Towards the Crypto-functional Motive of Existential *there*: A Systemic Functional Perspective

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Abstract—This paper, based on the proposal of crypto-functions of existential *there* in Dong (2016a), mainly focuses on the motive of crypto-functions in existential *there*. The constraints of genre on existential *there* in terms of indirect realization relationship between genre and lexicogrammar are firstly discussed in an attempt to locate its motive path. Then such a path is followed to explore the distribution frequencies of existential *there* in each genre in COCA for the intention of shedding light on the motive of crypto-functions of existential *there*. It is found that existential *there* enjoys the highest distribution frequencies, among other genres, in academic genre characteristic of hierarchical knowledge structures, and that existential *there* structures conducive to the verticality of the discourse in academic genre help form a semantic network about Existents, i. e. NPs and in the meantime result in the crypto-function of existential *there*.

Index Terms—existential *there*, crypto-function, knowledge structure theory

I. INTRODUCTION

The pioneering study of existential *there* (ExT) in systemic functional linguistics (SFL) can date back to Halliday (1967). However, in this long article Halliday only discussed the existential verbs like ‘exist’, ‘happen’, which were then marked as BE1. But only in the classic SFL monograph, *An Introduction to Functional Grammar* (IFG) (Halliday, 1985), ExT has been explored comprehensively and deeply. Though ExT structure has been rendered as one of six transitivity processes in IFG, ExT is still treated as an element that has no experiential function. Henceforth, the functional interpretation of ExT has ever since focused on its interpersonal function as Subject and textual function as Theme. However, the observation of Subject by Fawcett (1999, p. 261) indicating “the Subject or phrase that has some function in the experiential structure of the clause” (Halliday & Matthiessen, 2014, p. 91) entail that Subject and Theme are presupposed of the experiential function. Unfortunately, such a relationship has long been ignored in SFL literatures (see, Eggins, 2004; Downing & Locke, 2006; Halliday & Matthiessen, 2014; Thompson, 2014, among others), resulting in a contradiction in the functional interpretation of ExT, that is, SFL literatures claim that ExT has no experiential function on the one hand, while they have taken the experiential function as the presupposition to the interpersonally and textually functional interpretations of ExT on the other.

In light of this dilemma, we (cf. Dong et al., 2016) proposed a functional approach to the experiential function of ExT, the essence of which is twofold. For one thing, ExT can be taken as an independent functional unit according to Ranked Constituent Criteria (see, Halliday, 1994, p. 20); for another, ExT cannot be deleted as a compulsory element which undoubtedly contributes to the construction of the experience. Therefore, the functional approach can render ExT experiential function. In the meantime, given that ExT has some features that locative *there* lacks, ExT is then treated as crypto-category (cf. Whorf, 1956), and its experiential function is hence analyzed as crypto-experiential function (cf. Dong, 2016a). The present paper, however, even goes further to addresses the issue of the motive to crypto-functions of ExT. Compared with the replacement relation among micro-function, macro-function and metatunction, crypto-function does not attempt to substitute for the metafunction. Instead, crypto-function analysis is based on metafunction analysis, and forms a complementary relation to the latter. It is this complementary relation between crypto-function and metafunction that provides a better perspective to explore the motive to crypto-functions of ExT. Generally, there are two perspectives to address this issue, external and internal. This study, however, preliminarily attempt to take the external perspective to exploring the motive to crypto-functions of ExT, i. e. from the perspective of constraints of genre on ExT.

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II. THE MOTIVE TO CRYPTO-FUNCTION: THE CONSTRAINTS OF GENRE ON ExT

A. Indirect Realization Relationship between Genre and Lexicogrammar

Since genre and linguistic expression are beyond and within language system respectively, the realization relation between them is thus indirect. Though SFL starts from the study of grammar, the study of genre has long been explored, for example, in the form of generic structure potential (Hasan, 1977), rhetoric structure potential (Mann et al., 1992), and generic relation (Martin & Rose, 2007). These studies directly or indirectly indicate the relationship between genre and linguistic expression, which, to some extent, is well commented by M. M. Bakhtin (1986). That is, one who is a layman to genre cannot maneuver language properly. Accordingly, genre is treated as the basic unit in daily language use, and thus only in the specific context can the linguistic expressions be mastered by language users, linguistic expressions proper have meanings, though (as cited in Hu et al., 2008, p. 286). In other words, genre which is beyond language system has a constraining effect on lexicogrammar which is within language system (Martin, 2009/2012, p. 375), for genre, “a staged, goal-oriented social process” (Martin & Rose, 2007, p. 8), is realized through discourse. Therefore, the constraining relation between genre and expression can be diagrammed as Figure 1 below:

![Figure 1: The constraining relation between genre and expression](image)

B. Crypto-function and Types of Genre

As indicated in 2.1 above, genre has a constraining effect on linguistic expression. But the question of whether such a constraining relation has been realized in the crypto-function remains unanswered. Before giving an answer to this question, I claim that it is necessary to elaborate on types of genres, for the distribution frequencies of ExT can be well reflected upon the different types of genres, which in turn can be viewed as a good perspective to explore the crypto-function.

In SFL, Martin (2012), by introducing knowledge structure theory (Bernstein, 1996/2000), is a pioneer in discussion about types of genres. Based on knowledge structure theory, Martin (2012, p. 415) rendered natural sciences as hierarchical knowledge structures, humanities as horizontal knowledge structures, and social sciences in between. In reference to knowledge structure theory, I argue that the four genres in Corpus of Contemporary American English (COCA) which is to be discussed later can be illustrated in Figure 2 below.

![Figure 2: Types of genres and knowledge structure](image)

Now let us come back to the question of how crypto-functions can be reflected in genres. Generally speaking, ExT should have the similar distribution frequencies if there were no differences in their daily use. However, if there exist different distribution frequencies of ExT in different genres, it is surely suggested that ExT be inclined to match a certain genre. Undoubtedly, it is difficult to draw a conclusion that such an inclination is connected with crypto-functions, for nominalization also shows the same or similar performance. For instance, the high distribution frequencies of nominalization cannot ensure that it has crypto-function. But one thing is certain, i.e. that language is as it is indicates that “language has evolved in a certain way because of its function in the social system” (Halliday, 2013, p. 3). That is, different distribution frequencies in genres can indicate the knowledge construction performance in different genres. In this case, the genre per se can be taken as a better perspective to explore nominalization. By the same token, genre can also be taken as a better perspective to explore ExT. Unlike nominalization, ExT often serves as an introducer and helps the knowledge construction of NPs in ExT structure vis-à-vis the construction of ExT per se. In this case, the crypto-function of ExT can be related to types of genres and the different distribution frequencies of ExT in genres can thus be viewed as a testing point to the crypto-function.

III. THE EXPLORATION OF THE MOTIVE TO CRYPTO-FUNCTION OF ExT

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A. Data Collection and Analysis

Given the realization relation between genre and linguistic expression, the procedures of exploring the motive to crypto-function can be conducted by analyzing the distribution frequencies of ExT in COCA. With one year interval and a range of collection from 1990 to 2012, COCA boasts 450 million words. It is worthy of mentioning that COCA includes both spoken and written data, and the latter can be further divided into fiction, magazine, newspaper, and academic. In light of the distribution frequencies of ExT in different genres based on knowledge structure theory, this study therefore only consider the written data. However, the written data left still reaches the amount of 360 million. In addition, the distribution of magazine, newspaper, and academic in COCA is quite balanced, each accounting for 90 million.

It is worthy of noting that the data in online corpus like COCA can only be retrieved by CLAWS7 Tagset instead of by regular expression. In the meantime, the delimitation of ExT structure itself is a hard nut to crack, for the results by CLAWS7 Tagset like “there was Michael Jackson the trailblazing musician” (COCA_2009_SPOK_CBS_SunMorn). Luckily enough, the delimitation of ExT by Lakoff (1987, p. 545) can serve as a convincing reference for retrieving ExT in COCA. That is, three retrieval expressions can be set respectively in terms of being embedded, negation, and being questioned (as cited in Dong, 2016b).

Given that the results retrieved by (1) also share the features of being embedded and negative, I therefore code the retrieval expression (4) with the focus of retrieving both embedded and negative ExT structures. And the distribution frequencies of embedded ExT structures can thus be obtained by subtracting the results of (4) from those of (1). In addition, given that NP in ExT structures are often with some modifier, retrieval expression (3) can then be modified as (5), (6), (7), and (8) (as cited in Dong, 2016b).

B. Results: Distribution Frequencies of ExT in COCA

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(1) [cs] [csa] [csn] [cst] [cswn] [rrq] [rrqy] [vv0] [vv0y] [vv0z] [vv0z] [vn] [ex] [v*]
(2) [ex] [vbd] [vbdz] [vbr] [vbrz] [vd0] [vdd] [vddz] [vhd] [vhd] [vm] [xx]:
(3) [vbrd] [vbrd] [vbr] [vbrz] [vd0] [vdd] [vddz] [vhd] [vhd] [vm] [ex] [v*][vv0] [vv0] [vn] [nn*]
(4) [cs] [csa] [csn] [cst] [cswn] [rrq] [rrqy] [vv0] [vv0y] [vv0z] [vv0z] [vn] [ex] [v*]
(5) [vdd] [vddz] [vhd] [vhd] [vm] [xx]
(6) [vbrd] [vbrd] [vbr] [vbrz] [ex] [nn*]
(7) [vbrd] [vbrd] [vbr] [vbrz] [ex] [at*] [nn*]
(8) [vbrd] [vbrd] [vbr] [vbrz] [ex] [at*] [j*] [nn*]

B. Results: Distribution Frequencies of ExT in COCA

Table 1:

<table>
<thead>
<tr>
<th>Genre</th>
<th>Distribution frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Embedded</td>
</tr>
<tr>
<td>Fiction</td>
<td>24246 (95.69%)</td>
</tr>
<tr>
<td>Magazine</td>
<td>26395 (96.63%)</td>
</tr>
<tr>
<td>Newspaper</td>
<td>28162 (97.69%)</td>
</tr>
<tr>
<td>Academic</td>
<td>28217 (96.83%)</td>
</tr>
</tbody>
</table>

The results in Table 1 indicate that embedded ExT structures enjoy the highest distribution frequencies in academic genre while lowest in academic genre. However, compared with embedded ExT structures, the results about questioned ExT structures show the somewhat opposite direction in distribution frequencies. That is, they have the highest distribution frequency in fictional genre while much lower in academic genre. However, only the standardized distribution frequencies of ExT structures in each genre can be true to their real situation in COCA. In this case, the results in Table 1 are accordingly standardized by per 10 million words, as indicated in Table 2.

Table 2:

<table>
<thead>
<tr>
<th>Genre</th>
<th>Distribution frequency (per 10 million words) and result in Chi-square test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Embedded</td>
</tr>
<tr>
<td>Fiction</td>
<td>2683.73 (95.69%)</td>
</tr>
<tr>
<td>Magazine</td>
<td>2762.00 (96.63%)</td>
</tr>
<tr>
<td>Newspaper</td>
<td>3071.74 (97.69%)</td>
</tr>
<tr>
<td>Academic</td>
<td>3099.24 (96.83%)</td>
</tr>
</tbody>
</table>

Chi-square Test

Fiction: \( \chi^2 = 18.885 \) (df = 3, p > 0.0001)
The results in Table 2 indicate that the similar results can be obtained in Table 1, though the results in Table 1 were not standardized. That is, embedded ExT structures and their questioned ExT counterparts have different distribution frequencies in genres. These results undoubtedly show that ExT structures have quite different performance in terms of the knowledge structure construction.

However, an interesting finding is that though questioned ExT structures have the highest distribution frequencies in fictional genre, it still reveals much lower distribution frequencies in academic genre when compared with that in magazine and newspapers genre, which indicates that to some extent questioned ExT structures are also conducive to the knowledge structure construction in academic genre.

But these results still fail to show the overall distribution frequencies in different genres, which calls for a combination of distribution frequency of questioned ExT structures with that of embedded ExT structures. And the results shown in the section of total in Table 2 indicate that ExT structures have the highest distribution frequencies in academic genre when compared with that of other genres, and in the meantime are statistically significant ($X^2=18.885$, $df=3$, $p<0.0001$).

IV. DISCUSSION

A. ExT Structures and Hierarchical Knowledge Structures

According to Bernstein (1999), hierarchical knowledge structure is just like a triangle (see Figure 3), in which the knowledge with lower hierarch accumulates from the bottom to the top, thus “motivated towards greater and greater integrating propositions and operating at more and more abstract levels” (Bernstein, 1999, p. 162). Therefore, hierarchical knowledge structure belongs to an integrating knowledge structure mode.

Unlike hierarchical knowledge structure, horizontal knowledge structure comprises “a series of specialized languages with specialized modes of interrogation and the criteria for construction and circulation of texts” (Beinstein, 1999, p. 162). In this case, any discipline in humanities and social sciences that has a horizontal knowledge structure can be stated as a language series, which can be shown in Figure 4.

Based on the distinction between horizontal knowledge structure and hierarchical knowledge structure, I claim that ExT structure is conducive to the construction of the latter one. For one thing, ExT structure helps accumulate the relevant contents so that the hierarchical knowledge structure can be formed among these contents. For another, ExT proper can be developed through existentiality in the discourse (cf. Martin, 1992a). In the meantime, the highest distribution frequencies in academic genre with the feature of hierarchical knowledge structure also prove that ExT helps construct hierarchical knowledge structure. In light of distribution frequencies of ExT in genres and knowledge structures among genres, ExT can be treated as a cline between hierarchical knowledge structure and horizontal knowledge structure, as shown in Figure 5:

B. Increasing Verticality in Knowledge Structure Construction by ExT

The results in COCA show that the distribution frequencies of ExT are the highest in academic genre, which indicates that there is a good match between ExT and academic genre with the feature of hierarchical knowledge structure. But what feature does ExT have to help construct academic genre? The answer to this question may be well explained in terms of verticality proposed by Muller (2007) to distinguish hierarchical knowledge structure from horizontal
knowledge structure. By verticality, Muller (2007, p. 71) means it is “the capacity of a theory or language to progress integratively through explanatory sophistication”. From the definition given by Muller (2007), verticality can be seen as an elastic concept. In this case, horizontal knowledge structure can be changed into hierarchical knowledge structure by increasing its verticality.

As indicated in Martin (2012), academic genre belongs to hierarchical knowledge structure while fictional genre is categorized in horizontal knowledge structure. But the question left unanswered is whether ExT is helpful in increasing the verticality so as to match academic genre that enjoys the high verticality as hierarchical knowledge structure. Let us see the variation of verticality in two texts, i.e. (9a) and (9b).

(9) a. CONVENTIONS
Graphic conventions in system networks

b. A system x/y has an entry condition a, which indicates that if a, then either x or y. And x/y and m/n are combined into one simultaneous systems, both having the same entry condition a. That is, if a, then both either x or y and, independently, either m or n. If ordered in dependence such that m/n has entry condition x and x/y has entry condition a [if a then either x or y, and if x, then either m or n]

To put it simply, if a then either x or y, and if x, then either m or n. A system like x/y has a compound entry condition of conjunction of a and b [if both a and b, then either x or y]

<table>
<thead>
<tr>
<th>No.</th>
<th>(9a)</th>
<th>(9b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>there</td>
<td>A system x/y</td>
</tr>
<tr>
<td>2</td>
<td>there</td>
<td>And x/y and m/n</td>
</tr>
<tr>
<td>3</td>
<td>there</td>
<td>That is, if a</td>
</tr>
<tr>
<td>4</td>
<td>there</td>
<td>If ordered in dependence</td>
</tr>
<tr>
<td>5</td>
<td>there</td>
<td>To put it simply, if a</td>
</tr>
<tr>
<td>6</td>
<td>A system like x/y</td>
<td>In this case, if both a and b</td>
</tr>
<tr>
<td>7</td>
<td>If being attributed to two possible entry conditions of disjunction of a and c</td>
<td>(as cited in Halliday &amp; Matthiessen, 2014, p. x)</td>
</tr>
</tbody>
</table>

After the analysis, it is found that (9a) elaborates the discourse by focusing on Participant ‘there’, while in (9b) the text is centering on Participant ‘system’ and Circumstances ‘if’, as shown in Figure 6.
Now let us explain how (9a) is superior to (9b) in terms of verticality by comparing the Theme construction in above two texts. I argue that ExT structures can increase the verticality from at least two perspectives.

First, in literatures about discussion of verticality in terms of grammatical metaphors like nominalization, the common view is that the more grammatical metaphors are used, the higher the verticality is. Accordingly, the nominalization in ExT structure can increase the verticality. See (10).

(10) a. **And x/y and m/n are combined into one simultaneous systems**, both having the same entry condition a.
    b. There are **the combination of x/y and m/n into one simultaneous systems**, both having the same entry condition a.

Second, ExT structure can also increase the verticality by rank shift. That is, the clause can serve as a group in ExT structure. In this case, these NPs can form a large semantic network, which, compared with a single nominalization, can provide a framework for NPs, thus increasing the verticality. Note that such a rank shift does not form a grammatical metaphor. And the purpose of rank shift is to accumulate NPs. See (11).

(11) a. **A system x/y has a compound entry condition of conjunction of a and b**. In this case, if both a and b, then either x or y. If being attributed to two possible entry conditions of disjunction of a and c, the system can be called m/n, which means that if either a or c, or both, then either m or n. (adapted from Halliday & Matthiessen, 2014, p. x)
    b. There is **a system x/y with compound entry condition, conjunction of a and b** [if both a and b, then either x or y]. There is **a system of m/n with two possible entry conditions, disjunction of a and c** [if either a or c, or both, then either m or n]. (as cited in Halliday & Matthiessen, 2014, p. x)

The above two perspectives, however, can be elaborated in terms of Legitimation Code Theory given by Maton (2014). In (10) and (11), the semantic density in the former, i.e. (10a) and (11a), is not as good as the latter, i.e. (10b) and (11b). In the former, the description is always focusing on the objects being described, and the comprehension of these objects tends to depend on the context in which they occur, thus lacking the observation of the overall relations among objects being described. The lack of the overall relation, however, lies in the absence of the clue which can link up all the objects being described. In this case, from the perspective of Martin’s Theme and Macro-Theme, these Themes due to the lack of internal network cannot relate to Macro-Theme (cf. Martin, 1992b).

However, unlike (10a) and (11a), (10b) and (11b), based on existentiality, can form a network and then link up all the Exsistents being described and are also open for nominalization and rank shift. Therefore, the text can be hierarchically constructed in terms of Exsistents, i.e. NPs. In other words, the information coming earlier can help the construction of information that comes later to highlight the topic being discussed. Thus, the comprehension of Exsistents will undoubtely depend more on network, which eventually lessens the dependency of the Exsistents on non-linguistic context. Thus the less dependency on non-linguistic context means the increase of the semantic density but the decrease of semantic gravity (cf. Maton, 2014). In the meanwhile, Exsistents can link up to the Hyper-Theme, Macro-Theme. To illustrate this, (9a) is a good case in point, which can be diagrammed in Figure 7.
The above discussion indicates that it is the role played by ExT that helps the accumulation of Existents. Then such a hierarchical knowledge structure construction develops upwards to Hyper-Theme “Graphic conventions in system networks”, and then to Macro-Theme “CONVENTIONS”, which also indicates why ExT gets the highest distribution frequencies in academic genre in COCA.

After the discussion that ExT structures are most likely to be chosen in academic genre, let us discuss how ExT obtains its crypto-function in academic genre.

I claim that the cause for crypto-function of ExT lies in the fact that ExT, unlike Existents which participate in the experience construction and form a hierarchical knowledge structure, does not participate in experience construction. ExT can be constructed based on existentiality, though. It is such a construction based on existentiality rather than on hierarchical knowledge structure that makes the role of ExT played in experience construction underestimated and in turn results in the crypto-function of ExT. Perhaps as indicated by Pence & Emery (1947, p. 145), ExT is just like a catalyst, which can stimulate action but does not participate in action. And it is for this reason that its function is more often than not ignored. However, ExT does have function, though its function is not self-evident.

V. SUMMARY

This paper mainly focuses on the motive of the crypto-functions of ExT from the perspective of the indirect realization relationship between genre and lexicogrammar. The constraints of genre on ExT are firstly discussed and then evidenced by exploring the distribution frequencies of ExT in each genre in COCA. It is found (i) that ExT demonstrates the highest distribution frequencies, among other genres, in academic genre rendered as hierarchical knowledge structures, and (ii) that ExT structures enhancing the verticality of the discourse in academic genre help form a semantic network about Existents, i.e. NPs and in the meantime the crypto-function of ExT has come into being.

REFERENCES


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