drama: A t-score and MI Value Cut-offs Analysis of Pattern-forming Creativity in House M.D.” and “Interpersonal Metaphor Used in Different Discursive Moves in Reply Posts of an Online Health Forum”). See Table 1 for a snapshot of the themes.

2.1 Grammar

Part I (Chaps. “A Corpus-based Study of Transfers in English Gerunds”, “Corpus Linguistics as Contextual Prosodic Theory (CPT) and Subtext: A New and Final Linguistic Theory” and “Idiomaticity in Intercultural Communication in English as Lingua Franca: A Corpus-based Study of Verb-object Combinations” focuses on English lexicogrammar. Motivated by the disagreement between the transfer directions of English gerunds (i.e. definite nominal gerund → bare nominal gerund → bare verbal gerund → definite verbal gerund) and that of nominalization in grammatical metaphor theory (i.e. finite verbal groups → nonfinite verbal groups → nominal groups), Qingshun He (Chap. 2: “A Corpus-based Study of Transfers in English Gerunds”) investigates the gerund transfers diachronically in the corpus of Google Books.

Qingshun He raises a hypothesis that when compared with the decrease of nominal gerund, verbal gerund would show an increase over time. This hypothesis is confirmed by the data, by which it is found that bare nominal gerunds are negatively correlated with bare verbal gerunds. It is also found that definite nominal gerunds
Table 1  A snapshot of the volume

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coexist with bare nominal gerunds, and the same is true to definite verbal gerunds and bare verbal gerunds. Apart from nominal gerund and verbal gerund, the author identified a third gerund type, i.e. adjectival gerund (e.g., *sleeping bags*). Two criteria for the identification of adjectival gerund are proposed.

The author at last relates the transfer of gerund to the theory of grammatical metaphor. In light of grammatical metaphor, the transfers among nominal gerund, verbal gerund, and the adjectival gerund do not bring about rank shift and thus do not challenge the unidirectional transfer principle in grammatical metaphor. However, nominal gerunds and adjectival gerunds both nominalize verbal groups and involve rank shift which can give rise to grammatical metaphor, while the verbalization of nominal gerund does not produce any grammatical metaphor due to the absence of rank shift in them.

In Chap. “Corpus Linguistics as Contextual Prosodic Theory (CPT) and Subtext: A New and Final Linguistic Theory”, Bill Louw argues that the inductive use of corpus linguistics as contextual prosodic theory (CPT), with subtext and collocation as its key concepts, is a new linguistic theory and a common property of science that should be promoted. Louw first summarizes the issues that need to be dealt with in
the philosophy of language, including apriorism, intuitive opacity, induction logic, and enumerative vs. eliminative inference. The author holds that the reliability of intuition-based prior knowledge is doubtful, while reference to corpora raises the power of induction by exposing the logical form of the given and can be used to avoid the opacity incurred by intuition. In his view, though induction is popular in science, it is, unfortunately, not so in the science of language. In response to questions on inductive logic by Cohen and Hesse (1980), Louw believes the acceptance of propositional truth depends on collocation in concordances, and the justification is that natural language as a system can be its own instrumentation. Also, enumerative induction and eliminative induction are both applied to scientific theory, but “enumerative is more suited to provide intuitively expected collocation as proof than its counterpart” (66).

According to Louw, these issues can trigger consilience of induction proposed by William Whewell. Five possible areas of consilience of induction impact are detailed, including physics, linguistics, stylistics, philosophy and logic, and applications of inductive logic, in which collocation has a role to play, is open to consilience, and thus serves as the justification of induction. Louw also exemplifies how CPT can be used to reveal the meaning beyond intuition through such processes as subtext searches, “text read text,” the sharing of event, etc. In addition to this, the difference between collocation in CPT and colligation is further clarified by Louw.

In Chap. “Idiomaticity in Intercultural Communication in English as Lingua Franca: A Corpus-based Study of Verb-object Combinations”, Xinyue Yao investigates in idiomaticity as represented by verb–object combinations and measured by MI score, and comparison is made between English as Lingua Franca (ELF) and English as Native Language (ENL). Yao finds that the ELF and ENL interactions are not significantly different in the overall percentage of idiomatic combinations. However, when repeated forms are excluded, ELF speakers are found to use fewer idiomatic combinations and are more likely to avoid infrequent verb-object combinations in comparison with ENL speakers. It is also demonstrated that ELF speakers tend to repeat idiomatic expressions than non-idiomatic expressions. As to the types of idiomatic combinations, EFL speakers use less infrequent combinations, but frequency does not impact on the non-idiomatic combinations. These findings are interpreted in light of pragmatic strategies adopted in intercultural communication. The avoidance of infrequent combinations is due to the fact that EFL speakers are unsure about them and it is safer to avoid them in case of misunderstanding. Meanwhile, repetition is also adopted as a facilitative strategy for constructing shared knowledge.

Yao argues that neither the underuse nor the overuse of idiomatic expression is deficiency, for they are strategies adopted for communication needs. Besides, she suggests that “proposing an entirely different processing mechanism for ELF communication is unnecessary” (100) in that the level of idiomaticity largely depends in part on its technical operationalization, and that usages of idiomatic combinations as pragmatic strategy are communicatively motivated.
2.2 Media Discourse: Political and Academic

Articles in Part II focus on political and academic discourses. Media in the narrow sense does not include academic discourse. We here put academic discourse under the category of media for the reason that the authors are reporting findings and expressing their views through journals and/or books while readers are accepting or rejecting what they have received.

In Chap. “Participating and Expressing Attitudes in New Media: A Case Study of Comments on President Xi Jinping’s Speech at UN”, Binjian Qin, Xiaoyu Zhang, and Sut I Lam investigate the Chinese and western netizens’ different participation in and attitudes toward President Xi Jinping’s speech at UN from the perspective of appraisal theory. Two corpora (English vs. Chinese) are built from the online comments on Xi’s speech, with English data collected from YouTube and Chinese from Ifeng.com and Sohu.com. Key words of the two corpora are retrieved and annotated in terms of the subsystem of attitude, i.e. affect, judgement, and appreciation, and of position value (positive vs. negative). The authors find that western netizens’ attitudes toward Xi’s speech, though both positive and negative, are dominated by negative positions realized mostly through judgement, while Chinese netizens unanimously hold a positive attitude which are mostly manifested through affect system.

The authors argue that the possible explanation for these findings consists of political landscape, discourse production and reception, as well as different protocols in various new media platforms and their participants. First, China’s rise brings up the change of the global political landscape, which is welcomed by the Chinese but worried and even hated by some westerners. Second, Chinese people support President Xi and his administration’s national and foreign policies such as anti-corruption, the realization of Chinese Dream, determination in maintaining sovereignty, etc. These policies make his discourse more acceptable among the Chinese people. Third, the netizens in YouTube come from all over the world with different native languages and culture while the users of Ifeng.com and Sohu.com are mostly Chinese.

Stanley E. Porter and Ryder A. Wishart (in Chap. “Register Variation in Hellenistic Greek: Factor Analysis of Quantitative Linguistic Patterns”) accept the SFL’s assumption that lexicogrammatical patterns can predict or represent a text’s register. They study the register variation of Greek texts in the Hellenistic era through the identification of the patterns of morphosyntactic variation. They build a Hellenistic Greek Corpus consisting of three subcorpora: New Testament, Papyri and Ostraca, and Hellenistic Texts. The data are annotated with 42 variables under eight grammatical categories, i.e. Case, Voice, Mood, Gender, Tense Form, Part of Speech, Number, Person, with baseline probability established for each variable. Principal component analysis is employed for register variation analysis.

In the register analysis of New Testament, two dimensions are identified: narratival versus expositional (dimension 1, related to field) and descriptive vs. interactant (dimension 2, related to tenor). The dominance of these two dimensions is also confirmed in the much larger Hellenistic Texts, which proves the effectiveness of generalized register parameters above. The result in Papyri and Ostraca, however, is
totally different. A third dimension (documentary vs. relational) is identified as well as interactant vs. descriptive, and it is found to be correlated with generic distinction between literary versus non-literary. In order to answer the question whether intra-text variation reflects intertext variation, Porter and Wishart also check the dimensions in a chaptered book *Epistle to the Romans*. Finding no indication that the variation across chapters is attributed to register variation, they argue that register is best analyzed on the level of the text.

In Chap. “Synergising Corpus, Functional, and Cultural Approaches to Critical Discourse Studies: A Case Study of the Discursive Representation of Chinese Dream”, Hang Su synthesizes CL, SFL, and cultural discourse study, arguing that “an integrated research paradigm that is corpus-based, theory-informed, and culture-specific would be desirable for critical discourse studies”(191). To be specific, the combination of CL and SFL can strengthen CL’s weakness in theory and solve SFL’s problem in dealing with large quantity of texts, while a cultural discourse analysis can provide more reliable interpretation.

The synergy is applied in a case study of *Chinese Dream* in *China Daily*, with SFL’s TRANSITIVITY analyzed and the result culturally interpreted. A semi-automatic transitivity analysis method, assisted by the Word Sketch in Sketch Engine, is also proposed for the process-type analysis concerning “Chinese Dream” because Word Sketch can provide the grammatical information (e.g., subject, object) of the node term and thus reduce the number of verbal groups for process analysis. Four process types are found to be related to “Chinese Dream,” i.e. relational, material, mental, and verbal, among which relational and material processes are dominant.

A qualitative examination of relational and material processes shows that the former is employed to characterize *Chinese Dream* as a national dream, and the latter is used for discussing how the dream can be realized. Su culturally explains that *Chinese Dream* is put forward based on China’s past humiliation, i.e. western and Japanese invasion, with a goal of national rejuvenation, and it is a common dream of all Chinese due to the collectivism culture and ideology. In light of this, Su argues that the term is “timely vision, rather than just a political slogan” (187). Besides, the way of the dream can be realized is found to be adherent to the Socialism with Chinese characteristics because of the achievements made by Chinese Communist Party.

In Chap. “The Discourse of Nkrumaism: A Corpus-informed Study”, Mark Nartey studies professional politicians discourse: the speeches delivered by Kwame Nkrumah, Ghana’s first president and a pioneering Pan-African leader, aiming to reveal the dominant ideologies permeated in his discourse and how he employs the linguistic resources and discursive strategies to express his convictions. Political discourse analysis, in particular, discourse-historical approach emphasizing historical contextualization of discourse, is employed as the analytic framework for discourse analysis. Based on the 40 most frequent lexical words and their concordance and collocation, Nartey identifies six anti-imperialist themes: African unity, African liberation, (neo-)colonialism and imperialism, Pan-Africanism, African personality,
and socialism, among which the first three’s concordance, collocation, and semantic prosody were qualitatively analyzed in terms of the theme, and the linguistic recourses and discursive strategies used.

It is found by Mark Narwey that Nkrumah, by focusing on and devoting to the cause of anti-imperialism, establishes a strict dichotomy between African and western imperialists, constructing a discourse of resistance. Demonization strategy is also used to form a conflict between the good and the evil. Also, Nkrumah is found to construct mythic discourse to make his personal ideas shared by all Africans. In addition to these discursive strategies, Nkrumah also uses such linguistic resources as intensification, pro-nominalization, careful lexical choices, and metaphor (e.g., evil metaphor, disaster metaphor) to make his argument more persuasive.

In Chap. “Concordancing China’s Friend, Foe and Frenemy: A Corpus-based CDA Analysis of Geopolitical Actors (Re)presented at China’s Interpreter-mediated Political Press Conferences”, Chonglong Gu takes a product-oriented perspective of interpreting against the backdrop of linguistics/discursive turn in political science, arguing that interpreter-mediated communication can be taken as a self-contained practice and an effective resource to study global politics. A corpus-based critical discourse study of the English interpretation of China’s Premier-Meets-the-Press conference (1998–2002) is compiled to reveal China’s geopolitical diplomacy and international relations. In the word list of the data, Gu finds that USA, Japan, and Russia are most frequently mentioned. They are also found to be most bilaterally engaged with China through a search with the structure of “China and,” “and China,” and “China-/Sino-”. In this respect, Gu argues that the three countries are most ideologically salient and of greatest relevance to China’s international relationships. In order to find out who might be China’s friend, foe, and frenemy, the author conducted a detailed corpus-based (methodologically, collocation, concordance, and semantic prosody) critical discourse analysis of the discursive representations of USA, Japan, and Russia.

Gu finds that Japan is negatively construed (e.g., aggression, history, war, sufferings problem) because of its historical invasion of China and its leaders’ frequent visits to the Yasukuni Shrine where Class-A war criminals are enshrined. Russia, however, is predominantly positive in discourse. It is regarded as the good neighbor, friend, and partner of China (e.g., good, cooperation, comprehensive, strategic, achievement, constructive). As to USA, the bilateral relationship is more complicated. Though the two countries are economically interdependent (e.g., currency, business, financial, IMF, exports, import), they are confronted with many challenges, and Washington is often construed as an intervener in China’s affairs. This complicatedness makes USA more of a frenemy of China.

In Chap. “Citation Functions in the Opening Phase of Research Articles: A Corpus-based Comparative Study”, Kathy Ling Lin and Susie Xin Sui make a comparative study of the citation functions between Introduction and Literature Review (LR) in the research articles of applied linguistics (AL) and civil engineering (CE). It is found that citation is denser in AL than CE, indicating applied linguists’ greater reliance on referencing others and the contextualization of justification of the study at the beginning. Concerning the cross-generic variations, more citation is used in
the LR rather than Introduction in both disciplines since LR requires more information density and specificity. The authors also find that the reviewing function is downplayed in the Introduction and shifted to its subsequent LR, making Introduction a section for concise identification of research issues. Regarding the citation furcation variation across genres, it is found that LR favors complex non-attribution rhetorical purposes (typically exemplification, support, and comparison and contrast between/among sources) while citations for the functions of example and generalization from multiple sources are preferred in its preceding Introduction due to different communicative purposes. In terms of cross-disciplinary variations of citations functions, the functions of further reference, origin, support and evaluation are more favored by AL than CE because of the contrasting disciplinary nature.

In Chap. “Engagement Resources in Chinese College Students’ Argumentative Writings”, Yilong Yang studies the characteristics and pattern of engagement system, a subsystem in appraisal theory, employed by the Chinese college students, through analysis and comparison of their argumentative writings before and after teaching intervention. Two classes are randomly selected as experimental group in which scaffolding academic literacy pedagogy is carried out for engagement teaching and control group to which no engagement teaching is given. Their writings are scored and then annotated with the nine resources of engagement, i.e. monogloss and heterogloss (deny, counter, concur, pronounce, endorse, entertain, acknowledge, distance).

In the pre-test, t-test shows that there are no significant differences between the two groups in terms of the use of engagement variables. In the post-test, however, five engagement resources, i.e. counter, concur, pronounce, entertain, and acknowledge, are found to be significantly different between the two groups. The author also finds a significant difference in the post-test writing scores of the two groups, and that most of the nine variables of engagement are significantly and positively correlated with the writing score.

Though both groups’ use of engagement has greatly increased after an eight-week teaching intervention (engagement teaching for experiment group, normal teaching for control group), the two groups show significant changes in their use of some engagement variables in counter, concur, pronounce, entertain, and acknowledge. These changes, nevertheless, have not been found before the intervention. The author argues that the positive results achieved in engagement teaching invention suggest a causal relationship between the writing scores and the engagement resources employment, indicating that “the use of engagement resources is an indicator of the quality of English argumentative essays for Chinese college students” (318).

In Chap. “Interpreter’s Role in Discourse and Context: A Corpus-based Study From the SFL Perspective”, Yi Chen and Zhongwei Song, regarding interpreter as an independent social agent, study the contextual influence on their linguistic choice in speech function, modality, and attitudes in the purpose of revealing interpreter’s role in interpreting. By Filemaker, a written corpus is compiled on China two-session press conferences. Seven topics under three themes are identified, i.e. diplomatic relations (Russia, Japan, and India), cross-strait relations (Taiwan 1: independence and Taiwan 2: cooperation), and politically sensitive topics (Tibet and Tiananmen Square Event).
It is found that the interpreter’s lexicogrammatical choices in modality and attitudinal resources vary according to the topics. For example, the interpreter preserves more obligation in Taiwan 1 to keep the regulatory power of the speaker’s discourse, while he/she maintains more inclination in Taiwan 2 to highlight the willingness for cooperation. As to modality values, high-value is increased in the interpretation across all the topics, but the medium and low-values vary. For instance, regarding the Tiananmen Square Event and Tibet, less medium-value, but more high-value and low-value ones are employed, indicating clearly polarized stances. In terms of the modality orientation, more human involvement through subjective and implicit modal expressions is found in the topics concerning Sino-Russia relations, but less is found regarding Tiananmen Square Event which is evidenced by more objective and explicit modal expressions. There are also obvious changes in attitudinal resources among politics-concerned topics. For example, the authors find that attitude related to Taiwan 1 is more non-judgment-related and more implicit, while the evaluation related to Taiwan 2 is more explicit and judgment-related. Based on the findings, the authors conclude that interpreter’s social positioning in communication is constantly affected by the context, and the government interpreters play a dual role: the communication facilitators and the government officials.

2.3 Health Discourse

Part III (Chaps. “A study of Intersubjective Representations of Inferential Information in Health Crisis News Reporting”, “Creativity and Television Drama: A t-score and MI Value Cut-offs Analysis of Pattern-forming Creativity in House M.D.” and “Interpersonal Metaphor Used in Different Discursive Moves in Reply Posts of an Online Health Forum”) concerns health discourse. In Chap. “A study of Intersubjective Representations of Inferential Information in Health Crisis News Reporting”, Bin Tang investigates how inference is intersubjectively presented to make the inferential information more reliable in health crisis news reports. The inferential processes are identified by five types of epistemic modal expressions: modal verbs, modal adverbs/adjectives, verbs of epistemic judgment, nominalized modals, and modal grammatical metaphors. Based on the assumption that intersubjectivity is the ownership of the evidential proof (e.g., Subjective: It is probable that they have run out of fuel vs. Intersubjective: Probably they have run out of fuel), the author defines the intersubjectivity of an inferential process from a different perspective.

A corpus of 47 English health crisis news on the H5N1 avian influenza pandemic during 2005 and 2006 reported by The Times is compiled, and four types of inferential information sources are identified: specified, underspecified, unspecified, and without specification. It is found that the intersubjective representation of inferential information for the specified, underspecified source is realized by nomination (e.g., names of government officials and experts), objectivation (spatialization, utterance autonomization, and instrumentalization), and aggregation (collectivization). The underspecified information source is grammatically realized by passive structure
and nominalization which can hide the real inferential source. Inferential information without any clue of source, however, is contextually realized by cause-and-effect context and background support context. The author explains that the intersubjective representations of inferential information can achieve a higher degree of objectivity, credibility, and public acceptance of the information.

In Chap. “Creativity and Television Drama: A $t$-score and MI Value Cut-offs Analysis of Pattern-Forming Creativity in *House M.D.*”, Locky Law proposes custom $t$-score and MI value cut-offs to improve the efficiency and effectiveness of data retrieval for the study of pattern-forming creativity in *House M.D.* Assuming pattern-forming creativity is closely related to verbal repetition, the author argues that it “is prone to collocation because of its repetitive property, and so will likely be reflected by large $t$-score and MI value” (400). A corpus of *House M.D.*, an American television medical “dramedy,” of 927,922 words is compiled, and the software ConcGram is used for the extraction of pattern-forming creativity.

Law finds that the traditional MI score of 3 and $t$-score greater or equal to 2 are not efficient enough for the extraction of pattern-forming creativity because it returns too many results. Therefore, he argues that a pair of custom cut-offs of $t$-score and MI value calculated from a dataset is likely more desirable. The author first discusses the internal span of the concgram in order to limit the hits and thus reduce the number of concgrams. Then, the custom cut-offs for $t$-score and MI value are calculated and analyzed. A manual extraction of pattern-forming creativity performed on 67 episodes of *House M.D.* shows that the cut-offs effectively double the percentage yield of pattern-forming creativity in the concgram lists. Consistency in the percentage yield of the pattern is proved by three separate concgram-list analyses. It is also found that repeated use of the $t$-score and MI maximum range helps to improve the efficiency while retaining a reasonable hit rate.

Bingjun Yang (Chap. “Interpersonal Metaphor Used in Different Discursive Moves in Reply Posts of an Online Health Forum”) studies the interpersonal metaphor in doctors and nurses (DNs)’s reply posts of an online forum (doctorslounge.com). He aims to clarify how metaphors of modality are deployed in the discursive moves for the realization of delicate online healthcare communication. Eight moves under two categories are identified as the units of metaphorical analysis, i.e. solution moves (Advice, Assessment, Disclaimer, Question, and Referral) and supporting moves (Elaboration, Experience, Good wish and thanks, General information).

Findings on the metaphorical distribution in these moves are as follows: In Advice, obligation metaphor occurs most, while in Assessment, probability metaphors are the most. The former can mitigate the tension between speakers, and the latter helps to mitigate the certainty in medical judgment. In the supporting moves, it is found that probability metaphors dominate in Elaboration because of the lack of trust and diagnosis information, and inclination metaphors are mostly used in Wish-and-thanks, indicating the DN’s awareness of establishing good relationships. The significant relation between metaphors and moves is probability/obligation metaphor and Advice and Assessment, inclination metaphor and Disclaimer, probability metaphor and Elaboration, usability metaphors and Experience/General-inform, and inclination metaphor and Wish-and-thanks. It is in these ways that the metaphors are related to the
moves. Besides the metaphor–move relation, Yang also finds variants of metaphors of modality.

3 Concluding Remarks

From the overview, one can see that the papers presented in this volume touch upon various aspects in SFL, such as grammatical metaphor (Chaps. “A Corpus-based Study of Transfers in English Gerunds”, “A study of Intersubjective Representations of Inferential Information in Health Crisis News Reporting”, and “Interpersonal Metaphor Used in Different Discursive Moves in Reply Posts of an Online Health Forum”), register (Chaps. “Register Variation in Hellenistic Greek: Factor Analysis of Quantitative Linguistic Patterns” and “Interpreter’s Role in Discourse and Context: A Corpus-based Study From an SFL Perspective”), mood and modality (Chaps. “Interpreter’s Role in Discourse and Context: A Corpus-based Study From an SFL Perspective” and “A study of Intersubjective Representations of Inferential Information in Health Crisis News Reporting”), appraisal system (Chaps. “Interpretation and Expressing Attitudes in New Media: A Case Study of Comments on President Xi Jinping’s Speech at UN” and “Engagement Resources in Chinese College Students’ Argumentative Writings”), and transitivity (Chap. “Synergising Corpus, Functional, and Cultural Approaches to Critical Discourse Studies: A Case Study of the Discursive Representation of Chinese Dream”). These have all been studied with the help of corpus data. What is worthy to be noted is that theories in CL like collocation, concordance (Chap. “Corpus Linguistics as Contextual Prosodic Theory (CPT) and Subtext: A New and Final Linguistic Theory”), and statistic tools of t-score MI are investigated at the meta-level (Chap. “Creativity and Television Drama: A t-score and MI Value Cut-offs Analysis of Pattern-forming Creativity in House M.D.”); and a synergy of CL, SFL, and cultural discourse study is proposed for CDA (Chap. “Register Variation in Hellenistic Greek: Factor Analysis of Quantitative Linguistic Patterns”); and the citations in research article are analyzed from genre differences (Chap. “Citation Functions in the Opening Phase of Research Articles: A Corpus-based Comparative Study”), which throws light on theoretical and methodological innovation. Also, SFL’s strong appliability has been well demonstrated in this volume by the application of SFL in different fields including grammar and discourses of learner’s writing and spoken texts, political speeches, journalist reports, interpreting, health communication, and TV drama.

As is shown by the studies in this volume, SFL is characteristic of constant development and wide applicability. The vitality and sustainability of SFL lie in its openness to other theories and its advocacy of employing various scientific methods, which promise further prosperity to SFL in the twenty-first century.
Acknowledgements We would like to thank the authors for their contributions to this collection. Special thanks go to Prof. Guowen Huang at South China Agricultural University, Prof. Chenguang Chang at Sun Yat-sen University, and Prof. Kaibao Hu at Shanghai International Studies University for their support. Several Ph.D. candidates, especially Guichao Zhang and Hongmiao Gao from Shanghai Jiao Tong University, generously offered help and we would like to thank them as well. We also appreciate the work by the staff from Springer Nature, Rebecca Zhu, Carolyn Zhang, and Muruga Prashanth in particular. Part of the research is sponsored by Shanghai Pujiang Program (No. 18PJJC082).

References


Grammar
A Corpus-based Study of Transfers in English Gerunds

Qingshun He

1 Introduction

The English gerunds found in present-day English can be divided into nominal gerunds and verbal gerunds, with nominal gerunds being further divided into action nominal gerunds and result nominal gerunds (Heyvaert 2008). Nominal gerunds have the formal features of nouns (Fonteyn et al. 2015), taking “nominal dependents such as determiners, adjectives or genitive phrases” (Fanego 2004: 6). Verbal gerunds, on the other hand, have the internal syntax of a clause-like structure, with clausal participants and adverbial modifications. For example:

(1) a. Artegall’s subduing of Ireland is a conclusion to acts of masculine orderly restoration which the book as a whole deals with. (BNC_AC) [Nominal: Action]

   b. The traditional style and character of the building have been carefully retained. (BNC_MISC) [Nominal: Result]

   c. I pretended to ignore his ignoring me. (BNC_FIC) [Verbal]

In addition, both nominal gerunds and verbal gerunds may be used nonreferentially, being referred to as bare gerunds. For example:

(2) a. But you must inform them in writing of the situation. (BNC_MAG) [Nominal: Bare]

   b. On the third day we had to start using the lifts on the ski slopes. (BNC_MISC) [Verbal: Bare]

Both nominal and verbal gerunds can be defined as deverbal nominalizations (Declerck 1991; De Smet 2010; Fonteyn et al. 2015; Fonteyn 2016), but verbal gerunds were developed diachronically out of action nominal gerunds sometime in the Middle English period (Donner 1986; Jack 1988; Houston 1989; Van der Wurff 1993; Tajima 1996; Fanego 1996a, b, 1998, 2004; Kranich 2006; De Smet...
Of the four types of referentially classified gerunds (i.e. definite nominal gerunds, bare nominal gerunds, bare verbal gerunds, and definite verbal gerunds), bare nominal gerunds “display the first deviations from the nominal system” (Fonteyn 2016: 69). This deviation occurs “when the deverbal noun in -ing began taking adverbial modifiers of various kinds” (Fonteyn et al. 2015: 38).

Usage of bare verbal gerunds later spreads in contexts with a possessive marker and finally in contexts with definite determiners (Fanego 2004). Definite nominal gerunds are the most noun-like of the four types of gerunds, and hence have the most potential for transferring to bare nominal gerunds. Transferring from definite nominal gerunds to definite verbal gerunds should be a unidirectional process, and verbalization occurs in the transfer from bare nominal gerunds to bare verbal gerunds. Bare nominal gerunds have served as the locus of the formal verbalization of gerunds (Fanego 2004). This process of transfer can be illustrated as follows.

definite nominal gerund → bare nominal gerund → bare verbal gerund → definite verbal gerund

This process of verbalization, however, is not in agreement with the conclusion of He and Yang (2014) that the transfer from verbal groups to nominal groups that create grammatical metaphor is a process of unidirectional nominalization. Grammatical metaphor, in the Hallidayan sense (Halliday 1985, 1994; Halliday and Matthiessen 2004, 2014), can be described as “the remapping of the semantics onto the lexicogrammar” (Halliday 1998: 192). Moreover, it has been stated that “nominalization is the single most powerful resource for creating grammatical metaphor” (Halliday 1994: 352). See Example (3), as quoted from Halliday (1994: 345):

(3) a. In the evening the guests ate ice cream and then swam gently.
   b. The guests’ supper of ice cream was followed by a gentle swim.

This semantic configuration can be realized as a congruent form and one or more incongruent or metaphorical forms. The congruent realization is that the standard expression is “closer to the state of affairs in the external world” (Thompson 1996: 164). The incongruent or metaphorical realization on the other hand is “not expressed through the most typical (and highly coded) form of representation” (Halliday 1978: 180). The two finite clauses presented in Example (3a) are transferred to the two nominal groups in Example (3b). As a result, the conjunction group and then is correspondingly transferred to the verbal group was followed by.

The simple clause in Example (3b) has the potential to be further transferred to a nominal group, such as the guests’ supper of ice cream preceding a gentle swim. The transfer from a clause complex, to a simple clause, and then to a nominal group, is a process of step-by-step metaphorization (Halliday 2004: 35). More specifically, this process involves a unidirectional transfer that originates from finite verbal groups that move through nonfinite verbal groups to end with nominal groups. Within the domain of nonfinite verbal groups, present participles also have the potential to transfer to gerunds due to their higher degree of nounhood.
If the verbalization\(^1\) of nominal gerunds did in fact exist, then, diachronically, verbal gerunds should have experienced a trend of increasing usage through the Modern English period, as opposed to a relative decrease of nominal gerunds. In this study, a corpus-based investigation on the transfers in English gerunds will be conducted in order to (1) analyse the types of transfers for gerunds and (2) identify the different types of gerunds. Focus will also be placed on the transfers involved in creating grammatical metaphor within the context of systemic functional linguistics. The corpora as well as the study’s data collection methodology will first be presented in Sect. 2. The diachronic research regarding the distribution trends of gerunds will then be conducted in Sect. 3. The variable types of gerunds will be specifically identified in Sect. 4. Section 5 will be devoted to a discussion of the study’s results.

2 Methodology

2.1 Corpora

In this study, the corpus of Google Books (British English) will be utilized for data. This corpus covers the entire period of Modern English, from the 1500s to the 2000s. The corpus has a large sample size, covering more than 34 billion words. This allows “for research on a wide range of phenomena that are difficult or impossible to study with the small first-generation historical corpora of English” (Davies 2014: 401). For the study of gerunds specifically, this corpus is particularly useful in its ability to help examine the frequency of change in the different types of gerunds throughout the 500 years of language evolution covered in the dataset, as well as for its ability to help in identifying the possible different types of transfer in gerunds.

Convenient though it is, it must be noted that the corpus of Google Books (British English) does not provide context for its sample items. The example sentences to be used in this study will therefore be retrieved from the British National Corpus (BNC) instead. The BNC contains 100 million words of text that covers a wide range of genres. Both corpora are available online and provide convenient search tools that are helpful in retrieving any relevant concordances. It must be noted that of the 51 periods covered by the corpus of Google Books, there are complete gaps in the data from the 1500s to the 1550s, as well as in the 1570s. Therefore, relevant data will be retrieved from the other 44 periods in the corpus to address these gaps in the data.

\(^1\)Note that He and Yang (2018) have proposed another type of verbalization, in the context of systemic functional linguistics. This alternative verbalization is characterized by the transfer from conjunction groups to verbal groups.
2.2 Data Collection

Nominal gerunds are syntactically the same as nouns, potentially functioning as the subjects or complements of clauses. Verbal gerunds, on the other hand, can introduce their own complements. To retrieve different types of gerunds, the following regular expressions were written in the CLAWS7 tagset:

RE1. \([at\ast] | [d\ast] | [app\ast] | [vv\ast] | [i\ast] \) \*lings of

RE2. \([at\ast] | [app\ast] | [vv\ast] | [i\ast] \) \*ing.\([v\ast] | [pp\ast o] | [app\ast] | [at\ast] | [d\ast]\)²

The first regular expression can be described as any construction consisting of an article, determiner, possessive pronoun, lexical verb, or preposition and a singular or plural form of any word with the -ing ending, followed lastly by a preposition of. Using this regular expression, action nominal gerunds such as those seen in Example (4), as well as result nominal gerunds such as those seen in Example (5), can be retrieved. The second regular expression can be described as any word with the -ing ending that is tagged as a verb, preceded by an article, possessive pronoun, lexical verb or preposition, and then followed by the personal pronoun of an object, its possessive pronoun, an article or a determiner. Using this second regular expression, verbal gerunds with overt subjects like that in Example (6a), as well as bare verbal gerunds such as those seen in Example (6b-c), can be retrieved.

(4)

a. The Pharisees looked forward to the coming of the Messiah. (BNC_MISC)

b. I have the support in writing of a large number of owners and trainers in the action I have taken. (BNC_NEWS)

(5)

a. The teachings of the Church brought nothing tangible for mankind. (BNC_MISC)

b. He put in a good word for him at meetings of the Jockey Club. (BNC_FIC)

(6)

a. The collection or pot plants wasn’t simply brought about by my parking my car at the garden centre. (BNC_MISC)

b. He’s meticulous in keeping the records straight. (BNC_FIC)

c. The girl finished stacking the guide books and slipped out from behind the desk. (BNC_FIC)
Due to the restrictions inherent in these regular expressions, not all relevant constructions have been retrieved. That said, many common nouns and indefinite pronouns with the -ing ending were successfully retrieved. It is found that the most frequently used 14 words of this type are something, king, nothing, string, spring, morning, thing, ring, anything, wing, well-being, swing, sting and inkling. In addition, gerunds such as those seen in Example (7) are not easy to retrieve automatically, nor are gerunds such as those seen in Example (8) easy to distinguish from present participles.

(7) a. Burning of the Amazon forest produces nearly 720 million tons of carbon dioxide annually. (BNC_MISC)
   b. Using the local area is particularly important at primary level, for instance. (BNC_ACAD)

(8) a. Tiring of the crowd, I climbed from the reeking water. (BNC_FIC)
   b. Closing the door, I went through into my own room. (BNC_FIC)

Regardless, the number of occurrences retrieved using restricted regular expressions is still sufficiently large for quantitative analysis. For data validation, the occurrences of the aforementioned 14 common nouns and indefinite pronouns with -ing endings were excluded. The data that were finally arrived at are presented in Table 1.

### Table 1 Frequencies of the four types of gerunds in Google Books (British English)

<table>
<thead>
<tr>
<th>Gerund type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definite NG</td>
<td>22,124,837</td>
</tr>
<tr>
<td>Bare NG</td>
<td>1,617,827</td>
</tr>
<tr>
<td>Bare VG</td>
<td>42,481,490</td>
</tr>
<tr>
<td>Definite VG</td>
<td>1,404,405</td>
</tr>
<tr>
<td>Total</td>
<td>67,628,559</td>
</tr>
</tbody>
</table>

3 Diachronic Distributions of Gerunds

In this section, a comparison is made between the diachronic distributions of nominal and verbal gerunds in order to explore the transfer tendencies of gerunds. Following the principle of unidirectionality in the transfer from nominal gerunds to verbal gerunds, it is hypothesized that, when compared with the relative decrease in nominal gerunds usage, verbal gerunds usage will show an increasing trend over time.

#### 3.1 General Distributions of Nominal and Verbal Gerunds

To facilitate this comparison, the raw frequencies for each decade of the corpus were normalized to the frequency per million words. The total frequency for the four...
types of gerunds (i.e. definite nominal gerunds, bare nominal gerunds, bare verbal gerunds and definite verbal gerunds) is found to be 29,246, 5594, 42,342 and 2540 per million words, respectively. The other three totals for frequency per million words were then further normalized to the frequency for bare verbal gerunds (42,342). See Fig. 1.

It can be seen that the four distribution lines keep a trend that, while fluctuating, generally increases and then decreases in differentiated stages. The two groups of data for nominal gerunds keep a similar trend in distribution and are significantly correlated at the 0.05 level \( p = 0.019; R = 0.352 \). Similarly, the two groups of data for verbal gerunds are found to be also significantly correlated at the 0.05 level \( p = 0.015; R = 0.364 \). Bare nominal gerunds, however, are significantly negatively correlated with bare verbal gerunds at the 0.01 level \( p = 0.001; R = −0.473 \), rather than with the definite verbal gerunds \( p = 0.319 > 0.05 \). The distribution of definite nominal gerunds is found to be not significantly correlated with either the bare nominal gerunds or the definite verbal gerunds \( p = 0.717 > 0.05; p = 0.123 > 0.05 \). This verifies the study’s hypothesis and indicates that the decrease of bare nominal gerunds over time is compensated by a relative increase in bare verbal gerunds over the past 440 years.

These results are in agreement with the finding of De Smet (2008) that bare nominal gerunds transfer to bare verbal gerunds. However, there is no indication that definite nominal gerunds will transfer to bare nominal gerunds, nor that bare verbal gerunds will transfer to definite verbal gerunds. Rather, definite nominal gerunds and bare nominal gerunds coexist, and the same is true for definite verbal gerunds and bare verbal gerunds. This is because the definite word preceding a gerund will not change the grammatical function of the gerund itself. Referential and nonreferential nouns, for example, are also popularly used in English. For example:

\[
\begin{align*}
\text{a. Children need reassurance, praise and success. (BNC_MISC)} \\
\text{b. The landlord removes the goat. (BNC_MAG)}
\end{align*}
\]

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\text{b. The landlord removes the goat. (BNC_MAG)}
\end{align*}
\]
Verbal gerunds have the internal structure of clauses. Additionally, a verbal gerund and its complement taken together form a verbal gerund phrase. As such, this so-called definite verbal gerund is actually a verbal gerund phrase that is preceded by a definite word. In other words, the definite word does not function in the internal structure of the verbal gerund phrase. For example:

(10) a. But don’t start thinking about her finding a husband for me. (BNC_FIC)
    b. We will probably consider repeating the venture later in the season. (BNC_NEWS)

Seen from this perspective, nominal gerunds and verbal gerunds are not at the same lexicogrammatical rank. Specifically, nominal gerunds are in the word rank while verbal gerunds are in the group/phrase rank.

3.2 Comparing the Distributions of Nominal Gerunds and Common Nouns

It is not easy to automatically distinguish action nominal gerunds from result nominal gerunds in the dataset. However, one can take the plural nominal gerunds and the singular countable nominal gerunds directly preceded by an indefinite article as result gerunds, and take other nominal gerunds as action nominal gerunds, even though this is not always so because a countable nominal gerund preceded directly by an adjective is taken as an action nominal gerund. Here are some examples:

(11) a. Anderson’s respect appears undiminished, however, and is further indicated in his upholding of the modesty maxim. (BNC_ACAD) [Action]
    b. It will also enable the schoolroom to be retained as a building of cultural and architectural heritage. (BNC_NEWS) [Result: Singular]
    c. Thus what appears to be a contradictory finding does not, in fact, negate the consistent findings of other studies. (BNC_ACAD) [Result: Plural]

If nominalization is in fact a step-by-step transfer from finite verbs to nouns, as proposed by Halliday (2004), and if this process is also unidirectional, as was proposed by He and Yang (2014) as well as He et al. (2015), it can be hypothesized that the diachronic distribution of result gerunds will exhibit an increasing trend when compared with the relative decrease in action gerunds. With this in mind, the distributions for the singular and plural nominal gerunds will be compared with the singular and plural forms of all the common nouns retrieved from the corpus of Google Books (British English) using the same regular expressions. See Fig. 2.

Figure 2 shows that, with exception of the singular nominal gerunds, the other three gerund groups sustain similar trends in distribution ($p = 0.000$) over the past 440 years. This indicates that plural nominal gerunds are the same in use as common nouns. Although the distribution of singular nominal gerunds is found to be

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4 In their work, Matthiessen and Halliday (Matthiessen and Halliday 1997/2009: 72) divided English grammar into four general ranks: clause, group/phrase, word, and morpheme.
significantly correlated with the distribution of plural nominal gerunds ($p = 0.002$; $R = 0.448$), they are not in the same category as common nouns. This is because plural nominal gerunds are mostly result gerunds, and because a large part of singular nominal gerunds are actually action gerunds of a higher degree of verbhood than result gerunds. This trend in distribution does not conform to this study’s hypothesis that result nominal gerunds will elicit an increasing trend when compared with the relative decrease in action nominal gerunds. Here are some examples:

(12) a. He made a *drawing* of a gerbil’s mouth. (BNC_MISC)
    b. They were invariably attached to a two-storey *building* of more conventional shape. (BNC_MISC)

(13) a. We will introduce planning policies which will encourage the *building* of homes near workplaces. (BNC_MISC)
    b. At first sight these may seem rather disparate areas for the *drawing* of generalised conclusions. (BNC_AC)

The gerunds seen in Example (12) are result gerunds, while the gerunds seen in Example (13) are action gerunds. This is because plural forms of gerunds and the gerunds following the indefinite article are result gerunds, while action gerunds are uncountable. Within an action gerund group, however, the preposition *of*, when introducing the postmodifier, can be omitted because the nominal group introduced by the *of* is semantically the subject of the gerund. The omission of this *of* results in the verbalization of the action nominal gerund, forming a verbal gerund phrase. An example of this can be seen in the following statements:

(14) a. In this case the remedy lies in *cleaning* of the storage system. (BNC_MISC)
    b. A recent NASA research document details the positive effect that plants have in *cleaning the air*. (BNC_MISC)