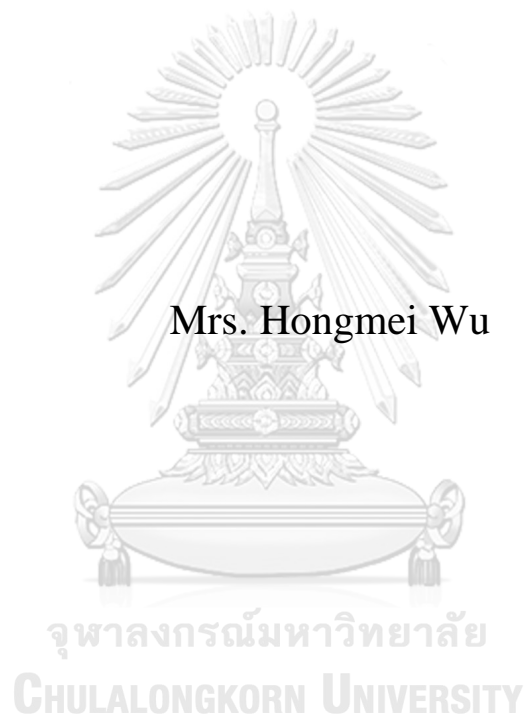


TOPIC-COMMENT SENTENCE STRUCTURE IN WRITTEN
ENGLISH



A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in English as an International
Language

Inter-Department of English as an International Language

GRADUATE SCHOOL

Chulalongkorn University

Academic Year 2019

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โครงสร้างประโยคแบบแก่นความ-เนื้อความในงานเขียนภาษาอังกฤษ



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรดุษฎีบัณฑิต
สาขาวิชาภาษาอังกฤษเป็นภาษานานาชาติ สหสาขาวิชาภาษาอังกฤษเป็นภาษานานาชาติ

บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2562

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

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ห่มยอ อู : โครงสร้งประ โยคแบบแก่นควม-เนื่อควมในงนเขียนภษอังกฤษ. (TOPIC-COMMENT SENTENCE STRUCTURE IN WRITTEN ENGLISH)
อ.ที่ปริภษหัด : ผศ. ดร.นิรค จิตรกร

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาโครงสร้างประโยคแบบแก่นความ-เนื้อความในงานเขียนภาษาอังกฤษ จากการศึกษาพบว่าภาษาอังกฤษใช้โครงสร้างประโยคแบบภาคประธาน-ภาคแสดงในเชิงวากยสัมพันธ์และโครงสร้างประโยคแบบแก่นความ-เนื้อความในเชิงวัจนปฏิบัติศาสตร์ ผลการวิจัยสรุปโดยทั่วไปที่ว่าภาษาอังกฤษคือภาษาที่เน้นความสำคัญในภาคประธานซึ่งเป็นไปตามการเรียงลำดับคำทางไวยากรณ์ อีกทั้งผลการวิจัยยังสนับสนุนแนวคิดที่ว่าโครงสร้างประโยคแบบแก่นความ-เนื้อความเป็นโครงสร้างที่พบได้ในหลาย ๆ ภาษา เพื่อที่จะตั้งคำถามกับคำกล่าวของลีและทอมป์สัน (1976) ที่ว่าโครงสร้างประโยคภาษาอังกฤษแบบแก่นความ-เนื้อความแตกต่างจากภาษาที่เน้นแก่นความ การวิจัยนี้จึงศึกษาทั้งโครงสร้างประโยคแบบแก่นความ-เนื้อความและโครงสร้างประโยคที่ไม่ใช่แก่นความ-เนื้อความซึ่งปรากฏในงานเขียนภาษาอังกฤษ จากการศึกษาพบว่าภาคประธานในประโยคบอกเล่าความเดียวถูกกำหนดโดยสถานะแก่นความของประธานและโครงสร้างประโยคแบบแก่นความ-เนื้อความ ในทางตรงกันข้ามโครงสร้างแบบคงลักษณะโครงสร้างประโยคต้นแบบ เช่น ประโยคกรรมวาจก และประโยคที่ขึ้นต้นด้วยประธานไร้ความหมาย มีความสำคัญในการคงไว้ซึ่งโครงสร้างทางวากยสัมพันธ์แต่ยังคงเก็บโครงสร้างประโยคแบบแก่นความ-เนื้อความไว้ในส่วนของหน่วยประกอบแก่นความ จากการศึกษาพบว่าการย้ายแก่นความเพื่อทำหน้าที่เป็นประธานเป็นวิธีที่ง่ายต่อการเน้นแก่นความในภาษาอังกฤษ ดังนั้นแก่นความซึ่งทำหน้าที่เป็นประธานจึงเป็นรูปแบบปกติที่พบได้ทั่วไปในภาษาอังกฤษ แนวคิดด้านความสัมพันธ์เชิงวากยสัมพันธ์ระหว่างประธานและแก่นความในการศึกษานี้ตั้งอยู่บนสมมติฐาน Split CP โดย ริชชี (1997) ซึ่งกล่าวว่ากรย้ายแก่นความเพื่อทำหน้าที่เป็นประธานเกิดจากการย้ายแก่นความจากตำแหน่ง Spec-TP ไปยังตำแหน่ง Spec-TopP เพื่อทำให้เกิดแก่นความในประโยค ดังนั้นแก่นความซึ่งทำหน้าที่เป็นประธานจึงหมายถึงแก่นความซึ่งถูกคัดลอกไปยังตำแหน่งประธาน นอกจากนี้จากข้อมูลพบว่าแก่นความที่ทำหน้าที่เป็นประธานโดยทั่วไปจะเป็น DPs แต่บางครั้งก็อาจจะเป็น CPs ได้ อีกทั้งลำดับคำของแก่นความแบบต่าง ๆ ในตำแหน่งต้นของประโยคยังขึ้นอยู่กับทฤษฎี End-Weight โดย เคอร์คและคณะ (1972) และทฤษฎี Early Immediate Constituents (EIC) โดย ฮอดกินส์ (1994) จากข้อมูลพบว่าในเชิงอรรถศาสตร์ non-AGENT มีจำนวนมากกว่า AGENT ในตำแหน่งประธาน ซึ่งทำทนายแนวคิดลำดับชั้นทางความหมายของคำโดยแจคเคนดอฟ (1990) ที่ให้ความสำคัญกับ agent มากกว่าบทบาททางความหมายของคำอื่น ๆ ในตำแหน่งประธาน ดังนั้นจากการศึกษานี้จึงสรุปว่าบทบาทเชิงอรรถศาสตร์ของประธานถูกกำหนดโดยสถานะแก่นความของประธานและโครงสร้างประโยคแบบแก่นความ-เนื้อความ

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สาขาวิชา	ภาษาอังกฤษเป็นภาษานานาชาติ	ลายมือชื่อนิสิต
ปีการศึกษา	2562 ลายมือชื่อ อ.ที่ปริภษหัด

5887809020 : MAJOR ENGLISH AS AN INTERNATIONAL LANGUAGE

KEYWORD: Topic-comment structure Language typology, Information structure, Split CP hypothesis, Canonical constructions, Structure-preserving constructions, Topicalization, Multiple topics, AGENT and non-AGENT semantic roles

Hongmei Wu : TOPIC-COMMENT SENTENCE STRUCTURE IN WRITTEN ENGLISH. Advisor: Asst. Prof. NIRADA CHITRAKARA, Ph.D.

This study investigates the topic-comment sentence structure in written English. It finds that English makes use of both the subject-predicate structure syntactically and the topic-comment structure pragmatically. The results of this study challenge the typological claim that English sentence structures are subject-prominent which mainly follows the subject-predicate structure (Li & Thompson, 1976). Via the investigation, this study proposes that English sentence structures exhibit the properties of subject-prominent and topic-prominent languages. As is believed that the topic-comment structure in English is represented differently from that in the topic-prominent languages, this study investigates the constructions in English writing to explore the appearances of both the topic-comment and the non-topic-comment constructions. It finds that the selection of the subjects in canonical constructions is governed by the topic status of the subject and the topic-comment structure of the sentence. On the other hand, structure-preserving constructions, such as the passives, the tough and have constructions are noted to be responsible for maintaining the syntactic structure as well as supporting the topic-comment structure. Regarding topic constituents, subject topicalization is found to be the most economical way syntactically to represent topics in English (Chomsky, 1993, in Collins, 2001, p. 55). Subject topic is thus considered the unmarked topic in English (Lambrecht, 1996). This study bases the syntactic connections between the subject and the topic on the Split CP hypothesis by Rizzi (1997) who states that subject topics undergo the movement from Spec-TP to Spec-TopP to realize the topic of the sentence. As a result, the term subject topic refers to the topicalized subject in the Spec-TopP position, which co-refers to the deleted copy in the Spec-TP position. In both data, subject topics are represented mainly by DPs, and occasionally by CPs in National Geographic. The scene-setting topics are PPs, CPs, adverbs and AdvPs. The order of the subject topics in the sentence-initial position are likely to abide by the End-Weight Principle (Quirk et al, 1972) and the Principle of Early Immediate Constituents (EIC) (Hawkins, 1994), which do not apply to multiple topics. Semantically, non-agent outnumbers agent as the subject in the data. This in turn challenges Jackendoff's (1990) Thematic Hierarchy which prioritizes agent rather than other semantic roles for the subject position. The topic-comment sentence structure affects the choice of constructions, so it, in turn, influences the selection of the subject. This study concludes that agent or non-agent semantic roles of the subject is influenced by the topic status of the subject.

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Field of Study:	English as an International Language	Student's Signature
Academic Year:	2019	Advisor's Signature

ACKNOWLEDGEMENTS

First and foremost, I would like to extend my heartfelt thanks to my advisor Assistant Professor Nirada Chitrakara, Ph.D. I was deeply impressed by her Syntax and World Englishes classes in which I enjoyed drawing tree diagrams and embraced the profound lessons on different varieties of English around the world. I was attracted by her professional knowledge and the thought-provoking comments. With great patience and wise mind, she never denied any immature assumption or naïve hypothesis. All through this long journey, she constantly offered her constructive suggestions and productive comments which spurred me on. Whenever, it gets tough, she was always there to help me out which kept me going. She has a high benchmark for herself and her advisees as she believes that many of us are naturally inclined to work harder if we set our sights towards the specific goals. She is an optimistic person who always think positively. Her encouragement is a ray of sunshine for me when I struggled with my dissertation. I cannot express my gratitude for her contribution to my academic growth just by words. I will always appreciate her kind understanding and consideration.

Besides my advisor, I am grateful to the committee members of my dissertation: Assistant Professor Jiran0thara Srioutai, Ph.D., the chair of the committee, who often gave me helpful and valuable questions and comments; Assistant Professor Pavinee Thirakhupt, Ph.D., who always encouraged me and gave me constructive suggestions; Associate Professor Raksangob Wijitsopon, Ph.D., who usually offered me the practical comments; and Associate Professor Napasri Timyam, Ph.D., who helped me a lot with the insightful suggestions. The committee of the dissertation are so generous to devote their time and knowledge to helping upgrade my dissertation. I learnt a lot from them and always feel thankful for their contributions and assistance.

Finally, I wish to thank my family: my parents, my mother in law, my husband, my son and my brother for their support and love. They always believe in me and provide me the strong backup financially and spiritually.

The end of one story is the beginning of another. I benefit a lot from the Ph.D. study. I fully understand that when it gets tough, only the tough get going. I will take perseverance and optimism as the most precious gift for my future.

Hongmei Wu

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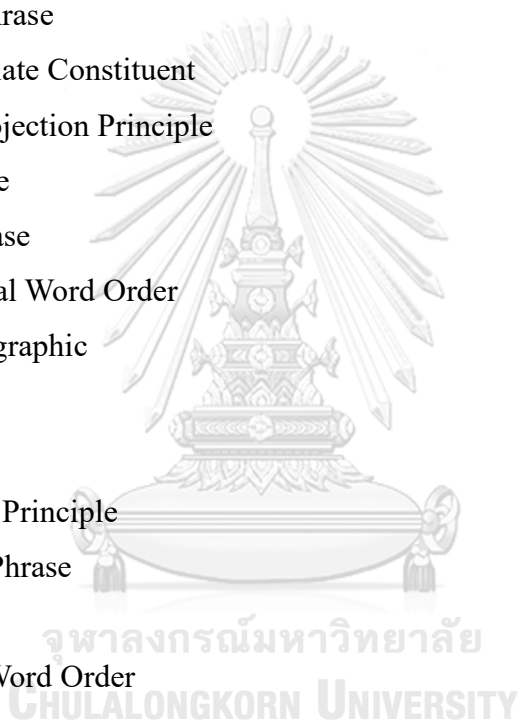


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LIST OF ABBREVIATIONS

Adv.: Adverb
 AdvP: Adverbial Phrase (Adverbial Clause)
 AP: Adjective Phrase
 AS: Argument Structure
 CD: Communicative Dynamism
 CP: Complementizer Phrase
 DC: The Da Vinci Code
 DP: Determiner Phrase
 EIC: Early Immediate Constituent
 EPP: Extended Projection Principle
 FocP: Focus Phrase
 ForceP: Force Phrase
 GWO: Grammatical Word Order
 NG: National Geographic
 NP: Noun Phrase
 OBJ: Object
 PEW: End-Weight Principle
 PP: Prepositional Phrase
 PST: Past Tense
 PWO: Pragmatic Word Order
 Spec-: Specifier
 SUB: Subject
 SUBJ: Subject marker
 SVO: Subject Verb Object
 TOP: Topic marker
 TopP: Topic Phrase
 TP: Tense Phrase
 VP: Verb Phrase



CHAPTER 1

INTRODUCTION

1.1 Background of the study

This study concerns the occurrence of the topic-comment sentence structure in written English. English speakers are likely to construe the canonical SVO construction as in (1), without contextual and prosodic clues, as the topic-comment sentence (Lambrecht, 1996, p. 132). According to Lambrecht, language users have a conscious inclination to presuppose the context when forming a sentence. It is taken as a psychological fact that topic-comment structure is the unmarked sentence structure which the speakers naturally resort to.

(1)

- a) [Subject The children] [predicate went to school].
- b) [Topic The children] [comment went to school].

(Lambrecht, 1996, p. 121)

Syntactically, in (1a), *the children* is the subject, while *went to school* is the predicate. Pragmatically, in (1b), *the children* is considered the topic, and *went to school* is the comment. Both the subject and the topic frequently appear in the initial position of English declarative sentences. The subject in English is deemed as the UNMARKED TOPIC by scholars (e.g. Chafe, 1976; Prince, 1981a; Gundel, 1988; Lambrecht, 1996). Lambrecht argues that the unconscious analysis of the subject as the unmarked topic is based on the evidence that the majority of the subjects in a coherent discourse are pronouns which represent the continuous topics (Prince 1981a; Chafe 1987, as cited in Lambrecht, 1996, p. 132). He clarifies that, unconsciously, language users equate grammatical subject-predicate with pragmatic topic-comment structure.

When it comes to language typology, languages are classified into four classifications (Li & Thompson, 1976, pp. 459-460), namely subject-prominent languages (e.g. English), topic-prominent languages (e.g. Chinese), neither subject-prominent nor topic-prominent languages (e.g. Tagalog), and subject-prominent and topic-prominent languages (e.g. Japanese). Based on Li and Thompson's (1976)

typological classification, English is regarded as a subject-prominent language which follows the subject-predicate word order (Greenberg, 1963; Li & Thompson, 1976; Hawkins, 1986; Lehmann, 1992). In the topic-prominent languages, such as Chinese, Lahu and Lisu, the basic sentence structure is determined by the topic-comment relations rather than by the grammatical relations such as subject and object (Li & Thompson, 1976). Gundel (1988) claims that the topic-comment structure in subject-prominent languages is realized by word order variation alone, without any change of the grammatical relations. In the constructions of the subject-prominent languages, the subject is more closely associated with ACTOR (AGENT) (Li & Thompson, 1976).

S. A. Thompson (1978) suggests that languages follow either Pragmatic Word Order (PWO) or Grammatical Word Order (GWO). In PWO languages, the main clause word order primarily correlates with pragmatic factors, such as the topic-comment structure, and in GWO languages, the word order primarily correlates with grammatical relations or syntactic factors, for instance, the subject-predicate structure. In this regard, English is subject to Grammatical Word Order, and the constituents of a sentence are supposed to be arranged in accordance with the grammatical functions.

On the contrary, Gundel (1988) finds that topic-comment structure is universal across languages. In addition, Kim (2018) claims that English makes use of both the subject-predicate structure and the topic-comment structure through the investigation of the preposed Prepositional Phrases (PPs).

Despite the above classifications, it is believed that in subject-prominent languages, the process of topicalization makes a constituent a topic. According to Rizzi (1997) and Radford (2009), topicalization is an important way to prepose the constituents such as arguments and adjuncts to the Spec-TopP position and hence makes the element the topic of the sentence. Therefore, both the subject and the topicalized phrases represent the topics in English. Although Rizzi (2004) considers Determiner Phrase (DP, also as NP) rather than other preposed constituents the topic because only DP is referential and it is what the sentence is about, other scholars (Chafe, 1976; Lambrecht, 1996; Erteschik-Shir, 2007) regard all the topicalized constituents as the topics of the sentence. Given other topic-prominent languages, apart from DPs, a variety of elements can be topicalized, which results in various kinds of topics. For example, a topic in a topic-prominent language, such as Chinese

“sets a spatial, temporal, or individual framework within which the main predication holds” (Chafe, 1976; as cited in Erteschik-Shir, 2007, p. 27), while others are what the sentence is about. The different topical properties may define different kinds of topics.

In accordance with Lambrecht (1996), the topic-comment information structure for English constructions is shown as in (2)

(2)

a) What happened to your car?

[Topic My car/It] [Comment broke down]. (Topic-comment)

(Polinsky, 1999, p. 577)

b) [Scene-setting This morning] [main predication my car broke down].

In the above example (2), two kinds of topics are identified. In (2a), the topic is the subject while the comment is the predicate. In (2b), the topicalized adjunct is the scene-setting topic which establishes the background framework for the main predication.

Following Rizzi (1997) and Haegeman (2012), topicalized constituents are topics which are recursive in a sentence. Although recursiveness of topics or multiple topics have been argued among the scholars (Krifka, 1992; Lambrecht, 1996; and Erteschik-Shir, 1997), it is found that there is more than one topic in a sentence in other languages. For instance, Ostyak and Catalan can mark more than one topic syntactically (Erteschik-Shir, 2007). It was observed that the temporal and locative adverbials topicalize in the same way as other arguments like the subject in Bantu Languages. This evidence supports that the topicalized constituents are topics with a variety of topical properties. Likewise, Kim (2018) investigates that Directional Prepositional Phrase preposing construction represents the topic-comment structure in English, which is shown in the following example (3).

(3) [Into the room] John ran [~~into the room~~]. (Kim, 2018, p. 13)

In (3), the PP *into the room* is preposed to the initial position of the sentence preceding the subject. It provides the spatial framework for the main predication and leaves the deleted copy after the verb. The topicalized PP is one of the topics of the sentence.

With respect to multiple topics, Lambrecht (1996) marks the topicalized constituent as the “secondary topic” (p. 147), while the subject serves as the “primary

topic” (p. 147). This study considers the topicalized constituents preceding the subject as the scene-setting topics which can be subdivided into Topic1, Topic2..., and so on, while the subject is marked as the *subject topic*, as shown in (4).

(4) [Scene-setting topic In 1999], [Subject topic I] was working for AOL.

(*National Geographic*, 2016)

In (4), the preposed PP *in 1999* is the scene-setting topic which provides the temporal framework for the main predication. The subject *I* serves as the subject topic, which is given, definite and what the sentence is about (Gundel, 1988).

Apart from word order and the topics in English constructions, the first mentioned participants in English declarative constructions are typically the subjects, and they are typically AGENT (Gernsbacher & Hargreaves, 1992). More specifically, “perceptually salient, animate, definite, and presupposed concepts are likely to be mentioned first as the subject” (Payne, 1992, pp. 5-6). In the same vein, Jackendoff (1990) prioritizes AGENT as the optimal choice for the subject position rather than other semantic roles along the thematic hierarchy. Nevertheless, the constructions with non-AGENT subjects also occur in English, such as the passive, the middle and the *tough* constructions. Additionally, both the topic and the subject appear frequently in the initial position of the sentence. Tomlin (1983) proposes that the element in the subject position encodes topic information primarily and the AGENT semantic role secondarily.

The above studies show that the typological classification of English as a subject-prominent language (Li & Thompson, 1976) deserves further exploration since the topic-comment structure is universal across languages (Gundel, 1988) and English is also found to follow the topic-comment structure in sentences with the preposed PPs (Kim, 2018). The subject is considered the unmarked topic while the topic-comment as the unmarked sentence structure (Lambrecht, 1996), which needs in-depth investigation besides the psychological intuition. The entangled relations between the subject, the topic, and the AGENT/non-AGENT shows that the topic and the topic-comment structure is an interface between syntax and pragmatics.

It is believed that the topic-comment structure is represented in different ways from those in the topic-prominent languages. This study investigates the topic-comment structure in written English from the following respects: the constructions

which represent the topic-comment structure; the constituents which represent the topics, for instance, the subject topics and the scene-setting topics; the AGENT and non-AGENT semantic roles for the subject topics.

Regarding the constructions which represent the topic-comment structure, this study explores canonical constructions, namely the transitive, the unergative and the unaccusative constructions. Aside from the canonical constructions, *structure-preserving* (i.e. *subject-creating*) constructions, such as the expletive, the passive, the middle, the *tough*, and the subject-raising constructions are also investigated. Structure-preserving constructions rarely appear in the topic-prominent languages (Emonds, 1976, as cited in S. A. Thompson, 1978, p. 28). According to Emonds, these constructions help preserve the subject-predicate word order in English, which in turn locate the subject as the first element in a sentence under most circumstances. These constructions are also explored whether or not they follow the topic-comment structure and how they represent the topic-comment structure in English.

With the attempt to study the topic-comment structure in written English, the data from the *National Geographic* magazine was selected, with the novel *The Da Vinci Code* to study the differences between two written genres. In turn, four research questions were raised corresponding to the perspectives of the frequency of the topic-comment structure, the constructions, the constituents, and the argument structure.

1.2 Research questions

The research questions for this study are as follows:

- 1) Are the topic-comment structures more frequent than the non-topic-comment structures in written English?
- 2) What kinds of constructions represent the topic-comment structure in written English?
- 3) What is the relationship between subjects and topics in written English?
- 4) Are the majority of the subject topics AGENT or non-AGENT?

1.3 Objectives of the study

The objectives of this research are stated as follows:

- 1) To identify whether the topic-comment structures occur more often than the non-topic-comment structures in written English.
- 2) To specify the constructions which represent the topic-comment structure in

written English.

- 3) To uncover the connections between the subjects and the topics in written English.
- 4) To investigate the topics represented by the AGENT subjects and the non-AGENT subjects, respectively.

1.4 Statements of hypotheses

The formulated hypotheses are as follows:

Hypothesis 1:

The topic-comment structures appear more often than the non-topic-comment structures in written English.

Hypothesis 2:

The canonical constructions as well as structure-preserving constructions represent the topic-comment structures in written English.

Hypothesis 3:

Topics are mainly represented by subjects, while multiple topics are represented by various constituents.

Hypothesis 4:

Non-AGENT subject topics outnumber AGENT subject topics in written English.

1.5 Definition of the terms

Pragmatic Word Order (PWO)

Pragmatic Word Order means that the main clause word order primarily correlates with the pragmatic factors (S. A. Thompson, 1978, p. 20), which is represented as the topic-comment structure, as in (5).

(5) [_{Topic} As for the syntactic analysis], [_{comment} I prefer Generative Grammar].

Based on the topic-comment structure by S. A. Thompson (1978) and Li and Thompson (1976), this study focuses on the topic-comment structure with initial topics, and in turn, the non-topic-comment structure is the sentence structure without the initial topic.

Grammatical Word Order (GWO)

Grammatical Word Order refers to the word order, which primarily correlates with the grammatical relations or other syntactic factors (S. A. Thompson, 1978), as in (6).

(6) [_{Subject} Mary] [_{predicate} beat John].

Subject

The (superficial structural) subject of a clause is a noun or pronoun expression which is normally positioned between a complementizer and an auxiliary or non-auxiliary verb. In (7), the underlined DP is the subject in the sentence.

(7) The president is lying.

(Radford, 2009, p. 480)

AGENT

It is a term used to describe the semantic (i.e. thematic) role which a particular type of argument plays in a given sentence. It typically denotes a person who deliberately causes some state of affairs to come about, as shown in the underlined DP in (8).

(8) John smashed the bottle.

(Radford, 2009, p. 441)

Topic

Two kinds of topics are identified in this study. On the one hand, topic (i.e. the argument) is what the sentence is about, and usually it is the given and definite knowledge identifiable and shared by both the speaker and the addressee (Gundel, 1988, pp. 210-212), as shown in (9a), in which the topic is underlined. On the other hand, the scene-setting topics are the topicalized adjuncts which set the frame for the main predication (Lambrecht, 1996), as shown in (9b). Syntactically, topics are in the specifier position of the Topic Phrase (Rizzi, 1997).

(9)

a) Her Sustainability in Prisons Project has since spread to several states.

(National Geographic)

b) In an instant, the curator grasped the true horror of the situation.

(The Da Vinci Code)

Topicalization

Topicalization refers to a transformation that fronts a non-*wh*-constituent to the left-periphery of the clause (see section 2.1.2.2). Specifically, topicalization indicates that the information-structural function of the preposing transformation is to mark the fronted constituent as the topic of a sentence, i.e. the entity the sentence is about

(Ross, 1967, 1986, as cited in Van Hoof, 2006), which is shown in (10). Here, the underlined constituent *Mary* (i.e. the complement of the verb *see*) is preposed, and it is what the sentence is about, hence it is topicalized (cf. dislocation, see section 2.1.2.2).

(10) A: I've been having problems with the Fantasy Syntax seminar.

B: That kind of course, very few students seem to be able to get their heads round. (Radford, 2009, p. 482)

Split CP

According to Rizzi (1997), Split CP framework is stated as follows:

The complementizer layer, is typically headed by a free functional morpheme and hosts topics and various operator-like elements such as interrogative and relative pronouns, focalized elements, etc. The complementizer layer should share the same fate as the TP¹ and VP, which dissolves into several projections in the left (pre-TP, extra clausal, A-bar) periphery of the clause rather than a single X-bar schema. (Rizzi, 1997, p. 281)

In (11a), it is a single X-bar for the CP layer, while it is the Split CP (i.e. Force-P, Topic-P, and Focus-P) in (11b), which can help exhibit the preposed topic *your book* in the left periphery preceding the TP.

(11)

- a) [CP [You TP [should VP [give your book to Paul.]]]]
- b) [ForceP [TopicP [Your book TP [you should VP [give your book to Paul.]]]]]]

Information structure

The component of sentence grammar in which propositions as conceptual representations of states of affairs are paired with lexicogrammatical structures in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts (Lambrecht, 1996, p. 5).

Expository writing

Expository writing explains and exposes the ideas, thoughts, and opinions to others. Its purpose is to explicate opinions and thoughts based on facts rather than telling stories based on emotions. There are types of expository writing, such as

¹ TP was also marked as IP (Rizzi, 1997).

extended definition, classification, exposition of a process, and the essay answer, and so on (Chapman, 2009, p. 290). The function of an expository text is explanation and persuasion, so expository texts have a strongly informational character aiming to enlarge the knowledge of the reader (Berzlánovich, Egg, & Redeker, 2008, p. 19).

Narrative writing

Narrative writing is a piece of writing that tells a story, and it is one of four classical rhetorical modes or ways that writers use to present information besides exposition, argument, and description. Narratives can be essays, fairy tales, movies, and jokes. Narratives have five elements: plot, setting, character, conflict, and theme. Writers use narrator style, chronological order, a point of view, and other strategies to tell a story (Nordquist, 2019).

1.6 Scope of the study

This research collected the data from the *National Geographic* magazine published in December 2016. The language of the magazine is assumed to be representative for written English. In order to check the genre effect, this study also retrieved the data from the novel *The Da Vinci Code*. It sold approximately 83 million copies to date which endorsed the acceptability of its language to some extent.

1.7 Limitations of the study

This study bases its findings on the data from *National Geographic* (December 2016) and *The Da Vinci Code* (the prologue and first two chapters), which are representative for expository and narrative prose of written English. It can be expanded to spoken language. Other subject-prominent and topic-prominent languages are needed to confirm the claims of this study.

1.8 Significance of the study

The present study is significant for the following reasons:

This study sheds light on the typological classification of English which is subject to subject-prominent languages as such claim seems to conflict with the claim concerning the universality of the topic-comment structure (Gundel, 1988). The investigation is hoped to provide evidence to properly classify the sentence structure of the English language.

This study investigates different types of constructions which are believed to represent the topic-comment structure in written English. It adds to the previous

literature, which mainly focuses on the non-canonical preposing (Ward, 1988; 2016); information structure and sentence forms across languages (Lambrecht, 1996); information structure and the syntax-discourse interface (Erteschik-Shir, 2007); the discourse function of English inversion (Birner, 2012), and so on.

Furthermore, the present research contributes to revealing the interrelated relationship between the subjects, the topics, and AGENT/non-AGENT semantic role in English constructions.

Finally, the current study uncovers the constituents representing the topics of English constructions in authentic context, which casts light on English writing, in particular, the expository and narrative proses.

This study aims to prove whether the facts that the subject is the unmarked topic and the topic-comment is the unmarked sentence structure apply to written English. The mapping of the subject-predicate structure to the topic-comment structure will be investigated based on the authentic data in written English. It attempts to investigate the topic-comment structure in written English and rethink the typological classification of English. It also explores the entangled relations between the subject, the topic, and the AGENT/non-AGENT semantic roles. This study probes into the topic-comment sentence structure in English from both the syntactic perspective and the discourse pragmatic point of view.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the studies on the concepts of topic-comment structure and the difference between the topic and the subject. It also details the typological classification of languages, which focuses on the differences between Pragmatic Word Order and Grammatical Word Order (S. A. Thompson, 1978). The roles of canonical constructions in English in relation to the topic-comment structure, as well as structure-preserving constructions are reviewed. Previous studies related to word order, sentence structures and argument structures provide a background on the presentation of the topic, the subject, and the topic-comment structure in English.

2.1 Pragmatic Word Order and Grammatical Word Order

Classification of languages in terms of the word order is not undebatable. Modern linguists make crucial use of grammatical categories such as verb, noun, subject, and object, to categorize languages into SVO, SOV, VSO, VOS, OSV, and OVS order (Greenberg, 1963; Lehmann, 1972; Vennemann, 1974, as cited in Myhill, 1985, p. 177). According to Greenberg's (1963) Universal 1 below, SVO, VSO, SOV are the major types of word order.

Universal 1. In declarative constructions with nominal subject and object, the dominant order is almost always one in which the subject precedes the object.

(J. H. Greenberg, 1963, p. 77)

This classification is supported by scholars (Keenan, 1978; Derbyshire & Pullum, 1981, 1986; Hawkins, 1983, as cited in Dryer, 1991, p. 443). English follows SVO word order in declarative constructions, in which the subject usually precedes the object.

The word order research may trace back to the Systemic Functional viewpoint. According to Halliday (1967), *theme* always precedes *rheme*, and the *theme-rheme* structure is realized by the sequence of elements within the clause. Mathesius (1939, as cited in Hasan & Fries, 1995) assigns two functions to theme, namely, the known or at least obvious in the given situation; from which the speaker proceeds. In English, theme equals the clause initial constituents, which are subcategorized as Textual theme (Conjunctives, e.g. *well, but, then*), Interpersonal theme (Modal adjunct and

Finite, e.g. *surely, would*), and Topical theme (subject, e.g. *she, he*) (Hasan & Fries, 1995, p. XXX). Thus, theme refers to all the preverbal elements in the initial position of the sentence. In this regard, topic is similar to Topical theme (i.e. subject) and part of the Interpersonal theme (e.g. adjunct), but topic excludes the Textual theme.

Regarding language typology, Li and Thompson (1976) propose that languages are classified as subject-prominent languages, topic-comment languages, subject-prominent and topic-prominent languages, and neither subject-prominent nor topic-prominent languages. In subject-prominent languages, the grammatical relation subject-predicate plays the major role, while in topic-prominent languages, the topic-comment structure plays the main part. In line with this viewpoint, S. A. Thompson (1978) finds that languages vary in the relative effects of syntactic and pragmatic considerations on word order. In languages like English, which observes the Grammatical Word Order (i.e. GWO), syntactic functions of constituents are the primary determinants of word order. In languages like Russian and Czech, which follow the Pragmatic Word Order (i.e. PWO), however, pragmatic considerations have a strong effect.

Moreover, Li and Thompson (1976) claim that all the languages investigated by them have the topic-comment structure, though not all the languages have the subject-predicate structure. In the same vein, Mithun (1992) believes that word order is governed by pragmatic consideration, which involves “the relative newsworthiness of the constituents to the discourse” (p. 39), but not by narrowly grammatical considerations which are relevant to the basic constituent order. In other words, Pragmatic Word Order plays a dominant role in determining the sequence of grammatical constituents.

2.1.1 Pragmatic Word Order

Topic-prominent languages follow Pragmatic Word Order (i.e. topic-comment structure). In such languages, topic plays a prominent role in initiating a sentence (Li & Thompson, 1976), and the elements are arranged according to the newsworthiness of the information as given²-new, known-unknown, theme-rheme, definite³-indefinite

² *Given* information is different from *old* information. *Old* means that the referent has been mentioned in the previous context, while *given* means that the hearer has the referent in mind or “knowledge in the possession of an audience” (Strawson, 1964, as cited in Erteschik-Shir, 2007, p. 18).

and topic-comment (e.g. Halliday, 1967; Hasan & Fries, 1995) .

2.1.1.1 Topic-comment structure

The canonical pragmatic order of the constituents is taken as theme-rheme, given-new, or topic-comment (e.g. Firbas, 1964; Greenberg, 1963; Givón, 1979). Topic-prominent languages generally follow the Pragmatic Word Order as topic-comment construction, which is shown in (1):

(1) [_{Topic} As for education], [_{comment} John prefers Bertrand Russell’s ideas].

(Li & Thompson, 1976, p. 459)

In Topic-prominent languages, topic is in the initial position, and coded by morphological marker in some languages, while the comment follows to provide some new or unknown information, like Lisu, Lahu, Japanese and Korean, and so on.

(2) hɛ chi tɛ pɛ² ɔ dà² jâ (Lahu)

Field this one classifier rice very good

“This field (topic), the rice is very good.”

(3) Gakkoo -wa buku -ga isogasi-kat-ta (Japanese)

School -TOP I - SUB busy - past tense

“School (topic), I was busy.”

(Li & Thompson, 1976, p. 462)

In the similar vein, Firbas (1971) raises the concept of “Communicative Dynamism” (p. 135) (henceforth CD), which refers to the fact that the less “communicative dynamism” (i.e. given or old information) would precede the more “communicative dynamism” (i.e. new information). In this regard, the rising of the CD is claimed to determine the word order in all Indo-European languages (Chamonikolasová, 2009), which is demonstrated as in example (4).

(4) She was happy.

The lowest degree of CD is carried by the pronoun *she*, which is given and context-dependent for the addressee, and the highest CD is encoded by *happy*, which is new and context-independent information for the hearer. *Was* ranks between these

³ Here, definiteness refers to the selection of one object in the class of possible objects as well as the pre-established elements in the discourse (i.e. the combination of the definiteness and specificity) (Ihsane & Puskás, 2001).

two constituents.

Thus the topic-comment sentence structure means that the topic contains the given, known information with the lowest CD, while the comment provides the new and unknown message with higher CD in the context. The topic precedes the comment in the sentence (Gundel, 1988).

Concerning the topic-comment structure in English, Lambrecht (1996) regards it as one kind of information structure which is originally termed by Halliday (1967). Consequently, he defines information structure as a component of sentence grammar below.

That component of sentence grammar in which propositions as conceptual representations of states of affairs are paired with lexicogrammatical structures in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts.

(Lambrecht, 1996, p. 5)

In other words, Lambrecht views information structure of a sentence as “the formal expression of the pragmatic structuring of a proposition in a discourse” (Lambrecht, 1996, p. 5). Lambrecht (1996) proposes four kinds of information structure for English declarative constructions, namely the topic-comment structure as in (5a), the identificational structure as in (5b), the event-reporting structure as in (5c), and the background-establishing structure as in (5d).

(5)

a) What happened to your car?

[_{Topic} My car/It] [_{Comment} broke down]. (Topic-comment)

b) I heard your motorcycle broke down.

[_{Focus} My car] broke down. (Identificational)

c) What happened?

[_{Focus} My car broke down.] (Event-reporting)

(Polinsky, 1999, p. 577)

d) What happened to your car yesterday?

[_{Scene-setting} _{Topic} Yesterday] my car broke down.

(Background-establishing)

In (5a), the topic is represented by the subject which is the given information in the context while the predicate is the comment, the new information. In (5b), the clause initiated with the new information and the rest is presupposed information from the context. The whole event-reporting clause in (5c) provides totally new information. In (5d), the preposed temporal adjunct provides background information for the main predication, which is the scene-setting topic.

2.1.1.2 Topic

The topic usually appears in the initial position of the sentence in topic-prominent languages. The topic carries the lowest CD and represents given information (Firbas, 1971). Firbas denotes given information as “context-dependent” (p. 136) information which refers to the “derivable, recoverable message from the preceding context” (p. 136). The description of the topic in terms of CD is consistent with the common interpretation of given information (Sgall, 1979; Gundel, 1985; Halliday, 1994; as cited in Simargool, 2005) because given information is regarded as the message retrievable from the context. Topic is also regarded as the “center of attention”, which establishes “the theme of the discourse” (Li & Thompson, 1976, p. 464).

Concerning given information or givenness, scholars discern it in different ways. Kuno (1976) and associate given information with the concept of “recoverability” and “predictability” (Prince, 1981a, p. 226), while Chafe (1976) terms it as “saliency” (p. 30), which represents “that knowledge the speaker assumes to be in the consciousness of the addressee at the time of the utterance” (p. 30). Another view for given information is “shared knowledge” (Clark & Haviland, 1977, as cited in Prince, 1981a, pp. 230-231), who explain that given is “information which [the speaker] believes the listener already knows and accepts it as true” (pp. 230-231). Prince (1981a) calls it “assumed familiarity” (p. 233) (i.e. the addressee has the previous knowledge of or familiarity with it), which is closely related to the “shared knowledge” in that it is assumed that the addressee is familiar with the knowledge as the speaker expects. Gundel (1988) regards givenness as the “activated” knowledge (p. 212), which means that the speaker and the addressee are not only familiar with the entity but are actually attending to or thinking of it at the time of utterance.

Despite the different elaboration on givenness, it is common that speakers take

the familiar and known information as the departure of the sentence or discourse (Prince, 1981a). Hence, the topic is characterized as givenness, as shown in example (6).

(6) What happened to John?

- a) John hit a boy on the head.
- b) ? A boy was hit on the head by John.

(Kuno, 1979, as cited in Prince, 1981a, p. 231)

John is the given (i.e. old, known, shared, or familiar) information for both the speaker and the addressee. Sentences usually initiate with given information, which is more accessible for the addressee, as the topic. In comparison with (6a), (6b) starts with unknown/new information *a boy*, which is grammatically acceptable, but rather marked pragmatically in the context.

As the topic is the contextually known information, it is expected that the topic is definite (cf. Kuno, 1972; Gundel, 1974; Li and Thompson, 1976; Schachter, 1976; Bak, 1977; Fuller, 1985, as cited in Gundel, 1988, p. 213). Regarding the definiteness, Abbott (2004) creates the list from the most definite to the least as:

[NPe] (i.e. Control PRO; pro and other instances of ellipsis) >Pronouns (*he, she, it*) > Demonstratives (*this, that*) > Definite determiner (*the*) >Possessive NPs (*his, her, my*) >Proper names (*Mary, Tom*) >NPs with a universal quantifier (*each, every, all*) >Generic NPs (Abbott, 2004, p. 123)

In contrast, the indefinite determiner (*a/an*), cardinal numbers (*one, two, three etc.*), and polarity quantifiers *any, no, most, some, several, few, a few, many*, express indefiniteness. Milsark (1977, as cited in Abbott, 2004) terms the definite determiners *strong determiners* while the indefinite determiners, *weak determiners*. He claims that DPs with weak determiners are compatible with *there-* existential construction while strong determiners are not. However, some quantifiers, such as *some, many* and the numerals are ambiguous as either strong determiner or weak determiner in different contexts. For instance, the weak use of the strong determiner (McNally, 1998, as cited in Hartmann, 2013) as in (7a), and the strong use of the weak determiner (Abbott, 2004) as in (7b) are found in some constructions.

(7)

- a) There was every kind of doctor at the convention.
- b) Some (of the) salesmen (but not others) are intelligent.

(Abbott, 2004, p. 139)

Therefore, there is no tidy categorization for definiteness and indefiniteness, which hinges on the discourse context.

This is further illustrated in Japanese in example (8), where the topic marker *wa* can only be understood as definite. In English in example (9), the sentence shows that only definite DPs can occur in the topic position.

(8) Neko wa kingyo o ijitte
 cat TOP goldfish OBJ play-with
 'The cat is playing with the goldfish.'
 { *a } { a }

- (9) a. { *A } The window, it's still open.
- b. It's still open, { *a } the window.

(Gundel, 1988, pp. 213-214)

Nevertheless, the correlation between the topic and definiteness is not without dispute. The definiteness of the topic as shown in example (10) is arguable (e.g. Reinhart, 1982; Prince, 1985, as cited in Gundel, 1988).

- (10) An old preacher down there, they augered under the grave where his father was buried.

(Prince, 1985, as cited in Gundel, 1988, p. 215)

Gundel (1988) points out that such constructions, as in (10), are highly restricted syntactically and pragmatically. She proposes that a dislocated topic can be debatable whether it is definite, as demonstrated in (11).

(11)

- a) The old preacher down there, did they auger under the grave where his father was buried?
- b) An old preacher down there, did they auger under the grave where his father was buried?

(Gundel, 1988, p. 215)

Furthermore, Gundel explains that “when a specific indefinite DP does occur in the topic position, it is typically anchored in something definite” (Gundel, 1988, p. 215). Hence, if the topic occurs without the phrase *down there*, which anchors the topic in a uniquely identifiable location, the sentence (12) will be even less acceptable.

(12) ?An old preacher, they augered under the grave where his father was buried.

(Gundel, 1988, p. 215)

Such kind of specific indefinite topic DP in English is quite restricted and whether it is definite or not, is dependent on the context.

By contrast, in English, bare plurals and indefinite singulars can express genericity, which is frequently taken as showing the property of definiteness, as seen in (13).

(13)

- a) Madrigals are polyphonic.
- b) A madrigal is polyphonic.

(Cohen, 2001, p. 183)

Although in (13), both the bare plural and the indefinite singular convey genericity, it is not always the case, as demonstrated in (14).

(14)

- a) Madrigals are popular.
- b) ? A madrigal is popular.

(Cohen, 2001, pp. 183-184)

(14b) is not ungrammatical, but simply unacceptable for the generic interpretation. Polyphonicity in (13) is an essential property of madrigals, while popularity in (14) is not. Therefore, the difference between bare plurals and indefinite singulars lies in the fact that the latter is restricted to properties which are essential and inherent, whereas the former bears no such restriction (Lawler, 1973; Burton-Roberts, 1977; as cited in Cohen, 2001). Therefore, bare plurals entail genericity without restriction, whereas indefinite singulars acquire genericity only under some circumstances. Bare plurals are generally definite, but definiteness of indefinite singulars is tied to the context.

With respect to the definiteness, Erteschik-Shir (2007) notes that a number of permanent and temporary fixtures of our world can also be considered topics without being previously mentioned in the context, such as *the president*, *the moon*, *the train*, and so on. These elements can be seen as topics, as they are definite and specific at the time of utterance, and available in the minds of both the speaker and the hearer, as demonstrated in (15).

(15)

- a) It's dark. The moon has disappeared.
- b) I have to go. The train is leaving any minute.

(Erteschik-Shir, 2007, p. 18)

Aside from *givenness* and *definiteness* of the topic, Hornby (1971) characterizes the notion topic as: “the part of the sentence which constitutes what the speaker is talking about” (p. 1976) or “that part of the utterance which refers to the fact or facts that may be taken for granted” (Hornby, 1972, p. 632). Chafe (1976) states that in topic-prominent languages, the topic usually “sets a spatial, temporal, or individual framework within which the main predication holds” (pp. 50-51), and these topics are represented by the temporal or the spatial adverbs in English. By contrast, E. O. Keenan and Schieffelin (1976) considers the topic a discourse notion, which represents a proposition, and about which some claims are made.

Gundel (1988) explicitly defines topic and comment from the pragmatic angle as well as a discourse context, which is shown in (16).

(16)

An entity, E, is the topic of a sentence, S, iff in using S the speaker intends to increase the addressee's knowledge about, request information about, or otherwise get the addressee to act with respect to E.

(Gundel, 1988, p. 210)

In other words, Gundel deems that topic is what a sentence is *about*, as demonstrated in example (17), where *Lake Maracaibo* is the topic, and the rest of the sentence is the comment which increases the addressee's knowledge and information about it.

- (17) Lake Maracaibo sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.

(*National Geographic*, December 2016)

Repp (2016) agrees that a topic is the entity that a sentence is about, hence *the dwarf* and *the giant* are topics in the following examples (18a) and (18b), respectively.

(18)

- a) [Topic The dwarf] [comment met the giant.]
- b) [Topic The giant] [comment met the dwarf.]

(Repp, 2016, p. 1)

Based on the literature on the topic, this study defines the topic as a combination of *givenness*, *definiteness* and *aboutness* with reference to the pragmatic context (Gundel, 1988). Hence, topic is defined to be what the sentence is about and the given knowledge identifiable for the addressee or shared by both the speaker and the addressee, which is demonstrated by example (19) with the context where it occurs.

(19)

Venezuela's Lake Maracaibo holds the distinction of being South America's largest lake by area, but the skies above it also are record setting. [...] (17)
Lake Maracaibo sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.

(*National Geographic*, 2016)

In the above example (19), *Lake Maracaibo* is the topic, and the rest of the sentence is the comment. *Lake Maracaibo* is what the sentence is about, and it expresses the given information aforementioned in the preceding clause. In turn, the comment is the new information which has never been referred to in the previous clauses.

The initial position of the sentence is often assumed as the position for the topic of the sentence due to the fact that the topic is frequently represented by the syntactic subject. And hence the subject is frequently claimed to be the UNMARKED TOPIC (Lambrecht, 1996). However, it is not always the case. In order to have a clear identification of the topic in a sentence, various tests are employed. With respect to the *aboutness* property of the topic, the *about-fronting test* (Kuno, 1972; Gundel, 1974, as cited in Hedberg, 1990, p. 4), the *about-question test* (e.g. Sgall, Hajič ova & Beneš ová, 1973; Gundel, 1974; Reinhart, 1982; as cited in Hedberg, 1990, p. 3), and the *about-context test* ((Reinhart, 1981) are applied quite often.

For the about- fronting test, it is expected that the topic canonically occurs in the sentence initial position with *about*, *as for*, *concerning*, and *speaking of* and so on, as demonstrated in (20).

(20)

About/as for/concerning/speaking of Lake Maracaibo, it sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.

Hedberg (1990) claims that “what a sentence is about possibly corresponds to the question which may elicit the sentence as its answer” (p. 4). In other words, the topical elements are those elements which are also contained in the question. The about-question test is instantiated as in (21).

(21)

- a) What about Lake Maracaibo?
- b) It (Lake Maracaibo) sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.

The *about-context test* is another way to single out the topic of the embedded clause syntactically. The sentence structure can be represented as *someone said about + topic that...* or *someone tells / talks about + topic* (Reinhart, 1981). If a sentence can be paraphrased in this way, then the Determiner Phrase (DP) following *about* is possibly its topic, which are shown as in (22).

(22)

- a) Sam said about Lake Maracaibo that it sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.
- b) I’ll tell you about Lake Maracaibo. It (Lake Maracaibo) sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.
- c) I’ll talk about Lake Maracaibo. It (Lake Maracaibo) sits in a valley at the northern end of the Andes and connects to the Gulf of Venezuela.

Apart from these *aboutness* tests, the topic can also be identified by other syntactic properties. Based on the syntactic structures, it is not difficult to identify the topic in a topicalized structure, as shown in (23), left/right dislocation in (24), and the structure-preserving constructions such as *passive*, raising and *have* constructions in (25), in which a DP that refers to the topic occurs as the surface subject of a clause, but not the logical subject of the clause (see section 2.1.1.3) (Gundel, 1988).

(23) One of these rugs Chambers delivered to Harry Dexter White.

(topicalization)

(Ward, 1988; 2016, p. 3)

(24) Lake Maracaibo, it sits in a valley at the northern end of the Andes.

(left-dislocation)

(25)

a) John was hit by a car yesterday. (passive)

b) Your battery seems to be dead. /George is difficult to talk to. (raising)

c) My soup has a fly in it. /There is a fly in my soup. (*have* construction)

(Gundel, 1988, p. 225)

In topicalized constructions, the topics are DPs which are preposed. In dislocated constructions, the adjoined constituents are deemed as the topics. In (25a), *John* in the passive surfaces as the subject (Radford, 2009), while in (25b), the subjects *your battery* and *George* raises from the lower clause to the subject position of the main clause and hence become the topic of the sentence. In (25c), *my soup* functions as the grammatical subject in *have* construction, while it is represented as an adjunct in the corresponding expletive sentence. All these created subjects are considered the topics, which will be further illustrated in section 2.3.

In addition to the syntactic analysis, a number of languages have special morphemes to mark the topic of a sentence, for instance, the topic marker in Tagalog is *ang*, in Japanese *wa*, and Korean, (*n*)*in*, and so on, which are shown in (26), respectively.

(26)

a) Kung tungkol kay Maria hinuhugasan niya ang mga pinggan
if about proper washing she TOP PL dishes
'As for Maria, she's washing the dishes' (Tagalog)

(Gundel, 1988, p. 220)

b) Gakkoo -wa buku -ga isogasi-kat-ta (Japanese)
school TOP I - SUBJ busy -past tense

"School (topic), I was busy." (Li & Thompson, 1976, p. 462)

c) siban- in hakkjo-ga manso (Korean)
now -TOP school -SUBJ many

“The present time (topic), there are many schools.”

(Li & Thompson, 1976, p. 462)

Although the overt topic marker is an effective way to identify the topic, it is not available for some other languages, such as English, Russian, and Turkish, to name just a few. Therefore, sentence stress and intonation are employed to discern the topic of a sentence. In a language, if a topic-comment structure is coded by intonation, then primary stress always falls inside the focus (Gundel, 1988). In other words, stress is a means to attract the addressee and call attention to the new information represented in the comment (Gundel, 1985). In this sense, the topic as given information may not be stressed, which can be detected in (27).

(27) Spiky, gigantic, and fibrous, jackfruit may not seem particularly inviting⁴.

(*National Geographic*, 2016)

2.1.1.3 Subject

Definitions for subjects abound. E. L. Keenan (1976) proposes that subjects tend to be topics, since both of them identify what the speaker is talking about. Givón (1976) considers the subject as the *grammaticalized topic*. Comrie (1989) finds that humans tend to select more agentive entities as topics of discussion. Nevertheless, the subject is different from the topic, as shown in (28).

(28) Lisa, we met ~~Lisa~~ last night.

In this context, *Lisa* is the topic, while *we* is the subject. (28) demonstrates that the topic and the subject are different entities in the sentence.

Generally, the topic is both the discourse and the sentence notion depicted in terms of pragmatic and discourse function, but the subject is a concept on the basis of the syntactic function on the sentence level.

The initial DP in a sentence plays various roles, such as *grammatical* (or *superficial*) *subject*, *logical subject*, and *psychological subject* (Hornby, 1972, pp. 632-634). The grammatical subject is a constituent which the verb agrees with; logical subject is the AGENT, which is a semantic role; and psychological subject is the topic which is a discourse notion expressing given information in the initial position of the sentence. This differentiation of different kinds of subjects is shown, as follows in (29).

⁴ The stressed constituents are underlined.

(29)

- a) Lisa bought the apples.
- b) The apples were bought by Lisa.
- c) The apples, Lisa bought.

In (29a), *Lisa* is the psychological subject, the logical subject, as well as the grammatical subject. In (29b), *the apples* functions as both the psychological and grammatical subjects, but not the logical subject since *Lisa* is still AGENT in the context. In (29c), *Lisa* is the logical subject, and also the grammatical subject, while *the apples* becomes the psychological subject because it is in the sentence initial position. *Lisa* in (29c), however, is not AGENT and does not need to agree with the verb.

Hornby (1972) seeks to unify these three different properties with the same term *subject*. In fact, the psychological subject is the topic in the discourse, while logical subject is AGENT, which refers to the semantic role of the DP occupying the subject position of the agentive verb. Grammatical subject and the superficial subject correspond to the subject in the traditional grammar, while both the logical and the superficial subjects are consistent with Li and Thompson's definition of the subject. Li and Thompson (1976, pp. 461-466) generalize the following five properties between the topic and the subject: 1) the topic is given and definite, whereas the subject can be either definite or indefinite; 2) the topic does not need to agree with the verb, but the subject agrees with the verb and usually should be an argument of a verb, such as AGENT or EXPERIENCER; 3) the topic occurs canonically in the initial position of the sentence, whereas the subject can be posited in the initial, the medial or the final position, following the word order of a language; 4) the topic can be optional in some context (e.g. all comment sentence⁵), nevertheless, the subject is obligatory for a sentence (overtly or covertly), which is usually overtly spelled out in English (Radford, 2009); 5) the subject but not the topic plays a prominent role in such processes as reflexivization in (30a), passivization in (30b), Equi-DP deletion (i.e. control construction) in (30c), and the raising construction in (30d) and the *tough*

⁵ All comment sentence means that all information presented is new (i.e.thetic sentence or event-reporting sentence) (Lambrecht, 1996, p. 138), as shown in B.

A: What happened?

B: I lost my key yesterday.

construction in (30e).

(30)

- a) The president_i may blame himself_i. (Radford, 2009, p. 74)
- b) John is tickled by Bill.
- c) John_i wants to (PRO_i) laugh.
- d) John seems to (~~John~~) be laughing.
- e) Fred is tough to catch (~~Fred~~).

(Anderson, 1976, pp. 8-10)

The differences between subjects and topics by Li and Thompson (1976) are summarized in Table 1.

Table 1: Subject vs. topic

Subject	Topic
definite or indefinite (e.g. articles). given or new	Definite, given information and what the sentence is about.
agreement with the verb. AGENT/ EXPERIENCER or THEME	no agreement with the verb
initial, (medial/ final) position	initial position of the sentence canonically
obligatory in English	optional in English
DP in canonical cases, which is involved in the syntactic operations, such as reflexivization, passivization, Equi-DP deletion and raising construction.	DP/AP/CP/PP....

In spite of the evident differences between the topic and the subject, some constituents are still taken as both the topic and the subject in a sentence (e.g. Givón, 1976; Gundel, 1988; Comrie, 1989; Hedberg, 1990), which is illustrated in (31), extended from example (29).

(31)

- a) Lisa bought fresh apples from Tesco.
- b) Fresh apples, Lisa bought from Tesco.
- c) From Tesco, Lisa bought fresh apples.
- d) Fresh apples were bought by Lisa from Tesco.
- e) Everybody loves fresh apples.

In (31a), *Lisa* is the logical and the grammatical subject, as well as the topic; in (31b) *Lisa* is the logical and grammatical subject, but *fresh apples* is the topic; in

(31c), *Lisa* is still the logical and grammatical subject, but *from Tesco* is the topic; in (31d), *Lisa* is the logical subject, but *fresh apples* becomes the grammatical subject and the topic; and in (31e), *everybody* is the logical subject, the grammatical subject and the topic, because *everybody* is a strong quantifier considered as the definite DP.

From the examples in (31), it is observed that the topics in (31b) and (31c) are left-adjoined constituents marked as the topics, which differ from the subjects. However, in (31a) and (31d), the subject and the topic are represented by the same constituent from the surface structure; as a result, the subject is also termed the UNMARKED TOPIC (Lambrecht, 1996).

2.1.2 Grammatical Word Order

A language with the subject consistently is a subject-prominent language (Li & Thompson, 1976). The pre-verbal position in English is canonically for the subject, rather than the topic, so the new, indefinite, and unknown information can also be filled in this position as in (32).

(32)

- a) A loaf of bread was sitting on the table.
- b) Eighty-seven people came to hear the Cat Creek Band.

(S. A. Thompson, 1978, p. 26)

In (32a), *a loaf of bread* is indefinite mentioned for the first time, which is not assumed to be known by the addressee, so it is the non-topic subject. *Eighty-seven people* in (32b), is an indefinite quantifier DP without any specific referent in the context, hence it is a non-topic as well.

In subject-prominent languages, the subject can be either a topic or non-topic element as long as it occurs in the subject position to preserve the SVO order.

2.1.2.1 SVO

In general, generative linguists hold that the basic sentence structure should be described in terms of subject, object, and verb (Li & Thompson, 1976). English is a language in which the basic grammatical relations are signaled by SVO word order in the sentence (S. A. Thompson, 1978).

Modern English is also an analytical language with limited morphology marking and a relatively fixed word order governed by the grammatical principles (Hawkins, 1986). Therefore, the variation within the word order pattern, namely SVO, is rather

limited. In English, the grammatical principle enforces the sequence as subject (S), verb (V), object (O), complement (C), and adverbial (A). Hence, the unmarked sentence patterns contain a subject immediately followed by a verb, and other elements may occupy the post-verbal positions, which are shown in (33).

(33)

- a) SV The sun is shining.
- b) SVO He'll get a surprise.
- c) SVC He's getting angry.
- d) SVA He got through the window.
- e) SVOO He got her a splendid present.
- f) SVOC Most students have found her reasonably helpful.
- g) SVOA He got himself into trouble.

(Quirk et al., 1985, as cited in Chamonikolasová, 2009, p. 19)

(33) shows that the unmarked subject in English is canonically preceding the verb, no matter whether it is the topic or non-topic. However, the word order signals grammatical relations, but does not distinguish the topic from the comment. Compensating for the fact that English cannot mark the topic-comment structure morphologically or by the word order, English tends to develop the articles/determiners, such as *the*, *a(n)*, to help identify definiteness, indefiniteness, and the topic-comment structure. The determiners are rare in Old English, which employs more morphological inflections to identify grammatical functions and exhibits relatively free word order (Hawkins, 1986). Definite and indefinite articles are frequently found in GWO languages to differentiate given information from new information. Definite articles usually indicate given information in the context, while indefinite articles, new information, as demonstrated in (34) and (35).

(34) Definite articles

- a) The meaty fruit also comes prepackaged and in cans.
- b) The gopher-like tuco-tuco is native to Bolivia.

(*National Geographic*, December 2016)

(35) Indefinite articles

- a) A veterinary surgeon helped start a small camel milk dairy.
- b) A separate network of brain activity kicks in when conventional placebos

are enhanced by peer pressure.

(*National Geographic*, December 2016)

Apart from the articles, non-meaning-bearing subjects (i.e. dummy subjects), namely, *it* and *there*, are also prevalingly found in English, as in (36).

(36)

- a) It's a central question to Ilse KöhlerRollefson, [...].
- b) There were lots of places where I came up with a problem.

(*National Geographic*, December 2016)

Besides articles and dummy subjects, English is rich in structure-preserving constructions, such as the passive construction, the *tough* construction, the middle construction, and the subject-raising construction (e.g. Emonds, 1976, as cited in S. A. Thompson, 1978). These constructions are regarded as those which move or delete elements to maintain the word order that subject precedes the verb and the object follows the verb.

In structure-preserving constructions, arguments raise (and leaving the deleted copy) from their original positions to the subject position to satisfy the EPP feature in English (Radford, 2009, p. 257). Extended Projection Principle (i.e. EPP) specifies that a finite tense constituent T must be extended into a TP projection containing a subject (Radford, 2009, p. 45). In other words, every finite sentence in English must have a subject, as shown in (37).

(37)

- a) Passive construction: The apple was eaten ~~the apple~~.
- b) *Tough* construction: John is not easy to love ~~John~~.
- c) Middle construction: The book sells ~~the book~~ well.
- d) Subject raising construction: Lisa seems ~~Lisa~~ to win the game.

In (37), all the arguments in the subject position are assumed to originate in some other positions in the constructions, where they are deleted, leaving the deleted copy in situ, and raise to the subject position to satisfy the EPP feature in English. In (37a), *the apple* surfaces as the subject, in order to satisfy the EPP feature of Tense (Radford, 2009). In (37b), *John* is the internal argument of the VP *love John*, which moves to the subject position to satisfy the EPP feature. In the middle construction in (37c), *the book* is the THEME, the internal argument of the VP *sell the book*, which is also

triggered to move to the subject position by the EPP feature (Williams, 1981; Keyser & Roeper, 1984; Roberts, 1987; Hale & Kayser, 1987; as cited in Simargool, 2005, p. 55). Likewise, in (37d), *Lisa* raises to the subject position to satisfy the EPP feature.

All these constructions are marked in that their subjects are derived and the movement of the elements is to follow the subject-predicate structure (Emonds, 1976, as cited in S. A. Thompson, 1978). In the passive, the middle and the *tough* constructions, the internal argument surfaces as the subject of the main clause. As for the *subject-raising* construction, it is the external argument in the subordinate clause that raises to the subject position of the main clause (Radford, 2009).

2.1.2.2 Topicalization

The term *topicalization* was introduced by Ross (1967, 1986, as cited in Van Hoof, 2006, p. 411) as the name for a transformation that fronts a non-*wh*-constituent to the left periphery of the clause. Specifically, topicalization indicates that the function of the transformation is to mark the fronted constituent as the topic of a sentence. Correspondingly, Rizzi (1997) also regards topicalization as an articulation of a clause involving the left periphery. The topic is the preposed element, which usually originates from a constituent position in the clause and is separated by “comma intonation” (p. 285). Topicalization moves a DP to the sentence-initial position, while the grammatical subject still precedes its verb (S. A. Thompson, 1978). In short, the topicalized constituents can be any XP except the *wh*-constituent, such as DP in (38a), adverb in (38b), PP in (38c), AdvP in (38d), and CP in (38e), and so on, as long as it is the topic of the sentence, which is given and what the sentence is about. It is shown as in (38).

(38)

- a) The agent checked his watch. (DP, *The Da Vinci Code*)
- b) Slowly, the fog began to lift. (adverb, *The Da Vinci Code*)
- c) Of the 500 lightning “hot spots” that the data revealed, more than half are situated in Africa. (PP, *National Geographic*)
- d) When the female’s eggs are ready, she signals the male. (AdvP, *National Geographic*)
- e) The phenomenon is tied to topography, says the meteorology professor Rachel Albrecht. (CP, *National Geographic*)

In (38a), *the agent* is the DP subject which topicalizes to the topic position. In (38b), the adverb *slowly* is preposed to the initial topic position. In (38c), PP originates from the adjunct position following the subject *more than half*. The PP is preposed to the sentence-initial position as the topic of the sentence. The fronted constituent in (38d) is an AdvP, which provides the temporal frame for the main predication. In (38e), the complement CP is topicalized to the topic position preceding the subject and the verb.

In (38e), the inversion of the subject-verb occurs under the same condition as the subject-verb order in reporting clause⁶. The conditions of inversion reflect the weight and communicative importance of the subject versus the verb. Specifically, whichever is placed last is relatively more prominent (Biber et al., 1999).

The following constructions as in (39) are all considered to be some variants of topicalization (Prince, 1981b).

(39)

- a) The man, she saw him. (L-Dislocation, OBJ)
- b) The woman, she came yesterday. (L-Dislocation, SUBJ)
- c) She saw him, the man. (R-dislocation, OBJ)
- d) She came yesterday, the woman. (R-dislocation, SUBJ)
- e) John, she saw. (Y-movement/ Contrastive topic, OBJ)
- f) Mary saw him. (Y-movement/ Contrastive topic, SUBJ)

(Givón, 1988, p. 246)

The Praguean scholars consider these constructions in (39a-d) the left/right-dislocation (i.e. the left/right dislocation + full sentence with the resumptive pronoun, which co-refers with the dislocated DP). They are in the same fashion as the topicalized construction, which preposes a constituent by the deletion process leaving the deleted copy at the original position. Arguing against the incorporation of dislocation and topicalization, G. R. Greenberg (1984) proposes that the difference between left dislocation and topicalization can be examined by interjections, such as *man*, *boy*, *dag nab*, which express disgust, contempt, and other emotions. He claims that interjections can occur either to the right or the left of the dislocated constituent,

⁶ This clause is termed as “reporting clause”, which is appended to direct reports of a person’s speech or thought (Biber, Johansson, Leech, Conrad, & Finegan, 1999, p. 921).

whereas interjections obligatorily appear to the left of a topicalized constituent, which is shown in (40) and (41).

(40)

- a) John man' Mary really loves him.
- b) Man' John, Mary really loves him.

(41)

- a) Man' John Mary really loves.
- b) *John man' Mary really loves.

(G. R. Greenberg, 1984, p. 285)

Taking these viewpoints into account, this study considers the left/right dislocation and topicalization different. Nevertheless, no matter whether the construction be topicalization or dislocation, the preposed constituent is taken as the topic of the sentence. Therefore, the topicalized constituent is restricted to those as in (42).

(42)

- a) Peanuts I really like ~~peanuts~~.
- b) That book I bought ~~that book~~ from the market.

On the basis of the properties of topic, there are some features of the topicalized constituents depicted as: (a) the DP must be referential, i.e. must represent an entity; (b) the DP must represent an entity that is already evoked in a salient set-relation or inferable in the discourse; (c) the preposed information must be old information, and the following clause must be the comment expressing the new information (Prince, 1981b). These characteristics are demonstrated in (43) and (44).

(43)

- a) You I didn't think ~~you~~ would leave.
- b) Mary, I told ~~Mary~~ that I wasn't chosen.
- c) Some books I brought ~~some books~~ with me.

(44)

- a) ? There I didn't think ~~there~~ would be a fight.
- b) ? It I represent ~~it~~ that I wasn't chosen.
- c) ? Few books I brought ~~few books~~ with me.

(Prince, 1981b, p. 251)

In comparison, the topicalized constituents in (43) and (44), originate from the same position of the constructions. Nevertheless, topicalization in (44) is illicit. In (43), the topicalized constituents *you*, *Mary* and *some books* are a pronoun, a proper name and a quantifier phrase with specific referents, respectively, while in (44), *there*, *it* and *few books* are a dummy subject, an object and a quantifier phrase without any definite referents, respectively. Therefore, the unacceptability of the topicalized constructions in (44) is not by virtue of grammaticality, but pragmatics because the topicalized entity should be definite.

Attempts have been made to restrict the types of constituents which can be preposed via topicalization (Ward & Prince, 1991). For instance, only the specific indefinites can be topicalized, as shown in (45a); only nonspecific indefinites can be topicalized, as shown in (45b); and no indefinites can be topicalized (see section 2.1.1.2).

(45)

a) A: Do you think you'd be more nervous in a job talk or a job interview?

B: A job talk I think you'd have somewhat more control over.

(S. Pintzuk, in conversation)

b) I'll have to introduce two principles. One I'm going to introduce now and one I'm going to introduce later. (T. Wasow, in lecture)

(Ward & Prince, 1991, p. 168)

Although under some circumstances, such kind of topicalization could be felicitous, these claims cannot be perfectly maintained (Ward & Prince, 1991, p. 167). Based on the exploration of the definiteness and specificity of the preposed DP in topicalization, Ward (1985, as cited in Ward & Prince, 1991, p. 173) proposes the revised condition on felicitous preposing (including topicalization) as in (46).

(46) Discourse Condition on Preposing:

The entity represented by the preposed constituent must be related, via a salient partially ordered set relation, to one or more entities already evoked in the discourse model.

In fact, Ward's discourse condition is in support of the properties of the topic, namely givenness, definiteness and aboutness.

Regarding topicalization, in accordance with Rizzi (1997) and Haegeman (2012),

the topicalized constituents are topics which are recursive in a sentence. Although recursiveness of topics or multiple topics has been argued among scholars (Krifka, 1992; Lambrecht, 1996; Erteschik-Shir, 1997), Erteschik-Shir (2007) finds that there are more than one topic in a sentence in other languages. For instance, Ostyak and Catalan can mark more than one topic syntactically. Lambrecht (1996) considers the topicalized constituent as “secondary topic” (p. 147), while the subject serves as “primary topic” (p. 147). The two topic expressions are seen as in (47).

(47)

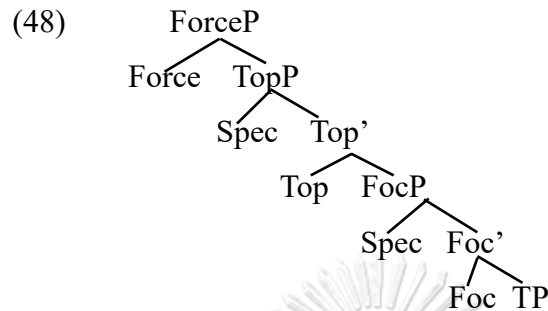
Why am I in an up mood? Mostly it's a sense of relief of having finished a first draft of my thesis and feeling OK at least about the time I spent writing this. The product I feel less good about. (Lambrecht, 1996, p. 147)

In this sense, the last sentence in (47) contains two topics including the topicalized object *the product* and the subject *I*. The subject *I* is termed as “primary topic” because the whole passage is about the thesis writer and his feelings. However, the last sentence conveys the information about the writer and *the product* related to the writer, therefore *the product* is also one of the topics of the sentence, which is termed as “secondary topic”. Lambrecht’s viewpoint is consistent with the properties of the topic aforementioned, which is what the sentence is about, and normally conveys the given information. Therefore, both the topicalized constituent and the subject are the topics of the sentence in this study.

Syntactically, Rizzi (1997) proposes that the elements above IP (i.e. TP) in the left periphery encode the semantic and pragmatic properties of the sentence (Newmeyer, 2013, p. 400). Rizzi (1997) states that the structural representation of a clause includes three kinds of structural layers, namely, the lexical layer, the inflectional layer and the complementizer layer. Each layer is an instantiation of the X-bar schema, and “the complementizer layer typically headed by a free functional morpheme, and hosting topics and various operator-like elements such as interrogative and relative pronouns, focalized elements, etc.” (p. 281).

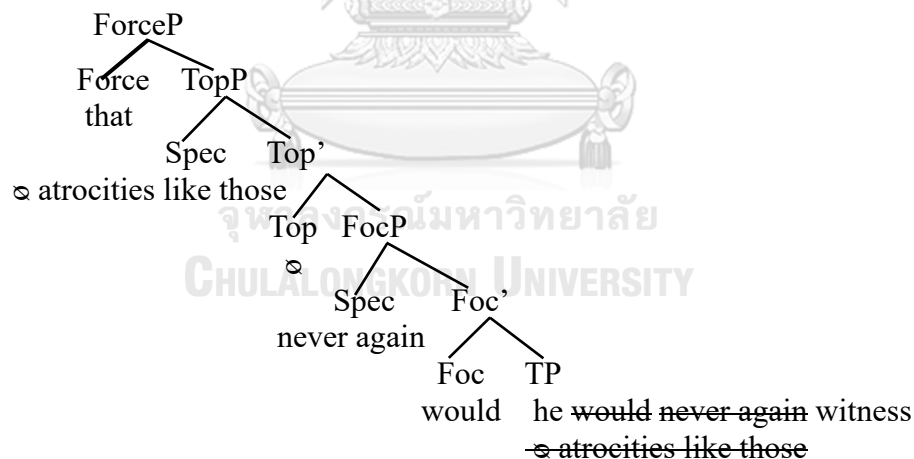
In this view, Rizzi (1997) suggests that Complementizer Phrase (CP) should be split into a number of different semantically relevant projections, specifically termed as *Split CP* hypothesis. Therefore, the highest projection, Force Phrase, specifies the illocutionary force of the sentence (e.g. declarative, interrogative, exclamative, and so

on). The complementizer should be analyzed as Force marker heading a Force Phrase (ForceP). Below ForceP are Topic Phrases (TopP) which are recursive. And then below the TopP is a Focus Phrase (FocP) above TP (i.e. IP in some literature), which is demonstrated in the tree diagram (48).



More specifically, we may put the topicalized sentence (49) into the above tree diagram frame as follows.

(49) He had seen something truly evil---prisoners being ritually raped, tortured and mutilated. He prayed *that atrocities like those*, never again would he witness.



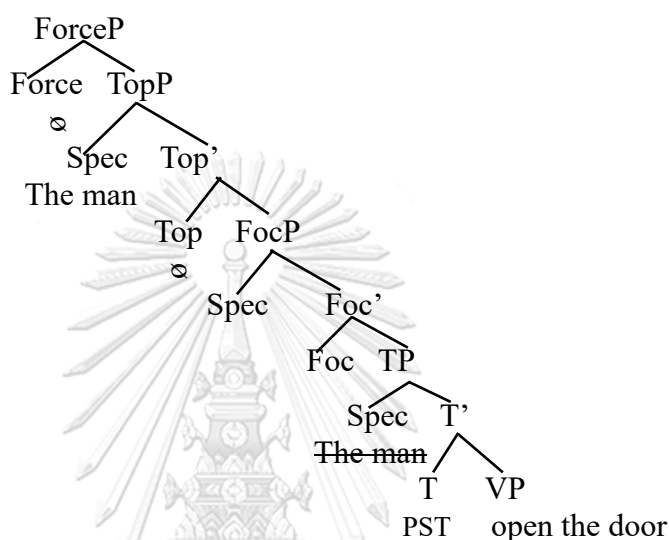
(Radford, 2009, p. 326)

From the above tree diagram (49), topicalization involves the movement of a maximal projection to a specifier position on the periphery of the clause, so topicalization is regarded as a particular instance of A-bar movement. In other words, the topicalized constituent is attracted into an A-bar specifier position of TopP (Radford, 2009).

Hence, the topicalized sentence in English can be represented under the Split CP

framework as $[_{ForceP} [_{TopP} [_{FocP} [S+V+O]]]]$, where the non-*wh*-constituents can be fronted as the topic as long as it is felicitous for the properties of the topic. In light of the Split CP hypothesis, subjects are also eligible to move to the topic position above it. This covert movement makes the subject co-refer to the topic in the sentence pragmatically, as shown in (50).

(50) [The man] ~~The man~~ opened the door.



In (50), the subject *the man* moves to the Spec-TopP position to satisfy the pragmatic requirement as the topic of the sentence and leaves the deleted copy ~~*the man*~~ in the Spec-TP position (i.e. the subject position). *The man* is the full copy of the DP ~~*the man*~~, which co-refers to the subject ~~*the man*~~ semantically and pragmatically. The DP *the man* performs the role as the topic and its full deleted copy serves as the subject in the sentence. Split CP hypothesis bridges the interface issue of the topic syntactically.

Languages are classified according to their sentence structures whether they are grammatically oriented or pragmatically oriented or both. English is claimed to be grammatically oriented (S. A. Thompson, 1978) or a subject-prominent language (Li & Thompson, 1976). The topic is different from the subject (Li & Thompson, 1976), although English subject is often considered the unmarked topic (Lambrecht, 1996). Topicalization is a common way to prepose arguments and adjuncts to the sentence initial position (Rizzi, 1997). Recursiveness of the topics is possible in English (Rizzi, 1997; Haegeman, 2012; Lambrecht, 1996). According to Lambrecht (1996), two kinds of topics, namely the subject topics and the scene-setting topics cooccur in

a sentence. The subject topic is given, definite and what the sentence is about while the scene-setting topic provides the frame for the main predication.

2.2 Argument Structure of English Clauses

As indicated earlier, all English sentences follow subject-predicate structure. The transitive, and the unergative constructions, as well as the imperative and *one* constructions are generally agentive, while the unaccusative and the structure-preserving constructions are generally non-agentive.

2.2.1 Canonical constructions⁷

The canonical constructions are identified as the transitive, the unergative and the unaccusative constructions based on the predicate.

According to Radford (2009), a predicate denotes an activity or event, while an argument is a participant in the relevant activity or event. For example, in constructions (51) below, the verbs are underlined and their arguments are in brackets.

(51)

- a) [Lisa] ate [the cake].
- b) [John] swam.

Arguments of a verb are typically its subject and complement(s) (Radford, 2009). In (51a), *Lisa* is the subject and *the cake* is the complement of the verb *eat*, while *John* is the only argument (subject) of the verb *swim* in (51b). Semantic roles are the semantic functions of the arguments, as shown in (52).

(52)

- a) AGENT/ACTOR: the person who intentionally initiates the action expressed by the predicate. (Haegeman, 1994, p. 49)
e.g. Lisa beat Tom.
- b) PATIENT⁸: the person or thing undergoing the action expressed by the predicate. (Haegeman, 1994, p. 49)
e.g. Lisa called Tom.
- c) THEME: the person or thing undergoing change of state. (Haegeman, p. 49)
e.g. The sea level rises.

⁷ In this study, *construction* is different from the special term *construction* of *Construction Grammar* (Goldberg, 1995).

⁸ Other authors consider the semantic role PATIENT the same as THEME, which refers to the entity affected by the action or state expressed by the predicate (Haegeman, 1994).

- d) EXPERIENCER: the entity that experiences some (psychological) state expressed by the predicate. (Haegeman, 1994, p. 49)
e.g. Mary likes the music.
- e) BENEFACTIVE/BENEFICIARY: the entity that benefits from the action expressed by the predicate. (Haegeman, p. 50)
e.g. Lisa gave the apple to John.
- f) GOAL: the entity towards which the activity expressed by the predicate is directed. (Haegeman, p. 50)
e.g. Lisa went to the office.
- g) SOURCE: the entity from which something is moved as a result of the activity expressed by the predicate. (Haegeman, p. 50)
e.g. Tom returned from New York.
- h) LOCATION: the place in which the action or state expressed by the predicate is situated. (Haegeman, p. 50)
e.g. John hid it behind the sofa.
- i) INSTRUMENT: the means used to perform some action. (Haegeman, p. 159)
e.g. Mark hit the nail with a hammer.

Semantic roles are also termed thematic roles, represented by θ -roles (i.e. theta-roles). A θ -role assignment follows the *Theta-Criterion*, which states that a θ -role can be assigned to only one argument, and an argument bears only one θ -role (Chomsky, 1993, p. 36).

In order to define the semantic roles systematically, Reinhart (2000, p. 52) puts forward the binary features $[\pm c]$ and $[\pm m]$. $[c]$ refers to *cause* while $[m]$ means *mental state*. The feature $[c]$ denotes the capability of the argument to cause the change and $[m]$ entails that the argument is animate with the property of volition and intention. In this sense, AGENT is defined with $[+c +m]$, INSTRUMENT $[+c -m]$, EXPERIENCER $[-c +m]$, and THEME $[-c -m]$. However, the technical features are by no means sufficient to describe all the traditional semantic roles, like BENEFICIARY, GOAL, SOURCE and LOCATION, etc.

Jackendoff (1990) associates the semantic roles with a specific syntactic position. As for Jackendoff (1990, as cited in J. Zhang, 2007), AGENT, being the instigator of the activity, receives the priority to be selected as the subject, rather than other

semantic roles, as demonstrated in his *Thematic Hierarchy* as in (53).

(53) AGENT>EXPERIENCER>GOAL>SOURCE>LOCATION>THEME

In this hierarchy, the left end gets the priority to be eligible for the subject position. Therefore, AGENT is typically chosen as the subject while THEME is selected as the object in transitive constructions (White et al., 1999).

The hierarchy demonstrates that AGENT is likely to be the preferred semantic role for the subject position. The thematic hierarchy is, however, challenged by some constructions, such as the double object construction in (54a) and (54b), in which BENEFICIARY is either before or after THEME. In addition, other counterexamples of the hierarchy were also found, for instance, the middle construction in (55a) and the passive construction in (55b), which prioritize THEME in the subject position.

(54)

- a) Mary gave [_{THEME} an apple] [_{BENEFICIARY} to John].
- b) Mary gave [_{BENEFICIARY} John] [_{THEME} an apple].

(55)

- a) [_{THEME} This novel] sells well.
- b) [_{THEME} The book] was sent to John.

Regarding the subject-predicate relations, the predicates are classified as agentive and non-agentive. Adopting Fillmore's (1967) viewpoint on agentivity, this study assumes that being "agentive is the case of the typically animate perceived instigator of the action" (p. 46).

The transitive and the unergative predicates are generally with AGENT subjects while the unaccusatives are generally with the THEME subjects. The classification shown in Table 2 was adapted from Simargool (2006, p. 52).

Table 2: Classification of verbs based on the argument structures

AGENTIVE		NON-AGENTIVE
Transitive	Unergative (intransitive)	Unaccusative (intransitive)
John ate the cake. Marco drew the picture. Paul teaches English.	John smokes. Marco died. Paul swam.	The accident happened. The lightning occurred. The sun rises.

In light of the Unaccusative Hypothesis first proposed by Perlmutter (1978), the intransitives are classified into the unaccusatives and the unergatives. The

unaccusative (with verbs e.g. *happen, appear, occur*), and the unergatives (with verbs e.g. *sleep, die, smile*) are considered intransitives because they have no object and hence retain no accusative case (cf. *abstract case* in Haegeman, 1994, pp. 155-156). The unaccusatives are with THEME subjects, while the unergatives generally have AGENT subjects.

The transitive construction is with a two-place predicate because of the two arguments, namely the subject and the object, as in (56). In the transitive construction, the object is considered the internal argument of the verb in a VP, whereas the subject is the external argument of the VP (Radford, 2009, p. 244).

(56) Tom ate the candy.

Tom is the subject and *the candy* is the object of the verb *eat*. The subject is AGENT, while the object is THEME. In accordance with Marantz (1984) and Chomsky (1986a, as cited in Radford, 2009, p. 248), although verbs directly assign θ -roles to their internal arguments, it is not the verb rather the compositional expression verb + complement determining the θ -role of the subject, which is demonstrated by the examples in (57) and (58).

(57)

- a) John threw a ball.
- b) John threw a fit. (Radford, 2009, p. 248)

(58)

- a) John broke the window.
- b) John broke his arm. (Radford, 2009, p. 248)

John plays different thematic roles in the above constructions. In (57), *John* is AGENT in the case of *threw a ball*, but EXPERIENCER in *threw a fit*. Likewise, *John* is AGENT in (58a), but EXPERIENCER on the most natural interpretation of (58b) as the accidental arm-breaking (Radford, 2009, p. 248).

The subject of a transitive verb performs the θ -role as AGENT or EXPERIENCER due to the fact that it requires the animate and volitional AGENT to initiate the action in transitive constructions.

The direct object of some of the transitives display the corresponding semantic relationship with the subject of its intransitive use. Such kind of verbs are regarded as ergative constructions by some scholars (Kuno & Takami, 2004), as in (59) and (60).

(59)

- a) The vase broke.
- b) The girl broke the vase.

(60)

- a) The rock rolled.
- b) Joe rolled the rock.

In (59a) and (60a), *break* and *roll* are intransitive whereas in (59b) and (60b), they are transitive. Semantically, these verbs share the property of representing the motion or change. In the intransitive constructions in (a), the THEME arguments are in the subject position, whereas they are the objects in the transitive (b) constructions. In both constructions, the THEME argument undergoes the motion or change on its own. The difference lies in the fact that in transitive constructions in (b), AGENT causes the motion or change of the THEME argument.

As for the other intransitive construction, the unergatives, a one-place predicate, Perlmutter (1978) and Perlmutter and Postal (1984, as cited in Surtani, Jha, & Paul, 2011, p. 55) designate unergative verbs as: (a) intransitive verbs that take AGENTS as their subjects (e.g., *walk, work, talk, swim, skate*), and (b) those that take EXPERIENCERS as their subjects (e.g., *cough, sneeze, belch, sleep*), as instantiated in (61).

(61)

- a) She ran fast.
- b) He swam across the river.

Run and *swim* in (61a) and (61b) are unergative verbs with AGENT subjects, but no object follows the verb. In (61), both AGENTS perform the volitional action of *running* and *swimming*, respectively.

Unergative verbs can also appear in the cognate object construction (e.g., Burzio, 1986; Belletti, 1988; Lumsden, 1988; Levin & Hovav, 1995, as cited in Kuno & Takami, 2004, p. 16), which is shown as in (62).

(62)

- a) She slept a good sleep.
- b) He died a glorious death.

However, the cognate object *sleep* in (62a) and *death* in (62b) are not considered as

canonical arguments, but as modifiers of the verbs since they do not provide any new information. The cognate object is different from other full DP constituents, which serve as direct objects. For instance, they can neither be replaced by pronouns nor be passivized without adjectives, which modify cognate objects (Wanner, 2000), as demonstrated in (63) and (64).

(63)

- a) She smiled her enigmatic smile/ *it/? what.
- b) He whistled a low whistle of satisfaction/*it/? what.

(Wanner, 2000, p. 90)

(64)

- a) *A sigh was sighed.
- b) *This life was lived. (Wanner, 2000, p. 90)

Unlike transitive and unergative constructions, the imperative constructions are with the covert or overt agentive subjects, and the *one* construction is with the impersonal agentive subject.

An imperative construction refers to the constructions requesting a hearer to comply with the speaker's request. Thus, the imperatives are taken to be a different propositional type, where things cannot be judged true or false (Lewis 1972, Huntley 1984, as cited in S. Zhang, 1990, pp. 11-12). In this regard, an imperative construction is a verbal attempt by the speaker to get the hearer to do something.

The imperatives have either the covert or the overt subject. The overt subject often refers to the second person DP *you* and the third person indefinite quantified DPs as in (65a). Conversely, the first and other third person DPs are improper, as shown in (65b).

(65)

- a) [You/Somebody/everybody] open the window now!
- b) *[I/we/he/they] please open the window now!

In addition, the subjects of the English imperatives can also be partitive DPs of *you*. The definite DPs can also be understood as *you* or *wh*-word *whoever* (S. Zhang, p. 25), as shown in (66).

(66)

- a) One of you go to my office!

- b) The girl in the red skirt come to the stage!
- c) Whoever took the magazine please put it back on the shelf!

In particular, these underlined indefinite quantified DPs as in (67) have special anaphoric binding.

(67)

- a) Somebody_i put up your_i/his_i/their_i hand!
- b) Everybody_i tie your_i/his_i/their_i shoes!
- c) Nobody_i take off your_i/his_i/their_i hat!
- d) Don't anyone_i throw away your_i/his_i/their_i wallet!

(S. Zhang, 1990, p. 25)

The reason why the subjects of the English imperatives can be the second person, the partitive DPs of *you* included, and third person indefinite quantified DPs, including *whoever*, is that the referent of the specified subject is either the addressee or among the addressees (Zanuttini, 2008). Although Thorne (1966, as cited in S. Zhang, 1990) denotes that vocatives and imperative subjects are two instantiations of the same phenomenon, the vocative DPs will be ruled out as subjects of the imperatives because vocatives were found to occur in a distinct position rather than the subject position (Jensen, 2003), as in (68).

(68) John, (you) put up your hands! (p. 153)

In (68), *John* is the vocative, whereas the covert second person *you* works as the subject of the imperative construction.

With regards to the impersonal construction, in English, *one*, the generic uses of second person singular *you*⁹ and third person plural pronouns *they*, are considered the impersonal pronouns, as shown in (69).

(69)

- a) One can visit the museum on weekdays.
- b) In ancient times, you rarely lived till 70.

⁹ Huddleston (1984, as cited in Kitagawa & Lehrer, 1990, p. 740) regards that the generic *you* is a stylistically less formal variant of non-deictic *one*.

- c) In those days, they had to be cautious.

(Malamud, 2012, p. 2)

From the pragmatic point of view, they simply decrease the prominence of the logical subject (AGENT), or the denotation of the logical subject does not participate in the salience or topichood computation at all (Prince, 2003, as cited in (Prince, 2003, as cited in Malamud, 2012, p. 2).

Semantically, the impersonal pronoun *one* is different from personal pronouns (Malamud, 2012, pp. 4-5). Impersonal pronoun *one* appears in generic constructions, but *one* is different from other generic constructions which specify definite referents, such as *people* in (70). The impersonal *one* is equivalent to indefinite pronouns, which specify the genericity (Moltmann, 2006, p. 258).

(70) People can see the picture from the entrance.

The pronoun which co-refers to *one* is confined to the third person singular *he* or *she*, and the third person plural *they*, as seen in (71).

(71)

- a) One claimed he had lost my file.
 b) If one does it, he/she/they usually get(s) killed. (Malamud, 2012, p. 4)

The impersonal *one* can be interpreted as anaphoric to a previous instance in the discourse as in (72a), and the interpretation of the second occurrence of *one* is similar to a definite personal pronoun, as in (72b).

(72)

- a) Joe has a red jumper and a blue one.
 b) Joe has several erasers, and the smallest one is cute.

According to Safir (2004, as cited in Malamud, 2012, p. 5), *one* denotes both the speaker and the audience, but it does not give an explicit semantic meaning, as seen in (73).

(73)

- a) One should not lie. (Moltmann, 2010, p. 442)
 b) One raises kids, sacrifices so much for them, and then they move where *one* cannot even see the grandchildren!

(Malamud, 2012, p. 10)

In (73), *one* identifies the participants including the speaker and the audience,

although it does not directly refer to them. Generic *one* is also called the *first-person-oriented* pronoun (Moltmann, 2010, p. 442). However, unlike the first person pronoun *I* or *we*, the first person property of *one* includes the speaker because they put themselves into the situation of the sentence and show apparent empathy in the constructions where *one* appears.

Unlike the above agentive constructions, unaccusative constructions take THEME subjects and some can occur in *there*-construction, which is demonstrated in (74).

(74)

- a) There have arisen several complications.
- b) Several complications have arisen.

(Radford, 2009, p. 249)

Locative inversion is possible for unaccusative syntactic configuration (Bresnan & Kanerva, 1989; Coopmans, 1989; Hoekstra & Mulder, 1990; Levin, 1986, among others, as cited in Levin, Hovav, & Keyser, 1995, p. 215), as in (75).

(75)

- a) In the distance appeared the towers and spires of a town which greatly resembled Oxford.
- b) The towers and spires of a town which greatly resembled Oxford appeared in the distance. (Levin et al., 1995, p. 218)

Unaccusative verbs include motion verbs, such as *arrive*, *come*, *fall*, *go*, *leave*, *return*, *rise*, etc., and existential verbs (i.e. verbs indicating the existence or coming into being of a state of affairs, or a change of state as well as the cessation of a state), for example, *appear*, *arise*, *be*, *become*, *begin*, *exist*, *happen*, *occur*, *remain*, *stay* (Radford, 2009, pp. 252-253).

This section details the canonical constructions which are divided into agentive and non-agentive constructions according to the semantic roles of the subjects. The agentives are the transitive, the unergative, the imperative, and the one constructions. The only non-agentive canonical construction is the unaccusative with its THEME subject. With their SV(O) structure, the canonical constructions are considered basic sentence structures in English.

2.2.2 Structure-preserving constructions

Structure-preserving constructions, such as the middle, the *tough*, the passive, the

have, and the expletive constructions take non-agentive subjects.

The middle construction is a clause where the THEME or PATIENT is structurally realized as the subject of an active predicate (Park, 2009), as shown in (76).

(76)

- a) The car drives like a Mercedes.
- b) The lights install easily. (Park, 2009, p. 125)

The distinctive property of the middle construction is that it has an arbitrary AGENT which leads to genericity, as shown in (76). They are, thus, non-eventive and appear with the *activity* and *accomplishment* predicates. Activity and accomplishment predicates, as in (Tom ran for an hour.) and (Tom built a shed.), respectively, describe the processes going on in time, with accomplishment having the endpoint (Vendler, 1967, as cited in Kearns, 2011, p. 157). The above properties distinguish the middle construction from similar constructions, such as the unergative, the passive and the *tough* constructions.

The *tough* construction is similar to the middle construction, with its THEME subject and genericity as seen in (77).

(77)

- a) Linguists are tough to please.
- b) The book is easy to read.

Apparently, the *tough* construction configuration is characterized by the missing object in the embedded infinitival clause, which is interpreted as a gap co-referent with the matrix subject (Hicks, 2009). *Tough* predicates assign no external θ -role, so the θ -role of the subject in the *tough* construction is assigned by the embedded infinitive verb. The *tough* construction is different from control construction as in (80b) in that the *tough* construction, as in (78a), has the expletive equivalent, and can be transformed into a clause with an infinitive subject, as demonstrated in (79a).

(78)

- a) John is easy to please. (It is easy to please John.)
- b) John is eager to please. (*It is eager to please John.)

(79)

- a) To please John is easy.
- b) *To please John is eager.

The *tough* construction includes a generic interpretation, which shows definiteness, so it precludes an indefinite reading of the subject (Postal, 1971; Lasnik & Fiengo, 1974; Berman, 1974, as cited in Miki, 2000, p. 258), which is demonstrated in (80).

(80)

- a) **(Jackendoff)* would be easy to kill with a stick like that.
- b) Men would be easy to kill with a stick like that.

(Miki, 2000, p. 258)

As aforementioned, generic DPs have the definite interpretation (see section 2.1.1.2), which refer to a kind of objects (i.e. the category), so *men* as the subject of the *tough* construction in (80b) is licit and acceptable, whereas the indefinite Quantifier Phrases *a man* and *someone* in (80a) appear illicit.

Apart from the middle and the *tough* constructions, another structure-preserving construction is the passive construction, as in (81a), the counterpart of the active construction in (81b).

(81)

- a) Hundreds of passers-by saw the attack.
- b) The attack was seen by hundreds of passers-by.

(Radford, 2009, p. 255)

There are four properties which differentiate passive constructions from their corresponding active counterparts: first, passive constructions generally require the auxiliary *be* preceding the main verb; second, the main verb in passive constructions is in passive participle form (e.g. *seen/broken/taken/beaten*, Radford, 2009); third, passive constructions may contain a *by*-phrase in which the complement of *by* plays the same θ -role as the subject in the corresponding active sentence; fourth, the constituent which serves as the complement of the active verb surfaces as the subject in the corresponding passive constructions.

Passive predicates resemble unaccusative predicates, which allow expletive structures, as shown in (82).

(82)

- a) No evidence of any crime was found.
- b) There was found no evidence of any crime.

In (82b), the QP *no evidence of any crime* merged as the complement of the passive predicate *found*, and hence acquires the thematic role of THEME to form VP. And the resulting VP further merges with the auxiliary *was* forming T-bar. Due to the EPP feature of the auxiliary *was*, it requires a specifier in the Spec-TP position. There are two ways to satisfy the EPP requirement, either by insertion of *there*-expletive as in (82b), or to move the closest QP *no evidence of any crime* from the complement position of verb to the Spec-TP position (i.e. to passivize the QP) as in (82a).

Furthermore, passivization can be applied across clause boundary, which is called long-distance passivization, as in (83).

(83)

- a) There are believed to have occurred several riots.
- b) Several riots are believed to have occurred.

(Radford, 2009, p. 259)

The passive construction and the corresponding active construction represent similar meaning, but they are distinct from each other in applications. The passive constructions generally defocus the AGENT and emphasize the affected PATIENT/THEME (Shibatani, 1985). In other words, the passive topicalizes the new subject (Hou, 1977, as cited in Davison, 1980, p. 51). More specifically, the subject in passive construction is the topic of the sentence (Davison, 1980, p. 56). The passive construction traditionally contributes to an overall objective tone, by means of deleting or deemphasizing the AGENT subject (Baratta, 2009, p. 1406). The effect of the passive construction is similar to the construction with the impersonal subject in this regard, which serves to distance the speaker or writer from the text (Reilly et al., 2005, as cited in Baratta, 2009, p. 1409). The THEME within a passive construction is sometimes given sentential prominence as the subject (Baratta, 2009, p. 1411).

Another structure-preserving construction is the *have* construction. *Have* construction is also considered the *subject-creating* construction in English as in (84).

(84)

- a) There is a fly in my soup.
- b) My soup has a fly in it.

(Gundel, 1988, p. 225)

The restrictions on DPs that can occur in *there*-constructions are closely

paralleled with restrictions on DPs that can occur in relational *have*-constructions (Partee, 1999, p. 1). For instance, the indefinite DP is usually found in the position after *have*, but not as restricted as that in *there*-construction.

Have occurs in many constructions, such as the existential-attributive, affecting event, resultant state/event, causative, depictive constructions and so on, as exemplified in (85).

(85)

- a) I have two brothers. (existential-attributive)
- b) I had my bicycle stolen. (affecting event)
- c) I had him angry the minute I walked in. (resultant state/event)
- d) I had them bring chips to the party. (causative)
- e) The movie had him dying in the end. (depictive)

(Brugman, 1988, p. 24)

Apart from these *have* constructions, there are other varieties, which are dependent upon the relation between the subject and the object, instantiated in (86).

(86)

- a) A donkey's skeleton has 300 bones. (inalienable possession)
- b) This house has four windows. (part-whole)
- c) That glass has wine. (container-containee)

(Gutiérrez-Rexach, 2007, p. 295)

Unlike the structure-preserving constructions aforementioned, the expletive construction has the expletive subjects, namely the extra-position *it*, weather/ time and place *it*¹⁰, and the impersonal *there*, which is distinct from locative *there* (Svenonius, 2002, p. 3), as shown in (87).

(87)

- a) It is obvious where you got that hickey.
- b) It gets dark in November.
- c) There's a fly in your soup, isn't there?

(Svenonius, 2002, pp. 3-4)

¹⁰ The expletive *it* which refers to *weather*-, *time*-, or *place-expression* is considered quasi-argument, or quasi-thematic subject by some scholars (Felser & Rupp, 2001; Chomsky, 1981, as cited in Radford, 2009, p. 299).

Although it is still arguable cross-linguistically for the non-referential and non-deictic properties of the expletives (cf. Rosenbaum, 1968; Hoekstra, 1983; Chomsky, 1981; Burzio, 1986; Bennis, 1986, among others, as cited in Svenonius, 2002, p. 4), they were found meaningless in the semantic computation of the sentence (cf. Chomsky, 2000, 2001; Safir, 1987; and Vikner, 1995, as cited in Svenonius, 2002, p. 5), as demonstrated in (88) and (89).

(88)

- a) It_i isn't even worth [PRO talking about that]_i.
- b) It_i seemed [that the boss went around tired]_i. (Franks, 1990, pp. 2-4)

(89)

- a) There_i aren't [many people]_i in the room.
- b) There_i seems to be [someone]_i in the room. (Witkos, 2004, p. 177)

In (88) and (89), the expletives *it* and *there* serve as subjects to satisfy the EPP requirement, meanwhile they lack referentiality and deictic properties entrenched in themselves. Expletives seldom occur with transitive verbs in English (Witkos, 2004).

The expletives can also occur in subject-raising constructions with the raising predicates, such as *seem* and *appear*, as seen in (90).

(90)

- a) There does seem [to remain some hope of peace].
- b) It would appear [that they have underestimated her].

(Radford, 2009, p. 264)

In English, the expletive *it* has several uses in which it is regarded as a placeholder for the subject and the object clauses in (91); as the subject in *it-cleft* constructions in (92); and as the subject with *weather-*, *time-*, and *place-*expressions in (93).

(91)

- a) It_i was pitiful [that you did not come to the party]_i.
- b) He made it_i clear [that he prefers to go to university]_i.

(92) It is your mother who loves you so much.

(93)

- a) It is raining heavily.
- b) It is five o'clock now.

- c) It is very noisy here.
- d) It is more than five miles to the nearest post office.

(Huddleston & Pullum, 2002, as cited in Hartmann, 2008, p. 4)

In comparison with *it*, the expletive *there* may occur in the presentational constructions as in (94), and the existential structures in (95).

(94)

- a) There was a man shot.
- b) There arrived a man.

(95)

- a) There are people who don't like their jobs.
- b) There are black swans in Australia.

(Hartmann, 2008, pp. 1-2)

There-construction shows apparent semantic restriction, namely, the definiteness effect or definiteness restriction. In other words, *there*-constructions do not normally allow strong quantifiers as in (96) and definite DPs in (97).

(96)

- a) *There was everyone in the room.
- b) *There were all viewpoints considered.
- c) *There was each package inspected.

(97)

- a) *There is the wolf at the door.
- b) *There were John and Mary cycling along the creek.
- c) *There was Frank's article mentioned.

(Milsark, 1977, as cited in Hartmann, 2008, p. 11)

2.3 Summary of the chapter

This chapter reviews the related literature of language typology which divides languages according to their syntactic and pragmatic orientation (Li & Thompson, 1976; S. A. Thompson, 1978). English is a subject-prominent language in which the subject-predicate structure plays a major role. Nevertheless, the topic-comment structure for the linearization of the sentential constituents is held universally across languages (Gundel, 1988; Lambrecht, 1996; Erteschik-Shir, 2007). The English subject is deemed as the UNMARKED TOPIC (Lambrecht, 1996), although subjects and

topics are different from each other (Li & Thompson, 1976; Rizzi, 1997). For the subject-prominent languages, topicalization of the arguments and adjuncts is a common way to realize the topics in the sentence initial position (Rizzi, 1997; Radford, 2009; Haegeman, 2012). Various kinds of constituents except the *wh*-constituent, such as DP, PP, AdvP, CP, etc. can be topicalized (Radford, 2009). Recursiveness of the topics is possible in English (Rizzi, 1997; Haegeman, 2012).

English canonical constructions, namely the transitive, the unergative and the unaccusative constructions follow the subject-predicate word order in English (Radford, 2009). The transitive, the unergative, the imperative and the *one* constructions are with the agentive subjects. The unaccusative construction has THEME, the non-agentive subject. Structure-preserving constructions are claimed to exist particularly in the subject-prominent languages, like English, to maintain the subject-predicate structure (Emonds, 1976, as cited in S. A. Thompson, 1978). Structure-preserving constructions, namely, the middle, the *tough*, the passive, the *have* and the expletive constructions occur with non-agentive subjects.

Based on the literature, the typological classification of English deserves further investigation. The subject as the UNMARKED TOPIC is based on the psychological intuition (Lambrecht, 1996), which needs in-depth exploration. Whether or not AGENT is the preferred semantic role of the subject position in English declarative constructions requires evidence. In addition, it is believed that the topic-comment structure represented in English is different from that in topic-prominent languages, in terms of the constructions, the topicalized constituents, and the semantic roles of the arguments.

CHAPTER 3

METHODOLOGY

The previous chapter shows that although English is claimed to be a subject-prominent language which follows the subject-predicate word order (Li & Thompson, 1976), there is an awareness that the topic-comment structure plays a crucial role in the linearization of the sentential elements which is universal across languages (Gundel, 1988). A variety of constructions, such as the canonical constructions and the structure-preserving constructions, follow the subject-predicate structure in English in different ways. With regards to the topic-comment structure, English subject is considered the UNMARKED TOPIC (Lambrecht, 1996) with AGENT as the most prominent semantic role in the subject position.

To further explore the claims above and to delve deeper into the linguistic properties of English subjects and topics, this study focuses on the expository prose in authentic data from a commercialized publication which targets a wide range of audience, *National Geographic* (NG). The best-selling novel, *The Da Vinci Code* (DC), was also selected to investigate genre-specific characteristics. By exploring the two data sets, it is hoped that further in-depth information about the topic-comment sentence structure, types of topic-comment constructions, and types and appearances of the topics in different genres of English writing will be specified.

3.1 Data source

Compared with spoken language, written language is expected to produce complete information and idea units more explicitly, since it lacks the extra-linguistic context at the time of utterance (Woolbert, 1922; Brochers, 1936; DeVito, 1965; Olson, 19771; Goody, 1980; Rubin, 1980, as cited in Akinnaso, 1982). The notion of sentence (i.e. main clause in this study) is often applied to written English, while the alternative unit as “information unit” (Halliday, 1973, as cited in Akinnaso, 1982), “utterance chunks” (Gumperz, 1977, as cited in Akinnaso, 1982) and “idea units” (Kroll, 1977; Chafe, 1980, 1982, as cited in Akinnaso, 1982, p. 105) are applicable for conversations in spoken language. Written English is chosen for this study to investigate the complete structure of constructions and their connections with the surrounding contexts.

The main set of data from *National Geographic* magazine was published in December 2016. Among the top ten best-selling American magazines, *National Geographic* was chosen partly because it contains contents in many fields, such as science, history, nature, culture, current events, geography, and photography. In contrast, other top ten magazines, such as *AARP The Magazine*, *The Costco Connection*, *Game Informer*, and *Better Homes and Gardens*, and so on, target specific groups of readers, such as senior citizens or homemakers. The subject matter is, thus, confined to gardening, social life, housekeeping, or related service and product promotion.

National Geographic magazine, published by the National Geographic Society since 1888, is circulated worldwide monthly. The magazine had the total annual circulation of 3,572,348 in 2015. The popularity among the audience proves the wide acceptance of its language to some extent. Most of the articles are research-based and are expository in general. The magazine is similar to academic writing but it caters to the general educated public with no focus on specific academic fields.

In order to compare the findings across genres, this study also retrieved the data from the best-selling novel *The Da Vinci Code*, published in 2003. Being originally written in English makes the novel linguistically parallel with the language in *National Geographic*. *The Da Vinci Code* was sold more than 80 million copies worldwide (San José Mercury News Archived, 2012-01-13). The popularity shows the acceptability of the written English of this novel to some extent.

The data were acquired from electronic sources as shown below.

National Geographic, <http://www.car.chula.ac.th/>;

The Da Vinci Code, https://archive.org/details/TheDaVinciCode_201812.

Both data are confirmed to be the same as the paper version. Both *National Geographic* and *The Da Vinci Code* are contemporary English which are temporally comparable with each other. The downloaded PDF texts were converted into word files.

In both written data sets, the written form of the spoken language is found in interviews in *National Geographic* and dialogues in *The Da Vinci Code*. It, however, will be included in the analysis as part of the genres. As the attention is on the topic in English sentences located sentence initially, this study focuses on only the main

clause; as a result, fragments/incomplete utterances, such as “*favorite cookie: chocolate chip, 44%*” are excluded.

3.2 Data collection

300 main clauses were extracted from *National Geographic* (December 2016) and 300 main clauses were collected from the first two chapters and the prologue of *The Da Vinci Code*.

The extraction of 300 main clauses is based on the related previous study (Jayaraman, 2011). Although this is not a large number of instances, it can show the consistency in the frequency ratios between the topic-comment structures and the non-topic-comment structures.

To quantitatively justify the number of instances collected, the 300 main clauses are divided into three groups with 100 instances in each group to compare the ratios between the topic-comment structures and the non-topic-comment ones. The division of the 300 main clauses into three groups is to check whether the frequency of the topic-comment structure is influenced by other variables, for instance the content, since the data collected from each source are in sequence. The frequency of the topic-comment and the non-topic-comment structures is shown in Table 3 for *NG*.

Table 3: Topic-comment structure in NG

Constructions (NG)	T-C structure		Non-T-C structure	
	N	%	N	%
1 st 100	91	91	9	9
2 nd 100	86	86	14	14
3 rd 100	86	86	14	14
Total 300	263	87.7	37	12.3

Within the first 100 main clauses, 91 instances are the topic-comment structures, while nine instances are the non-topic-comment structures. The second and the third 100 main clauses have the same number of the topic-comment and the non-topic comment constructions. 86 instances were observed as the topic-comment structures and 14 instances are the non-topic-comment structures in each hundred. The topic-comment structures are prevailing in the data, whereas the non-topic-comment structures occasionally occur.

Table 4: Topic-comment structure in DC

Constructions (DC)	T-C structure		Non-T-C structure	
	N	%	N	%
1 st 100	89	89	11	11
2 nd 100	86	86	14	14
3 rd 100	89	89	11	11
Total 300	264	88	36	12

The frequency of the topic-comment structures in *DC* is shown in Table 4. The number of the topic-comment and the non-topic-comment structures in the 300 instances are close to the numbers in *NG*.

Specifically, in the first and the third 100 main clauses in *DC*, there are 89 instances of the topic-comment structures and 11 instances of the non-topic-comment structures. Within the second 100 main clauses, the number is similar to *NG*, that is, 86 instances are marked as the topic-comment structures and 14 instances are the non-topic-comment structures.

The ratio of the topic-comment structures against the non-topic-comment structures in *DC* appears consistent with that in *NG*. The topic-comment structures are prominent in both data sets.

The 300 main clauses in *National Geographic* were extracted from five articles with varied length published in December 2016. The text in *NG* consists of the title, the writer, and the body text as shown below.

ROMANTIC ATTACHMENT

By Patricia Edmonds

Keeping your mate extraordinarily close—as in permanently fused to your body—has its advantages.

A mile or more down in the lightless ocean, deep-sea anglerfish search for partners. The 162 species of this Ceratioid suborder form odd couples: The males are dwarfed, the females many times larger (some three feet long). Yet they're uniquely equipped to find each other.

The male's outsize nostrils pick up the female's waterborne pheromones. His well-developed eyes search for a spot of light: the bioluminescent lure on a stalk adorning the female's brow. Ted Pietsch, a University of Washington ichthyologist, says the lures' different shapes, pigment patterns, and flash patterns

tell a male when he's found a female of his species to hook up with.

"Hook up" is putting it mildly. Rather than risk separation from his mate in the vast dark, the male clamps his teeth onto some part of her and stays put. "Eventually the skin of male and female grows together," Pietsch says; vessels join "so her blood flows through his body." Fins and other disused body parts wither away until the male is only what the female needs him to be: a sperm factory.

This sexual parasitism bears fruit. When the female's eggs are ready, she signals the male. As he releases sperm, she releases a gelatinous egg mass that expands in water, absorbing the sperm.

The buoyant mass of fertilized eggs slowly rises to the ocean's upper reaches. There the larvae hatch and fatten on plankton. As they start to mature, Pietsch says, the anglerfish will make "the great vertical migration" back to the dark deep to find mates of their own.

National Geographic

Similarly, the 300 main clauses in *The Da Vinci Code* were adopted from the first two chapters including the prologue, as shown below.

Prologue

Louvre Museum, Paris 10:46 P.M.

Renowned curator Jacques Saunière staggered through the vaulted archway of the museum's Grand Gallery. He lunged for the nearest painting he could see, a Caravaggio. Grabbing the gilded frame, the seventy-six-year-old man heaved the masterpiece toward himself until it tore from the wall and Saunière collapsed backward in a heap beneath the canvas.

As he had anticipated, a thundering iron gate fell nearby, barricading the entrance to the suite. The parquet floor shook. Far off, an alarm began to ring.

The curator lay a moment, gasping for breath, taking stock. I am still alive. He crawled out from under the canvas and scanned the cavernous space for someplace to hide.

A voice spoke, chillingly close. "Do not move."

On his hands and knees, the curator froze, turning his head slowly.

Only fifteen feet away, outside the sealed gate, the mountainous silhouette of his

attacker stared through the iron bars. He was broad and tall, with ghost-pale skin and thinning white hair. His irises were pink with dark red pupils. The albino drew a pistol from his coat and aimed the barrel through the bars, directly at the curator. "You should not have run." His accent was not easy to place. "Now tell me where it is."

"I told you already," the curator stammered, kneeling defenseless on the floor of the gallery. (1a)"I have no idea what you are talking about!"

"You are lying." The man stared at him, perfectly immobile except for the glint in his ghostly eyes. (1b)"You and your brethren possess something that is not yours."

The curator felt a surge of adrenaline. How could he possibly know this?

"Tonight the rightful guardians will be restored. Tell me where it is hidden, and you will live." The man leveled his gun at the curator's head. "Is it a secret you will die for?"

Saunière could not breathe.

The Da Vinci Code

The main clause is marked as the analysis unit for both *NG* and *DC*. In particular, the independent quotations as marked in (1a) and (1b) in *DC* are regarded as main clauses.

3.3 Data analysis

This study restricts the investigation to the main clause which is also termed as the independent clause because topicalization is mainly found in the main clause rather than the embedded clause in English (Emonds, 2004, as cited in Haegeman, 2012, p. 151), as demonstrated in (2). The connectors *and*, *but*, *or* are excluded because they connect two main clauses.

(2) *When the second chapter my students couldn't handle, I returned to the intro.

(Haegeman, 2012, p. 151)

The data analysis of this study is divided into the construction identification, the topic identification and the semantic roles identification as follows.

3.3.1 Construction identification

The constructions are manually marked and the constructions are identified corresponding to the canonical constructions, namely the transitive, the unergative

and the unaccusative constructions, the imperative construction, and structure-preserving constructions (see section 2.2), as demonstrated in (3) and (4).

(3)

- 1) Talal Akasheh has devoted half his life to protecting the 2,500-year-old Jordanian city of Petra from the ravages of nature and neglect. [TRANSITIVE] 2) And at a time when many of his peers have long since retired, Akasheh, 69, remains dogged in his efforts to preserve the once thriving trade capital. [UNACCUSATIVE] 3) The 2008 Rolex laureate, who trained as a chemist, created a research database on Petra, mapping and analyzing nearly 3,000 archaeological features carved from red sandstone. [TRANSITIVE] 4) Akasheh spent three years using photogrammetry to gauge the stability of rocks in the Siq, the main entrance to Petra. [TRANSITIVE] 5) In 2015 he completed a conservation plan for the ancient city. [TRANSITIVE] 6) There's still time to conserve what's standing for scholars, tourists, and posterity. [EXPLETIVE] 7) But if parts of structures crumble, Akasheh's database can provide references of how the originals looked. [TRANSITIVE] 8) The quest to find life on other planets has intrigued scientists for eons. [TRANSITIVE] [...] 9) but their way of life is threatened by disappearing grazing lands, mechanized farming, and falling demand for camels. [PASSIVE]

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(4)

- [...] 1) I am still alive. [UNACCUSATIVE] 2) He crawled out from under the canvas and scanned the cavernous space for some place to hide. [UNERGATIVE] 3) A voice spoke, chillingly close. [UNERGATIVE] 4) "Do not move." [IMPERATIVE] 5) On his hands and knees, the curator froze, turning his head slowly. [UNACCUSATIVE] [...] 6) The albino drew a pistol from his coat and aimed the barrel through the bars, directly at the curator. [TRANSITIVE] 7) "You should not have run." [UNERGATIVE] 8) His accent was not easy to place. [TOUGH] [...] 9) "I have no idea what you are talking about!" [HAVE]

The Da Vinci Code

The canonical transitive, the unergative and the unaccusative constructions are identified in the paragraphs above in both data sets. The imperative construction, and some of the structure-preserving constructions, such as the passive, the *tough* and *have* constructions appear in the data.

3.3.2 Topic identification

Based on the different properties of topics, two kinds of topics are specified in this study. The subject topic covers the properties of givenness, definiteness and aboutness, which is realized via argument topicalization. The scene-setting topic provides the background framework for the main predication, which is realized via adjunct topicalization. The topics are in the spec-TopP position of the sentence (Rizzi, 1997).

Since this study follows Li and Thompson (1976) and S. A. Thompson (1978), the topic-comment structure is the sentence structure with either kind of these topics in the initial position. In turn, the non-topic-comment structure is the sentence without the initial topics.

The two kinds of topics and the topic-comment structure and non-topic-comment structure are identified as follows in (5) and (6).

(5)

1) The pilgrim [**Subject Topic**] wasn't sure he'd make it to the Chapel of Grace. 2) It [**Non-Topic Subject**] was agony to walk at all, let alone endure the 70 miles that thousands of believers trek each year to behold an enshrined wood statue: the Black Madonna of Altötting. 3) Richard Mödl [**Subject Topic**] had recently broken his heel, 4) but in 2003 [**Scene-setting Topic**] he [**Subject Topic**] was determined to complete his first pilgrimage from Regensburg to Altötting, Germany. 5) He [**Subject Topic**] figured if the pain got too bad he could always hitch a ride. 6) But he [**Subject Topic**] had a deep faith in the Virgin Mary's ability to deliver him. 7) So he [**Subject Topic**] walked. 8) And (he) [**Subject Topic**] walked.

National Geographic

(6)

1) Renowned curator Jacques Saunière [**Subject Topic**] staggered through the vaulted archway of the museum's Grand Gallery. 2) He [**Subject Topic**]

lunged for the nearest painting he could see, a Caravaggio. 3) Grabbing the gilded frame, [Scene-setting Topic] the seventy-six-year-old man [Subject Topic] heaved the masterpiece toward himself until it tore from the wall, 4) and Saunière [Subject Topic] collapsed backward in a heap beneath the canvas. 5) As he had anticipated, [Scene-setting Topic] a thundering iron gate [Non-Topic Subject] fell nearby, barricading the entrance to the suite. 6) The parquet [Subject Topic] floor shook. 7) Far off, [Scene-setting Topic] an alarm [Non-Topic Subject] began to ring. 8) The curator [Subject Topic] lay a moment, gasping for breath, taking stock.

The Da Vinci Code

Two kinds of topics are identified in the above paragraphs, which can occur in a sentence simultaneously. Correspondingly, if neither of these two kinds of topics appears in the initial position of the sentence, it is regarded as non-topic-comment structure.

3.3.3 Semantic roles identification

Semantic roles of the subject topics in this study are identified according to the definitions by Haegeman (1994) and the binary semantic features [+cause] and [+mental] by Reinhart (2000) (see section 2.2.1). The analysis of the semantic roles in *NG* and *DC* are shown below.

(7)

- 1) Venezuela's Lake Maracaibo [LOCATION] holds the distinction of being South America's largest lake by area [...]
- 2) The whole one (jackfruit) seen here [THEME] weighs about 20 pounds. [...]
- 3) Kakenya Ntaiya's life [THEME] was mapped out at an early age, as it is for many traditional Kenyan girls: a preordained engagement at age five, followed by genital mutilation at 14, which would mark the end of her formal education and lead to marriage. [...]
- 4) Ntaiya [EXPERIENCER] hopes to raise five million dollars to expand, and to boost enrollment to 600 girls by 2021. [...]
- 5) The 2008 Rolex laureate, who trained as a chemist, [AGENT] created a research database on Petra, mapping and analyzing nearly 3,000 archaeological features carved from red sandstone.
- 6) Akasheh [AGENT] spent three years using photogrammetry to gauge the stability of rocks in the Siq, the main entrance to Petra. [...]
- 7) The quest to

find life on other planets theme] has intrigued scientists for eons. [INSTRUMENT] [...] 8) His research [INSTRUMENT] has taken him from ocean floors to Antarctic glaciers, where he can study life in extreme environments, like those on Europa.

National Geographic

(8)
[...] 1) Saunière [EXPERIENCER] now realized his sénéchaux, following strict procedure, had told the same lie before their own deaths. [...] 2) and the curator [EXPERIENCER] felt a searing heat as the bullet lodged in his stomach. [...] 3) The man [AGENT] was now taking dead aim at Saunière's head. 4) Saunière [AGENT] closed his eyes, his thoughts a swirling tempest of fear and regret. 5) The click of an empty chamber [THEME] echoed through the corridor. 6) The curator's eyes flew open. [...] 7) His books on religious paintings and cult symbology [INSTRUMENT] had made him a reluctant celebrity in the art world. [...] 8) "Boston Magazine [LOCATION] clearly has a gift for fiction."

The Da Vinci Code

The semantic roles of the subject topics identified in the above data are AGENT, EXPERIENCER, THEME, INSTRUMENT, and LOCATION. AGENT is the instigator of the activity with volition, which employs the binary features [+c+m]. EXPERIENCER is the entity experiences the event, with the binary features [-c+m]. THEME is the person/thing undergoes the change of state, with the binary feature [-c-m]. INSTRUMENT is the means used to perform some action, with the feature [+c]. LOCATION is the place where the action is situated, with the feature [-m].

The constructions, the topics, and the semantic roles of the subject topics are identified and classified as demonstrated above in this chapter. The results will be presented in next chapter.

CHAPTER 4

RESULTS

In this chapter, the results are reported corresponding to the research questions: the constructions which represent the topic-comment structures in written English (section 4.1); the relationship between the subjects and the topics (section 4.2); and the AGENT and non-AGENT subject topics (section 4.3).

4.1 Topic-comment constructions

Canonical constructions that represent the topic-comment structures in the data are, transitive, unergative, and unaccusative constructions. Meanwhile, structure-preserving constructions, for instance, the passive, the *tough* constructions and *have* constructions were occasionally found. The imperative construction was also noted.

Among the 263 main clauses which represent the topic-comment structures in *NG*, the majority, which are 252 instances are found with the subject topics, as in (1).

- (1) [Subject Topic She]’s currently raising money to break ground in 2018 on the first of several museums.

Nevertheless, 11 instances noted with the expletive subjects as in (2a) or the indefinite subjects as in (2b), are excluded because these constructions with the expletive subject and the indefinite subject are regarded as the non-topic-comment structure in this study.

- (2)
- a) But [Scene-setting topic for those who would sample], [expletive subject there] is a shortcut.
 - b) [Scene-setting topic Of the top 30] [indefinite subject only six] are not located near mountain ranges.

The constructions which represent the topic-comment structures in *NG* are shown in Table 5.

Table 5: Topic-comment constructions in NG

Constructions	N	%	Examples (NG)
Transitive	116	46.0	(3) He has his training regimen down to a science.
Unergative	22	8.7	(4) The first 26 (students) will graduate from high school in 2017.
Unaccusative	91	36.1	(5) The whole one seen here weighs about 20 pounds.
<i>Have</i> construction	12	4.8	(6) I had a different idea.
Passive	11	4.4	(7) Ceregene was bought by another company in 2013.
Total	252	100	

Within these 252 instances, 116 instances (46.0%), the majority, are transitive constructions as shown in example (3). Second to the transitive constructions are unaccusative constructions as in example (5), which are 91 instances (36.1%). There are 22 instances (8.7%) of unergative constructions as in (4). Meanwhile, the minority, the *have* construction as in (6) and the passive construction as in (7) were occasionally found, 12 instances (4.8%) and 11 instances (4.4%), respectively.

Similarly, among 264 main clauses which represent the topic-comment structures in *DC*, 256 instances were found with the subject topics (see Table 6).

Other eight instances are, however, with topicalized constituents preceding the expletive or indefinite subjects, as demonstrated in (8).

(8)

- a) [Scene-setting topic *As expected*], [expletive subject *it*] was the concierge.
- a) [Scene-setting topic *Far off*], [indefinite subject *an alarm*] began to ring.

Table 6: Topic-comment constructions in DC

Constructions	N	%	Examples (DC)
Transitive	98	38.3	(9) You and your brethren possess something that is not yours.
Unergative	57	22.3	(10) Saunière could not breathe.
Unaccusative	77	30.1	(11) The parquet floor shook.
<i>Have</i> construction	6	2.3	(12) Langdon had little doubt.
Passive	13	5.0	(13) He was trapped inside the Grand Gallery.
<i>Tough</i>	1	0.4	(14) His accent was not easy to place.
Imperative	4	1.6	(15) Do not move.
Total	256	100	

Likewise, transitive constructions in *DC* as in (9) are prominent, which include 98 instances (38.3%) out of 256 instances. Although the unaccusative constructions as in (11) are not as many as those in *NG*, there exist 77 instances (30.1%) in *DC*. In stark contrast, the unergative constructions as in (10), were found more often than those in *NG*. 57 instances (22.3%) of unergative constructions were detected. Additionally, six instances (2.3%) of the *have* construction as in (12) and 13 instances (5.0%) of the passive construction as in (13) were noted, respectively. In particular, four instances (1.6%) of the imperatives were observed in *DC*, as in (15), which are absent in *NG*.

(15)

- a) Do not move.
- b) Now tell me where it is.
- c) Tell me where it is hidden.
- d) So, my pupil, tell me what I must know.

Interestingly, one instance (0.4%) of the *tough* construction was detected, as shown in example (14) in Table 6 above.

4.2 Subject and topic constituents

Compared with the obligatory subject in English, the topic is claimed to be optional (Li & Thompson, 1976). English subject is usually considered as the UNMARKED TOPIC (Lambrecht, 1996) because both the subject and the topic appear in the initial position of the sentence. Nevertheless, due to the different properties of the subject and the topic, various constituents are found to represent either the subject or the topic or both.

Among the 300 main clauses in *NG*, 263 instances are the topic-comment structures. The topics found can be either the subject topic or the scene-setting topics.

It is shown in Table 7, that within the 263 topics, 175 instances (66.5%) are subject topics. The dominant subject topics are DPs (172 instances, 98.3%) as in example (16). The rest 1.7% are CP subject topics, which are three instances, as in (17).

(17)

- a) [_{CP} Breaking one down] takes time.
- b) But [_{CP} winnowing 19 days of food and supplies to fit into a 60-pound backpack] is still daunting.
- c) [_{CP} Keeping your mate extraordinarily close—as in permanently fused to your body]—has its advantages.

These CP subject topics in (17) are control constructions with the covert PRO as the subjects. Since these CPs denoting something mentioned in the previous context, they are given information and specific according to the context. The CPs are topicalized to the topic position of each sentence in (17) and become the subject topics.

Apart from the subject topics, 86 instances (32.7%) are observed with topicalized constituents preceding the subjects as the scene-setting topics. These topicalized constituents are categorized as PPs, adverbs, AdvP, and CPs.

Table 7: Constituents which represent subjects and topics in *NG*

NG	N	%	Examples (<i>NG</i>)
A. Subject Topic (ST)	175	66.5	
a. DP	172	98.3	(16) <u>They [Random House]</u> offered me a book deal.
b. CP	3	1.7	(17) <u>Breaking one down</u> takes time.
B. Scene-setting Topic	86	32.7	
a. PP	39	45.3	(18) <u>In 1999</u> , I was working for AOL
b. Adverb	20	23.3	(19) <u>Most astonishingly</u> , placebos can work even when the person taking them knows they are placebos.
c. CP	27	31.4	
Complement CP	14	51.9	(20) <u>“Basically, they’re big and uncooperative,”</u> says Alger.
AdvP	13	48.1	(21) But <u>if parts of structures crumble</u> , Akasheh’s database can provide references of how the originals looked.
C. T1+T2+T3 ... + (ST)	2	0.8	(22) <u>Today, at 74, Mödl</u> has a warm smile and a wiry frame that looks as if it could survive a charging rhinoceros.

Among the scene-setting topics, PPs as shown in (18) are the most frequently topicalized constituents (39 instances, 45.3%). Second to PPs are CPs which appear quite often (27 instances, 31.4%). 14 instances of the CPs (51.9%) are Complement CPs as in (20). 13 instances (48.1%) are AdvPs as in (21). In addition, 20 instances (23.3%) of Adverbs as in (19), were also found topicalized. Two instances (0.8%) of the topic-comment structures were found with multiple scene-setting topics, as in (22).

(22)

- a) [_{Topic1} Since May 2009], [_{Topic2} when she opened the Kakenya Center for Excellence, a girls boarding school in Ensooan for fourth to eighth graders], nearly 280 girls have attended.
- b) [_{Topic1} Today], [_{Topic2} at 74], [_{Subject topic} Mödl] has a warm smile and a wiry frame that looks as if it could survive a charging rhinoceros.

It is shown in (22a) that the PP and AdvP are topicalized as Topic1 and Topic2 preceding the subject *nearly 280 girls* which is indefinite. Likewise, Adverb *today*, and PP *at 74* are preposed to the topic position preceding the subject topic *Mödl*.

In line with the constituents which represent the subject topics in *NG*, it is shown in Table 8, that 178 instances (67.4%) of the subject topics were found in *DC*, among which 178 instances (100%) are DPs as in (23) and no instance of CP was found.

Table 8: Constituents which represent subjects and topics in DC

DC	N	%	Examples (DC)
A. Subject Topic (ST)	178	67.4	
a. DP	178	100	(23) <u>He</u> lunged for the nearest painting he could see, a Caravaggio.
B. Scene-setting Topic	81	30.7	
a. PP	10	12.3	(24) <u>With the confident tone of a man of enormous influence</u> , the Teacher explained what was to be done.
b. Adverb	20	24.7	(25) <u>Most likely</u> , some religious scholar had trailed him home to pick a fight.
c. DP	2	2.5	(26) "But <u>the church</u> , <u>it</u> is a fortress. Especially at night.
d. CP	49	60.5	
Complement CP	20	40.8	(27) " <u>Pain is good, monsieur</u> ," the man said.
AdvP	29	59.2	(28) <u>When the curator had finished speaking</u> , his assailant smiled smugly.
C.T1+T2+T3+... + (ST)	5	1.9	(29) <u>Suddenly</u> , <u>now</u> , <u>despite all the</u>

DC	N	%	Examples (DC)
			<u>precautions... despite all the fail-safes...</u> Jacques Saunière was the only remaining link, the sole guardian of one of the most powerful secrets ever kept.

Aside from the DP subject topics, 81 instances (30.7%) of the topicalized PPs, Adverbs, DPs, CPs preceding the subjects were also found. Among these constituents, 49 instances (60.5%) of CPs appear. There are 29 instances (59.2%) of AdvPs as in (28), which is the majority, and 20 instances (40.8%) of Complement CP as in (27) respectively. Being second to CPs, 20 instances (24.7%) of Adverbs as in (25), were observed in the initial position of the constructions. Although PPs as in (24) are not as prevailing as those in *NG*, 10 instances (12.3%) were noted. In particular, two instances (2.5%) of dislocated DPs were found in the constructions, as in (26)

(26)

- a) But the church, it is a fortress.
- b) but a man like this... I cannot presume the authority to stop him.

In (26a), the subject *the church* is preposed to the initial position of the sentence, and it co-refers to the pronoun *it* in the main clause. In contrast, in (26b), the object *a man like this* of the verb *stop* is preposed, and it co-refers to the pronoun *him* retaining in the main clause.

Moreover, five instances (1.9%) are with multiple topics, as in (29).

(29)

- a) [_{Topic1} Only fifteen feet away], [_{Topic2} outside the sealed gate], [_{Subject topic} the mountainous silhouette of his attacker] stared through the iron bars.
- b) [_{Topic1} Suddenly], [_{Topic2} now], [_{Topic3} despite all the precautions...] [_{Topic4} despite all the fail-safes...] [_{Subject topic} Jacques Saunière] was the only remaining link, the sole guardian of one of the most powerful secrets ever kept.
- c) [_{Topic1} Last month], [_{Topic2} much to Langdon's embarrassment], [_{Subject topic} *Boston Magazine*] had listed him as one of that city's top ten most intriguing people—a dubious honor that made him the brunt of endless ribbing by his Harvard colleagues.

- d) [_{Topic1} Tonight], [_{Topic2} three thousand miles from home], [_{Subject topic} the accolade] had resurfaced to haunt him at the lecture he had given.
- e) [_{Topic1} Tonight], [_{Topic2} at last], [_{Subject topic} Silas] felt he had begun to repay his debt.

In (29), multiple topics are observed, including the topicalized adjuncts Adverbs, PPs, and the subject topics. In (29a) and (29 c), the constituents Adverbs and PPs are topicalized to form the hierarchy like Adverb + PP + Subject topic, while five constituents are topicalized to the topic position in (29b) as Adverb + Adverb + PP + PP + Subject topic. In (29d) and (29e), two Adverbs are topicalized preceding the subject topic, as Adverb + Adverb + Subject topic.

Apart from the subject topics which are mainly represented by DPs, multiple topics (e.g. the scene-setting topics) were found. The scene-setting topics are PPs, Adverbs, CPs, and DPs, in which PPs are prominent in *NG* and CPs, inter alia, the AdvPs, are salient in *DC*.

4.3 AGENT and non-AGENT subject topics

Li and Thompson (1976) consider AGENT the preferred semantic role for the argument in the subject position in English. Topics in this study are found mainly in the initial position of a sentence, inter alia, constructions with the subject topics. Therefore, Tomlin (1983) holds that the topic and the AGENT semantic role vie for the subject position. In the data, AGENT is found prominent in *DC* whereas non-AGENT is observed as the majority in both *NG* and *DC*.

Within the 172 instances of the DP subject topics in the initial position in *NG*, the most prominent semantic role found is THEME (see Table 9). There are 83 instances (48.3%) of THEME subjects, including ten instances (12.0%) in the passive construction, as in (34), and 73 instances (88.0%) in the unaccusative construction as in (35). 43 instances (25.0%) of AGENT subjects as in (30) were found, which are second to THEME. Additionally, 30 instances (17.4%) of EXPERIENCER subjects as in (32), were also discovered. Aside from THEME, AGENT, and EXPERIENCER subjects, 13 instances (7.6%) of INSTRUMENT as in (31) and three instances (1.7%) of LOCATION subjects were noted as in (33).

Table 9: Semantic roles of the subject topics in NG

Semantic roles	N	%	Examples (NG)
1 AGENT	43	25.0	(30) But <u>she</u> eventually persuaded her family and her village of Enosaen to allow her to leave and get an education.
2 INSTRUMENT	13	7.6	(31) <u>The comic books</u> help educate Rwanda's youth about conservation and biodiversity.
3 EXPERIENCER	30	17.4	(32) But <u>I</u> also liked eating regular meals
4 LOCATION	3	1.7	(33) <u>It</u> [<u>The jackfruit</u>] has a texture (though not a protein content) like meat's.
5 THEME	83	48.3	
a. passive	10	12.0	(34) but <u>their way of life</u> is threatened by disappearing grazing lands, mechanized farming, and falling demand for camels.
b. unaccusative	73	88.0	(35) Spiky, gigantic, and fibrous <u>jackfruit</u> may not seem particularly inviting.
Total	172	100	

In contrast, Table 10 below shows that among the 178 instances of DP subject topics in the initial position in *DC*, there exist 78 instances (43.8%) of AGENT as in (36). Being second to AGENT subjects, 60 instances (33.7%) of THEME subjects were noted. It is consistent with those in *NG*, the THEME subject topics were also found in the unaccusative constructions as in (41) with 50 instances (83.3%) and the passive constructions as in (40) with 10 instances (16.7%). Correspondingly, 33 instances (18.6%) of EXPERIENCER subjects as in (38) were observed. In addition, five instances (2.8%) of INSTRUMENT as in (37), and two instances (1.1%) of LOCATION were observed as in (39).

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Table 10: Semantic roles of the subject topics in DC

Θ roles	N	%	Examples (DC)
1 AGENT	78	43.8	(36) <u>The man</u> leveled his gun at the curator's head.
2 INSTRUMENT	5	2.8	(37) <u>His books on religious paintings and cult symbology</u> had made him a reluctant celebrity in the art world
3 EXPERIENCER	33	18.6	(38) <u>Robert Langdon</u> awoke slowly.
4 LOCATION	2	1.1	(39) <u>Boston Magazine</u> clearly has a gift for fiction.
5 THEME	60	33.7	
a. passive	10	16.7	(40) <u>He</u> was trapped inside the Grand Gallery
b. unaccusative	50	83.3	(41) <u>The click of an empty chamber</u> echoed through the corridor.
Total	178	100	

With regard to the semantic roles of the subjects which represent the topics, AGENT is prominent in *DC*, but non-AGENT is dominant in *NG*. Overall, non-AGENT appears more frequent than AGENT in both data sets. Aside from AGENT, THEME, EXPERIENCER, INSTRUMENT and LOCATION occur in the data. In particular, THEME is salient in both *NG* and *DC*.

The data reveal that the topic-comment structures outweigh the non-topic-comment structures in both *NG* and *DC*. The topic-comment structures are found mainly represented by the canonical transitive, unergative and unaccusative constructions. Additionally, the structure-preserving constructions, such as the passive construction was observed in both *NG* and *DC*, but only one instance of the *tough* construction was found in *DC*. Furthermore, *have* construction was found in both *NG* and *DC*, while the imperative construction was discovered only in *DC*. Regarding the constituents which represent the topics, DPs, CPs, Adverbs, PPs were observed. DPs play a major role in representing the subject topics in both *NG* and *DC*, while CPs were occasionally found in *NG*. For the topicalized constituents preceding the subjects (i.e. the scene-setting topics), PPs are prominent in *NG* and CPs are salient in *DC*. With regard to the AGENT or non-AGENT semantic roles of the subject topics, AGENT is prominent in *DC* while THEME is the majority in *NG*. Overall, non-AGENT semantic roles, such as THEME, EXPERIENCER, INSTRUMENT and LOCATION appear more often than AGENT in the data.

Most of the topic-comment structures are represented by the canonical transitive, unergative and unaccusative constructions. The topics are mainly subjects, which are DPs. Multiple topics are CPs, PPs, adverbs and DPs. The subjects which represent the topics have non-AGENT semantic roles as the majority in the data sets. In Chapter Five, the reasons and factors governing these occurrences will be further explored and discussed.

CHAPTER 5

DISCUSSION

The findings show that English written language in the data makes use of both the subject-predicate structure syntactically and the topic-comment structure pragmatically. Syntactic rules and pragmatic principles are seen as inseparable like two sides of a coin for the written English language. This study suggests that English is better to be classified as a subject-prominent and topic-prominent language because the language follows the subject-predicate structure as well as the topic-comment structure. The topic-comment structure represented in English is different from that in topic-prominent languages in terms of the topic-comment constructions, the topicalized constituents, and the subject-topic semantic roles. The concept of the topic and topic-comment sentence structure is an issue of the interface between syntax and pragmatics. This study analyzes the topic-comment sentence structure from both the syntactic and the pragmatic perspectives.

Subject topicalization is extensive in both the canonical constructions and structure-preserving constructions (see section 2.3). The investigation of the constituents which represent the subjects and multiple topics cast light on the independent but interrelated connections between subjects and topics. Moreover, the topic status influences the choice of the subject to a great extent because the topic of a sentence affects the selection of a construction from the allosentences (see section 5.2.2).

To further explore the topic-comment structure in English, the topic-comment constructions, the topicalized constituents, and the semantic role of the subject topic will be discussed in detail. The discussion is divided into five parts: non-topic-comment sentence structures (section 5.1); topic-comment sentence structures (section 5.2); types of topic-comment constructions (section 5.3); topic constituents (section 5.4), and semantic roles of subject topics (section 5.5).

5.1 Non-topic-comment sentence structures

The topic-comment sentence structures in the data outweigh the non-topic-comment sentence structures. The ratios of the topic-comment structures and the non-topic-comment structures in the two data sets are 87.7:12.3 and 88:12, respectively.

Based on the working definition of the topics in this study, the expletive subject and the indefinite subject are excluded. In accordance with Rizzi's (1997) Split CP hypothesis, *wh*-question and *yes-no* question main clauses are not considered the topic-comment constructions. The non-topic-comment constructions, as in (1), appear for a reason.

- (1)
- a) Am I correct that you were scheduled to meet with the curator of the Louvre this evening? (DC)
 - b) How did you know that? (DC)
 - c) A crucial part of an inspiring performance is sets and costumes. (NG)
 - d) It's a long way from Costa Rica's rain forests to a Washington State prison. (NG)

The *yes-no* main clause in (1a) introduces a new topic for the upcoming sentence, for instance, the schedule to meet the curator of the Louvre that evening. The *wh*-question main clause in (1b) requests new information about the way that the speaker got to know the schedule, and the known information *that* refers back to the appointment in the previous clauses. The examples (1a) and (1b) with the context are demonstrated as in (2).

- (2)
- "It's after midnight." (1a) **"Am I correct that you were scheduled to meet with the curator of the Louvre this evening?"** Langdon felt a sudden surge of uneasiness. He and the revered curator Jacques Saunière had been slated to meet for drinks after Langdon's lecture tonight, but Saunière had never shown up. "Yes. (1b) **How did you know that?"** "We found your name in his daily planner."

The sentence in (1c) initiates with an indefinite DP *a crucial part of an inspiring performance* which serves the purpose of introducing a new topic about the sets and costumes for the inspiring performance. As for (1d), the expletive *it* is semantically null and the latter part of the sentence involves unknown information.

Although the non-topic-comment constructions do not specify the topic of the sentence *per se*, they introduce new information which are potential topics for the clauses following them. With respect to these non-topic-comment constructions,

Gundel (1974, as cited in Erteschik-Shir, 2007) argues that they do have a topic identifying “the particular situation (time and place) about which it is asserted” (p. 16). In other words, all the non-topic-comment constructions have the covert scene-setting topics which denote the time and place of the utterance. In support of Gundel, Erteschik-Shir (1997) regards that expletive constructions have the implicit *stage topics* (Erteschik-Shir, 2007, p. 16) indicating the *spatio-temporal parameters* of the sentence, namely here and now. The stage topics (e.g. time and space) are not under the discussion here because this study is centered on the “text-internal world which comprises the linguistic expressions (words, phrases and constructions) and their meanings” (Lambrecht, 1996, p. 37), rather than the “text-external world which comprises the speech participants and the speech setting” (Lambrecht, 1996, p. 36). Regardless of the stage topics, the non-topic-comment constructions serve the function of introducing a topic or shifting from one topic to another. In a broad sense, they also abide by the topic-comment structure. The non-topic-comment structures, thus, are considered supporting the appearance of topic-comment structures.

5.2 Topic-comment sentence structures

From the typological point of view, English is classified as a subject-prominent language which follows the subject-predicate structure (Li & Thompson, 1976). However, the topic-comment structure is a common principle to designate the sentential elements in English (Lambrecht, 1996). This section explores the topic-comment sentence structures in the data from two perspectives, namely the typological and the information structure perspectives.

5.2.1 Typological perspective

Based on the frequency of the topic-comment sentence structures and the non-topic-comment sentence structures, it is discovered that English constructions also abide by the topic-comment structure.

The way that the topic-comment sentence structure is represented in English is different from that in the topic-prominent languages, like Chinese and Lahu (Li & Thompson, 1976). English does not change its grammatical configurations or alter the subject-predicate word order to represent the topic-comment structure (Gundel, 1988). Aside from the prosodic stress (see section 2.1.1.2), topicalization in English preposes the constituents, such as the arguments and the adjuncts, to the topic position (see

section 5.4). Multiple topics consist of the scene-setting topics as in (3b) together with the subject topics as in (3a) and (3b).

(3)

- a) [Subject topic Richard Mödl] had recently broken his heel. (NG)
- b) [Scene-setting topic In 2003] [Subject topic he] was determined to complete his first pilgrimage from Regensburg to Altötting. (NG)

The structure-preserving constructions, such as the passive and the *tough* constructions are also observed to represent the topic-comment sentence structure in the data, as in (4).

(4)

- a) [Subject topic This photo] was taken less than an hour ago. (DC)
- b) [Subject topic His accent] was not easy to place. (DC)

The subject *this photo* in (4a) and *his accent* in (4b) demonstrate the given and definite information from the previous context as in (5a) and (5b) and they are the subject topics of the constructions.

(5)

- a) When Langdon saw the photo, his entire body went rigid. **(4a) This photo was taken less than an hour ago.**
- b) "You should not have run." **(4b) His accent was not easy to place.**

The data agree with the generalization that structure-preserving constructions are responsible for maintaining the subject-predicate in English (Emonds, 1976, as cited in S. A. Thompson, 1978) on the one hand. On the other hand, they also satisfy the requirement of the topic-comment structure (see section 5.3.2).

In English, non-canonical word orders were observed to mark the information status of the sentential elements (Birner, 2013). For instance, the preposing construction in (6a), postposing construction in (6b) were noted to follow the information structure in which given information comes before new information in the discourse (Birner, 2013).

(6)

- a) I want to have a really big kitchen someday. The house itself I don't care about, but the kitchen needs to be big. (Birner, 2013, p. 54)

- b) The volume of engine sound became louder and louder. [...] There appeared police vans and police buses, one, two, four, six, eight of each.

(Birner, 2013, p. 50)

The preposed DP *the house itself* in (6a) is the inferable information which is discourse given because the house is presupposed by the kitchen in the preceding clause. In (6b), the underlined information is not mentioned and cannot be inferred from the prior clause, so it is relatively new information in the discourse. The postposing construction is to make the relative new information come later in the clause.

The examples in (6) show that although English constructions follow subject-predicate structure, they change the order of elements to accommodate the pragmatic purpose in a given discourse context, in which given information precedes new information (Birner, 2013). Therefore, English constructions follow the subject-predicate structure on the sentence level while they abide by the topic-comment structure on the discourse pragmatic level.

English constructions, such as the canonical and the structure-preserving constructions observe the subject-predicate structure syntactically, which makes English a subject-prominent language. Nevertheless, these constructions also abide by the topic-comment structure pragmatically. In addition, English speakers make use of syntactic operations, for instance, preposing and postposing to follow the topic-comment structure on the discourse pragmatic level. Topic-comment structure is the defining characteristics of the English language.

5.2.2 Information structure perspective

In accordance with Lambrecht (1996), information structure of English constructions are classified into four categories. Apart from the identificational structure and the event-reporting structure (see section 2.1.1.1), the topic-comment structures with subject topics and the background-establishing structures with scene-setting topics play a dominant role in structuring the information of English constructions. The scene-setting topic provides the temporal, spatial and manner framework for the main predication.

Information structure is centered on the formal structuring of a proposition in a discourse (see section 2.1.1.1). In this sense, one meaning can be expressed by a

variety of constructions called *allosentences* (Daneš, 1966, as cited in Lambrecht, 1996, p. 6). Allosentences refer to a group of constructions which are semantically equivalent but formally and pragmatically different, as demonstrated in (7).

(7)

- a) The hostess goaded the crowd. (DC)
- b) The crowd were goaded by the hostess.
- c) The crowd, the hostess goaded.
- d) It was the crowd that the hostess goaded.
- e) What the hostess did was goad the crowd.

In fact, the constructions in (7) are just a part of examples which convey the same proposition with various formal structures and different pragmatic interpretations. However, these allosentences, albeit grammatically correct and semantically equivalent to each other, cannot apply to the same pragmatic context. Therefore, only a specific sentence structure is felicitous in a given discourse context, which usually follows the topic-comment structure, as demonstrated in (8a).

(8)

- a) They have a great big tank in the kitchen, and in the tank are sitting all of these pots. (Jeff Smith, *Frugal Gourmet*, 6/17/89, as cited in Birner, 2013, p. 43)
- b) They have all of these pots in the kitchen, and # in a great big tank are sitting all of the pots. (Birner, 2013, p. 43)

In (8a), the preposed PP *in the tank* to the initial position of the clause refers back to the given information of the tank in the previous clause. The preposing of the PP makes the discourse coherent in which the given comes before the new. It is, thus, felicitous in this context. On the contrary, the inversion in (8b) is infelicitous, as the given information *all of the pots* is postposed while the relatively new information *a great big tank* is in the initial position of the clause. Hence, the choice of a certain sentence is constrained by the topic-comment structure in a given discourse.

Topic-comment structures found in *NG* are demonstrated as in (9).

(9)

- a) [Scene-setting topic After earning a Ph.D. in education from the University of Pittsburgh], [Subject topic Ntaiya] decided to pay it forward. (NG)

- b) [Scene-setting topic Since May 2009], [Scene-setting topic when she opened the Kakenya Center for Excellence, a girls boarding school in Enoosaen for fourth to eighth graders], nearly 280 girls have attended. (NG)
- c) [Subject topic They] gain knowledge and are encouraged to break the cycle of cultural practices such as genital mutilation and early forced marriage. (NG)

In (9), the preverbal constituents exhibit the patterns, namely, the topicalized adjuncts + subject topic in (9a), the topicalized adjuncts + non-topic subject in (9b), and the subject topic in (9c). These constructions are with either scene-setting topics or subject topics, or both.

The topic-comment constructions in (9) preposed either the adjuncts or the subject, or both to the topic position, and hence make the preposed constituents the topic(s). In accordance with Ward (1988; 2016), preposing has two pragmatic functions, namely, marking the backward looking center of an utterance and making the open proposition salient. The constructions in (9) are consecutive constructions from a discourse about a Kenyan girl's life. They appear with the preceding clause as in (10).

(10)

But she eventually persuaded her family and her village of Enoosaen to allow her to leave and get an education. (9a) After earning a Ph.D. in education from the University of Pittsburgh, Ntaiya decided to pay it forward. (9b) Since May 2009, when she opened the Kakenya Center for Excellence, a girls boarding school in Enoosaen for fourth to eighth graders, nearly 280 girls have attended. (9c) They gain knowledge and are encouraged to break the cycle of cultural practices such as genital mutilation and early forced marriage.

The topicalization of the PP in (9a) echoes the information in the previous clause that she (Ntaiya) was permitted to receive an education. In the same vein, the topics of (9b) and (9c) convey the given information aforementioned in the prior clause. In particular, the non -topic subject *nearly 280 girls* in (9b) introduces the relevant but new topic for the following clause, and in turn derives the given and definite information *they* in (9c) which refers back to the girls who attended the school. The constructions in (9), therefore, follow the topic-comment structure to make the

discourse coherent and easy to process.

Likewise, in *DC*, the occurrences of the topic-comment structure, are shown as in (11).

(11)

- a) [Subject topic Renowned curator Jacques Saunière] staggered through the vaulted archway of the museum's Grand Gallery.
- b) [Subject topic He] lunged for the nearest painting he could see, a Caravaggio.
- c) [Scene-setting topic Grabbing the gilded frame], [Subject topic the seventy-six-year-old man] heaved the masterpiece toward himself until it tore from the wall.

In (11), the sentence topics are continuous topics *Jacques Saunière*, *he*, and *the seventy-six-year-old man* which share the same referent. The continuous topics make the discourse coherent. The topics in (11a) and (11b) are represented by the subjects while the comments, the predicates, which is the typical and canonical way to represent the topic-comment structure in English. The AdvP *grabbing the gilded frame* has the covert subject that shares the reference with the subject of the main clause (Kortmann, 1995, as cited in Killie, 2006, p. 448). The preposed AdvP is connected with the previous clause. Specifically, what he grabbed is *the gilded frame of the painting, a Caravaggio* mentioned in the previous main clause.

Based on the information structure of English constructions, the canonical and the structure-preserving constructions follow the topic-comment structure on the pragmatic level, which makes the discourse coherent. English canonical and structure-preserving constructions map the subject-predicate structure to the topic-comment structure. English constructions generate the subject topics and the scene-setting topics via topicalization of the arguments and the adjuncts.

5.3 Types of topic-comment constructions

In the data, the canonical transitive, unergative, and unaccusative constructions play a major role in representing topic-comment sentence structures. Structure-preserving constructions, such as the passive, the *tough*, and *have* constructions were found to represent topic-comment sentence structure as well. Covert subjects in the imperative construction and elliptical construction were also found to represent the

topics of the constructions. On the other hand, the expletives, which are non-topic-comment sentence structures, add new information or introduce new topics to the discourse. The mapping of the subject-predicate structure to the topic-comment structure of the English constructions in the data is discussed in this section.

5.3.1 Canonical constructions

Canonical constructions in the data are classified as the transitive, unergative and unaccusative constructions (see section 2.2.1).

Transitive constructions are the most prominent canonical constructions found in both data, as shown in (12).

(12)

- a) [subject I] [predicate wrote [object a book]]. (NG)
- b) [subject The hostess] [predicate goaded [object the crowd]]. (DC)

In (12), the predicate *write a book* and *goad the crowd* collocate with the animate subjects. Apparently, the animate subject instigates the activity that affects the object. In addition, the subjects *I* in (12a) and *the hostess* in (12b) convey the given information mentioned in the previous clauses as in (13). Therefore, the subjects mapped to the topics while the predicates, the comments.

(13)

- a) I had a bunch of money in stock options, so I took three years off. **(12a) I wrote a book.**
- b) The hostess began reading choice excerpts from the inane article, [...] and the woman showed no signs of letting up. [...] **(12b) The hostess goaded the crowd.**

Unergative constructions resemble transitive constructions in the agentive/EXPERIENCER subjects. Unergative predicates reflect “volitional actions of the subjects or involuntary bodily process of humans” (Kuno & Takami, 2004, p. 10), as in (14).

(14)

- a) So [subject he] [predicate walked]. (NG)
- b) Finally, [subject he] [predicate spoke]. (DC)
- c) [subject I] [predicate don’t care about interpersonal relationships]. (NG)

In (14a) and (14b), the subject *he* is the AGENT which intentionally initiates the action of walking and speaking, while the subject *I* in (14c) is EXPERIENCER. In the data, the unergative subjects are topics which express the given information referring back to the previous clauses as shown in (15).

(15)

- a) But he had a deep faith in the Virgin Mary's ability to deliver him. (14a)
So he walked.
- b) The Teacher fell silent, as if letting the triumph of this moment settle over him. (14b) **Finally, he spoke.**
- c) I don't know if I'm happy or sad that that was your mental state at the time. [...] (14c) **I don't care about interpersonal relationships.**

With regards to agentivity, parts of the body can also be considered AGENT, as demonstrated in (16).

(16) [Subject His well-developed eyes] [predicate search for a spot of light: the bioluminescent lure on a stalk adorning the female's brow].

His well-developed eyes in (16) is a case of metonymy where the part stands for the whole (Lakoff & Johnson, 2003, p. 30). Therefore, the eyes represent the anglerfish which is the AGENT subject of the sentence.

Unlike the transitive and the unergative constructions, the unaccusative constructions take THEME subjects. The unaccusatives, as in (17), which are second in the data to the transitive constructions, were found to frequently occur in both *NG* (91 instances) and *DC* (77 instances).

(17)

- a) [subject Her Sustainability in Prisons Project] [predicate has since spread to several states]. (NG)
- b) [subject Patients who had been treated with the drug] [predicate did not improve any more significantly than those in a control group...]. (NG)
- c) [subject The parquet floor] [predicate shook]. (DC)
- d) [subject The agent] [predicate looked grim]. (DC)

In (17), the THEME subjects are either animate in (17b) and (17d) or inanimate in (17a) and (17c), which are not fully consistent with the binary features [-c-m] by Reinhart (2000). They depict the person as in (17b) and (17d) or thing as in (17a) and

(17c) undergoing the change of state (Haegeman, 1994). The THEME subjects in the above constructions are topics expressing the given information mentioned in the preceding discourse or being inferable in the context as shown in (18), which are definite and specific in the context.

(18)

- a) But after years of fieldwork, she turned to developing nature programs for prison inmates while teaching at Washington's Evergreen State College. **(17a) Her Sustainability in Prisons Project has since spread to several states.**
- b) In April 2013, Ceregene announced the results of the trial: Neurturin had failed. **(17b) Patients who had been treated with the drug did not improve any more significantly than those in a control group [...].**
- c) As he had anticipated, a thundering iron gate fell nearby, barricading the entrance to the suite. **(17c) The parquet floor shook.**
- d) "Positioned?" the agent offered. [...] **(17d) The agent looked grim.**

With regards to frequency, the transitive constructions occur more often than the unaccusative constructions, and, in turn, more frequent than the unergative constructions in both data sets uniformly, as shown in the hierarchies formed in (19) below.

(19)

- a) NG: transitive (116 instances) > unaccusative (91 instances) > unergative (22 instances)
- b) DC: transitive (98 instances) > unaccusative (77 instances) > unergative (57 instances)

The above hierarchies of the canonical constructions which represent the topic-comment structure according to the frequency of their appearances in written texts are different from the hierarchy proposed by Haspelmath (2016). Based on the usage frequency of the basic verbs with the causal and non-causal meanings, Haspelmath (2016, p. 34) generalizes the scale as in (20).

(20) transitive > unergative > automatic (intr. e.g. *freeze*) > costly (intr. e.g. *break*) > agentful (e.g. *be cut*).

Haspelmath's hierarchy is based on the degree of verb causality. The basic (i.e.

non-derived) verbs in the leftward position of the scale tend to express causative meaning while the verbs in the rightward position convey the anti-causative meaning. In (20), the *automatic* and *costly* intransitive verbs are ad hoc terms to subdivide unaccusatives. Meanwhile, *agentful* here mainly refers to the passive verbs. Hence, the scale in (20) can be reformulated as in (21).

(21) transitive > unergative > unaccusative > passive

By comparison, only the behavior of the transitives in the data reflects the general appearance of the transitives according to Haspelmath (2016). The unaccusatives in the data appear more frequent than the unergatives which is opposite to that in Haspelmath's hierarchy. The hierarchies constructed from the data reveal that causativity of a construction does not affect its frequency. Instead, it is the topic-comment structure that determines the textual occurrences of the English canonical constructions.

The findings show that canonical transitive, unergative and unaccusative constructions are the majority to represent topic-comment sentence structures. The subjects map to the topics while the predicate maps to the comment. This corresponding mapping is unmarked and needs minimum syntactic operation in the part of the topic, namely, the A-bar movement from the subject to the topic positions. Hence, the canonical constructions are the optimal candidates to represent the topic-comment structure in English. As for the frequency of the canonical constructions, the disagreement with Haspelmath's (2016) hierarchy leads to the claim that the occurrences of the canonical constructions in English are due to their capability of accommodating the topic-comment structure rather than the degree of causativity of the verbs.

5.3.2 Structure-preserving constructions

Structure-preserving constructions are considered special in English to maintain the subject-predicate structure (Emonds, 1976, as cited in S. A. Thompson, 1978, p. 28). The passive, the *tough*, the *have*, and the expletive constructions were found in the data.

The difference between the structure-preserving constructions and the canonical constructions is that the canonical constructions are frequent, economical, basic, default, and unmarked in English (Lambrecht, 1996, p. 17; 21), while the structure-

preserving constructions are derived and marked constructions that are infrequent (Emonds, 1976, as cited in S. A. Thompson, 1978).

Compared to the canonical constructions, the passive construction appears less frequent. The passive construction allows a different linearization of the arguments and different structure of the information in subject-prominent languages (Lyngfelt & Solstad, 2006, p. 9). In other words, the element which functions as the complement of an active verb surfaces as the subject in the corresponding passive construction (Radford, 2009).

The passive construction was found in both *NG* (11 instances) and *DC* (13 instances), as shown in (22).

(22)

- a) Ceregene was bought by another company in 2013. (NG)
- b) It /The book did not get published. (NG)
- c) He was trapped inside the Grand Gallery. (DC)
- d) Locks were forbidden here. (DC)

In (22), the subjects of the passive constructions are THEME. These subjects exhibit the properties of givenness, definiteness and aboutness. Therefore, like the canonical subjects, THEME subjects which position themselves in the initial position of the passive construction are the topics of the constructions.

In addition, the *get*-passive construction as in (22b) was observed in the data. In English, the *get*-passives are usually used in adversive conditions (Herold, 1986, as cited in Givón & Yang, 1994, p. 137), but it is similar to the *be*-passives syntactically in that both are with the “topic-of-passive” (p. 119) placing in the subject position.

Another THEME-subject structure-preserving construction, the *tough* construction is also typologically marked in English (Emonds, 1976, as cited in S. A. Thompson, 1978). Only one instance of the *tough* construction was found in *DC*, as in (23a). And a variation of the *tough* construction is shown in (23b).

(23)

- a) His accent was not easy to place.
- b) It was not easy to place his accent.

The subject of the *tough* construction in (23a) is the complement of the embedded verb in (23b). In this regard, the subject of the *tough* construction is raised

from the complement position of the embedded verb. The purpose of the movement is to form a topic representing the given information to conform to the given-new information structure of the sentence (Hietaranta, 1984; Mair, 1987). Specifically, the *tough* construction is considered a topic-comment structure (Goodenkauf, 2009). The subject *his accent* in (23a) is the given information inferred from the preceding clause which is a quoted speech of the protagonist. Despite being a topic-comment structure, only one instance of the *tough* construction was detected in *DC*, which suggests that the *tough* construction is rare in English. Its single appearance leads to the conclusion that, like the passive, the *tough* construction is capable of representing the topic-comment structure, but it is not the best choice probably due to the complicated derivation of the subject.

The third structure-preserving construction, *have* construction, is considered not only a structure-preserving construction, but also a relation-changing construction (Gundel, 1988, p. 225). *Have* construction appears in both *NG* (12 instances) and *DC* (six instances) as in (24).

(24)

- a) It/the jackfruit has a texture (though not a protein content) like meat's. (NG)
- b) [...], he has his training regimen down to a science. (NG)
- c) But you have a visitor. (DC)
- d) Langdon had little doubt. (DC)

In *have* construction, the DP which represents the topic occurs as the subject of the sentence, but it is not the AGENT of the sentence. In (24), the subjects *it/the jackfruit*, *he*, *you*, and *Langdon* are not AGENTS which intentionally initiate the action or a state of affair. Instead, they raise to the subject position because of the topic status (Gundel, 1988). Although agentive subject has the privilege to be in the subject position (Li & Thompson, 1976; Jackendoff, 1990), the non-agentive argument in *have* construction can also be eligible for the position.

Have constructions as in (25a) and (25c) copied from (24b) and (24c) for convenience, correspond to *there*-counterparts as in (25b) and (25d).

(25)

- a) He has his training regimen down to a science.

- b) There is a training regimen down to a science for him.
- c) You have a visitor.
- d) There is a visitor for you.

By comparison, the subjects of the *have* constructions in (25a) and (25c) originate from the complement position of the preposition. The raised subjects in the *have* construction then become the subject topics of the constructions. The stranded preposition can be syntactically deleted in English (Radford, 2009, p. 429), as in (26).

(26)

A: Where are you going (to)?

B: To the post office.

The *have* construction was found in both *NG* and *DC*. The *have* construction does not have a restriction on the choice of the subjects. It is assumed that the *have* construction, like the other structure-preserving constructions in the data, is used to represent the topic-comment structure.

On a par with the passive, the *tough* and the *have* constructions, the expletives are also a structure-preserving construction. The expletives are, however, the only one being a non-topic-comment structure due to its non-referential and semantically null subject, as shown in (27).

(27)

- a) It remains to be seen whether Americans will embrace this South Asian staple, which grows in abundance in its native India. (NG)
- b) There existed only one person on earth to whom he could pass the torch. (DC)

In (27), the extraposition *it* and the existential *there* are the subjects to satisfy the EPP feature (Radford, 2009, p. 45). They are not given, definite and specific information and are not what the sentence is about, so they are non-topic subjects.

With 14 instances in *NG* and 13 instances in *DC*, the expletives in the data function to maintain the subject-predicate structure, and, meanwhile, add new information or introduce a new topic to the discourse, as demonstrated in (28).

(28)

- a) Parkinson's is the result of a chronic loss of the neurotransmitter dopamine. It had been shown in monkeys that injections of a protein

called neurturin could halt the progress of the disease by protecting and possibly repairing damaged dopamine-secreting neurons. Ceregene's experimental treatment was to cut two holes, one in each hemisphere of the brain, through a patient's skull and inject the drug directly into the target regions. (NG)

- b) Dazed, Langdon looked at the bedside clock. It was 12:32 A.M. He had been asleep only an hour, but he felt like the dead. (DC)

In (28a), the expletive construction adds new information to the discourse and facilitates to shift the topic from the cause of Parkinson disease to its treatment. In turn, it leads to the new topic of the following sentence about the treatment experiment. In (28b), the expletive *it* denotes the time which adds new information to the preceding sentence. The expletive construction does not introduce a new topic but is related to the information of comment in the upcoming clause.

The above structure-preserving constructions are less frequent in the data because they are typologically and syntactically marked in English (Emonds, 1976, as cited in S. A. Thompson, 1978). Subject-raising is not as economical as subject topicalization in canonical constructions to represent the sentence initial topic. The expletive construction does not represent topic-comment structure *per se*, but it adds new information to the discourse and establishes the background information for the following clause.

When compared to the canonical constructions, structure-preserving constructions derive the subject via syntactic movement to keep the subject-predicate structure syntactically. Structure-preserving constructions generate non-agentive subjects via syntactic movement of the arguments. The derived subjects map to the topics while the predicate maps to the comment. Therefore, structure-preserving constructions assume the function of maintaining the subject-predicate structure in English; meanwhile, they also represent the topic-comment structure on the discourse pragmatic level.

5.3.3 Covert subject constructions

In addition to the imperatives, the data also consist of the subjectless construction as another covert subject construction. The subjects of the imperatives and the subjectless construction are inferential and recoverable from the context. The

covert subjects of the imperatives and the subjectless constructions in the data were found to be the topics of the constructions.

The imperatives are constructions with covert or overt agentive subjects. In the data, four instances of imperatives were found in *DC*, as shown in (29), but none is in *NG*.

(29)

- a) “Do not move.”
- b) “Now tell me where it is.”
- c) “Tell me where it is hidden.”
- d) “So, my pupil, tell me what I must know.”

The imperatives canonically apply to express the sentential force of directives such as order, commands, and requests etc. (Han, 2019, p. 226). In (29a-c), the assailant ordered the curator not to move and threatened the curator to tell him the secret. In (29d), the master commanded and requested the information he wanted to know from the assailant. One important prerequisite for the imperatives is that the speaker believes the state of affairs depicted by the imperatives is realizable (Han, 2019, p. 233). It is expected that what the speaker uttered in the imperative clause is the information which is known by both the speaker and the hearer, but which has not been executed by the hearer.

With respect to the subject of the imperatives, if it is covert, usually it is understood as the second person pronoun *you* (S. Zhang, 1990). In (29), all the imperatives have the covert subject *you* which is predictable from the discourse. It is assumed that “the covert subject in the imperatives is the *wh*-trace of an empty topic operator” (Beukema & Coopmans, 1989, as cited in Han, 2019, p. 245). This is consistent with the argument that the covert subject in the imperatives is PRO¹¹, whose reference conforms to an implicit arbitrary addressee (Radford, 2009). In this sense, the arbitrary addressee controls the covert PRO subject, spelling out as *anyone* or *you* (Han, 2019, pp. 245-246). Therefore, the covert subject *you* in the imperatives is considered the topic of the sentence.

¹¹ PRO, also referred to as “big PRO”, which is a null subject found in control construction. PRO is claimed to have the same grammatical and referential properties as a pronoun e.g. We would like [PRO to stay]. (Radford, 2009, p. 94).

Only four instances of the imperative construction appear in *DC*, which shows some effect of genre as imperative construction expresses a special mood in the discourse context. The imperative construction, with the identifiable covert subject is syntactically interpreted as a canonical construction. Like other canonical constructions, the imperative covert subject maps to the topic while the predicate, the comment. The imperative construction does not occur as often as the canonical constructions in the data, but it also plays a significant role in representing the topic-comment structure.

Similar analysis of the imperative construction applies to the subjectless construction, as in (30). Two instances of the subjectless construction in *NG* and one in *DC* are found to represent the topic-comment structure. In this study, the subjectless constructions are conflated in the canonical constructions since they exhibit the same syntactic structure with the only difference in the covert subject.

(30)

- a) Well, (I) see. (NG)
- b) And (he) walked. (NG)
- c) but then (he) seemed to reconsider, smirking calmly at Saunière's gut.

(DC)

Subjectless constructions omit the pragmatically recoverable element in the initial position of the sentence (Reiman, 1994). They are different from the imperative constructions in the indicative mood. In (30), the omitted subject is recoverable and predictable from the preceding discourse. For instance, the covert subject *I* in (30a) is predictable from the discourse context as *I see*.

In comparison with the pronoun *he* in (30b) and (30c), covert subject functions to encode the continuous topics in the discourse (Reiman, 1994, p. 148), which makes the discourse more coherent. In (30b), the preceding clause as in (31), entails the continuous topic *he* which makes the covert subject recoverable from the context.

(31) He walked. (30b) And (he) walked.

Likewise, the covert subject in (30c) is the continuous topic refers back to the preceding clauses, as in (32), which facilitates the readers to work out the elliptical subject from the previous discourse.

(32) The man glanced down at his weapon, looking almost amused. He reached

for a second clip..., (30c) but then (he) seemed to reconsider, smirking calmly at Saunière's gut.

Like the canonical constructions, the subjectless construction shows the way of mapping the covert subject to the topic and the predicate, the comment.

The above discussion illustrates the appearance of the canonical transitive, unergative and unaccusatives constructions in the data that plays an important role in representing the topic-comment sentence structure in English. Apart from the syntactic requirements of the verbs, the choice of the subjects of the canonical constructions are influenced by their topic status to a great extent. As for the structure-preserving constructions, the raising of the subjects are well motivated by the topic status. Although the expletives are all-comment clauses and the subjects of the expletives are non-topic, they add new information or introduce a new topic for the subsequent clause in the discourse. Topics can also be covert as in the subjects of the imperative and the subjectless constructions. The covert subjects are pragmatically recoverable information or the continuous topics in the discourse.

In general, except the expletives, the canonical constructions, the structure-preserving constructions, and the constructions with the covert subjects map the subject (overt or covert) to the topic while the predicate to the comment. The topic mapping relation in English employs the least syntactic operations in order to syntactically abide by the subject-predicate structure and to pragmatically represent the topic-comment structure. The investigation of the mapping relation of the constructions in actual discourse context proves the psychological intuition that the English subject is the unmarked topic while the topic-comment structure is the natural information structure of the sentence.

5.4 Topic constituents

The findings show that topics can be of various types of constituents. While subject topics are mostly DPs, with some CPs in *NG*, scene-setting topics, as appear in multiple topic constructions, vary. With the attempt to study how various constituents are arranged in a sentence, this study applies the *Principle of End-Weight* (PEW) (Quirk, Greenbaum, Leech, & Svartvik, 1972, p. 766) and the *Principle of Early Immediate Constituents* (EIC) (Hawkins, 1994, p. 77) to the data. The PEW believes the light constituent is systematically placed before the heavy one, where the

light constituent is likely to be a short phrase, and the heavy constituent, the long phrase. The above principle is explained by the EIC which believes that humans tend to recognize the simple and easy immediate constituents rather than the complicated ones. As a result, the shorter and lighter constituents are likely to appear early in a sentence. The application of the two principles is demonstrated in (33).

(33)

- a) Jerry gave [DP a very interesting book] [PP to Tom].
- b) Jerry gave [PP to Tom] [DP a very interesting book].

In (33), PP is shorter and easier to recognize than DP. The readers are, thus, believed to prefer the sentence structure of (33b) to (33a). Conforming to the two principles above, the process of *Heavy NP Shift* applies to shift the heavy DP constituent to the rightward position.

5.4.1 Subject topics

The findings of this study agree with the generalization that DPs and CPs are prototypical constituents in the subject position of the declarative constructions in English (Radford, 2009). The placement of the subject topic also follows the PEW and EIC, as shown in (34).

(34)

- a) My capitaine is waiting, sir. (DC)
- b) Breaking one down takes time. (NG)
- c) (You) Do not move. (DC)
- d) Well, (I) see. (NG)

Examples in (34) represent the majority of the subject topics in the data which are light DPs spanning from zero in the covert subject constructions to three words in the CP subjects. The covert subjects also considered topics (Reiman, 1994) because they are recoverable from the context.

The DPs in the data are simple pronouns denoting the person or the thing in the previous discourse, the name of a person or an agency, plural DPs, proper names, and so on, as in (35) from NG and (36) from DC.

(35)

- a) You can go a little while without food, but only two to three days without water.

- b) Mike Pauletich hadn't gotten the real surgery.
- c) Physicians sometimes call these trappings around hospitals the theater of medicine.
- d) Ceregene was bought by another company in 2013.

(36)

- a) You should not have run.
- b) Saunière held up his hands in defense.
- c) The doors could not be reopened for at least twenty minutes.
- d) The DCPJ was the rough equivalent of the U.S. FBI

DP subject topics are lighter and easier to process than the constituents in the rightward positions of the sentence. The DP subject topics in the data thus follow the PEW and EIC.

Although most of the subject topics are simple and light DPs, heavy DP subject topics as in (37) and the CP subject topics as in (38), were noted in the data.

(37)

- a) His doctor on the study, Kathleen Poston, was astonished. (NG)
- b) And Mr. Langdon's refusal to speak publicly about his unusual role in last year's Vatican conclave certainly wins him points on our intrigue-o-meter. (DC)

(38)

- a) But winnowing 19 days of food and supplies to fit into a 60-pound backpack is still daunting. (NG)
- b) Keeping your mate extraordinarily close—as in permanently fused to your body—has its advantages. (NG)

In the above examples, the DP subject topics are heavier than the predicate, with the word length ratios as 7:2 in (37a) and 15:6 in (37b). Likewise, in (38a) and (38b), the CP subjects are heavier and syntactically more complicated than the predicate. P. Collins (1994) states that English normally avoids the constructions with clauses (i.e. CP) as subjects followed by a relatively light main predicate. The non-extraposed CP (i.e. heavy CP as the subject instead of the expletive *it*) are selected as the subjects in

(38) because they show the given information mentioned in the previous discourse as demonstrated in (39).

(39)

- a) With 30 years' experience, he has his training regimen down to a science. (38a) **But winnowing 19 days of food and supplies to fit into a 60-pound backpack is still daunting.**
- b) ROMANTIC ATTACHMENT (38b) **Keeping your mate extraordinarily close—as in permanently fused to your body—has its advantages.**

The non-extraposed CP subject *winnowing 19 days of food and supplies [...]* in (38a) is inferable from the related information of the preceding clause as *his training regimen down to a science*. The CP subject in (38b) echoes the title *Romantic Attachment*.

Although the non-extraposed CP constructions do not occur as frequently as the extraposed constructions as shown in (40), they exactly reflect the preferred given-new and topic-comment word order in English. Compared with the extraposed constructions, as in (40), the non-extraposed constructions with a clausal subject as in (38) actually show a special rhetorical and discourse requirement (P. Collins, 1994).

(40)

- a) It is still daunting winnowing 19 days of food and supplies to fit into a 60-pound backpack.
- b) It has its advantages keeping your mate extraordinarily close—as in permanently fused to your body.

The appearance of the CP subjects in *NG* is due to the topic status of the CP, which makes the discourse coherent. These CPs are control constructions referring to facts or past actions with the covert subject PRO (Radford, 2009). Moreover, the CP subjects in *NG* denote the depersonalized generic meaning (Maekelberghe, 2019), which tends to be more common in expository prose than in the novel.

The heavy DP subject topics and non-extraposed CP subject topics violate the PEW and the EIC principles. They prioritize the given-new and topic-comment information structure in the constructions. Thus, these two principles are unable to elaborate the order of the heavy subject topics.

Regardless of the weight, the DP and the CP subjects are placed in the initial position because they are topics of the sentence which is given and related to the previous clause. It finds that the topic-comment structure is the major factor to determine the order of the preverbal constituents, especially that of the heavy subject topics. The analysis confirms that subject topicalization is the preferred strategy to realize the topic, which facilitates the coherence of the discourse.

5.4.2 Scene-setting topics

Apart from the subject topics, the topicalized constituents (e.g. the adjunct) preceding the subject are the scene-setting topics. *Scene-setting topics are represented by a variety of constituents, such as PPs, adverbs, and AdvPs. Multiple scene-setting topics were also found in the data.*

Adjuncts are presumably in favor of the initial or the final position of the sentence according to the context (Hasselgård, 2010). If the adjuncts contain anaphoric references or provide background information for the main predication, they often occur in the initial position. Appearing in such position enhances the cohesion and coherence of the discourse. The adjuncts as scene-setting topics in the initial position, therefore, represent the given information.

The topicalized PPs in the initial position provide the background information, in particular, a spatial, temporal, or individual framework for the main predication (Chafe, 1976; as cited in Erteschik-Shir, 2007, p. 27). PP topics found in the data are shown in (41) and (42).

(41)

- a) [PP At Alaska's Sukok Lake], [Subject topic astrobiologist Kevin Hand] tests a rover designed to move beneath ice on Jupiter's moon Europa. (NG)
- b) [PP As head of the Georgian State Museum in nearby Tbilisi], [Subject topic he] still visits the site at least twice each week. (NG)
- c) [PP In 1999], [Subject topic I] was working for AOL. (NG)

(42)

- a) [PP On his hands and knees], [Subject topic the curator] froze, turning his head slowly. (DC)

- b) [PP As a veteran of la Guerre d'Algérie], [Subject topic the curator] had witnessed this horribly drawnout death before. (DC)
- c) [PP By the time anyone got to him], [Subject topic he] would be dead. (DC)

PPs *At Alaska's Sukok Lake* in (41a) and *on his hands and knees* in (42a) sets the spatial framework for the main predication. Likewise, PPs as *head of the Georgian State Museum in nearby Tbilisi* in (41b) and *as a veteran of la Guerre d'Algérie* in (42b) set the frame to modify the subject topic in the main predication. In (41c), PP *in 1999*, and in (42c), PP *by the time anyone got to him* sets the temporal frame for the main predication. As a result, the topicalized PPs in the initial position of the constructions connect the clauses coherently in that the background information represented by PPs refers back to the information in previous discourse. The preposed PPs are considered supporting the topic-comment structure.

Adverbs usually function as adjuncts and may occur in different positions in a sentence (Bonami, Godard, & Kampers-Manhe, 2004), as illustrated in (43). Particularly, the initial and the final positions are often preferred.

(43)

- a) Evidently John has eaten the beans.
- b) John evidently has eaten the beans.
- c) John has evidently eaten the beans.
- d) John has eaten the beans, evidently.

(Jackendoff, 1972, as cited in Delfitto & Fiorin, 2017, p. 97)

The adverb *evidently* in (43) appears in different positions with different semantic explanations. Nevertheless, Belletti (1990, as cited in Delfitto & Fiorin, 2017, p. 98) proposes that the linearization where adverbs occur sentence-initially as in (44), is derived by the application of A-bar movement of the adverbs. More specifically, adverbs which occur in the initial position of a sentence are topicalized and, in turn, become the scene-setting topics of the constructions.

(44) Often fake injections ~~often~~ work better than fake pills. (NG)

Adverbs which are fronted as the topics of the sentence, were extensively found in the initial position of a sentence in the data, as shown in (45).

(45)

- a) Now they are seeing placebos as a window into the neurochemical mechanisms that connect the mind with the body, belief with experience. (NG)
- b) There the larvae hatch and fatten on plankton. (NG)
- c) Slowly, Saunière rolled over and stared back through the bars at his attacker. (DC)

In (45), the adverbs are preposed to the initial position of the constructions, which they serve as the scene-setting topics. In (45a), the adverb *now* sets the temporal framework, and *there* in (45b), gives the spatial background. In (45c), *slowly* indicates the manner of the main predication.

The adverb *now* in (45a) plays a role in forming a contrast with the time aforementioned in the preceding clause as in (46).

(46) Scientists have known about the placebo effect for decades. (45a) **Now they are seeing placebos as a window...** (NG)

In (45b), *there* refers back to *the ocean's upper reaches* mentioned in the prior clause, as shown in (47), which makes the discourse coherent.

(47) The buoyant mass of fertilized eggs slowly rises to the ocean's upper reaches.

(45b) There the larvae hatch and fatten on plankton. (NG)

And in (45c), *slowly* echoes the preceding depiction of the curator as in (48).

(48) He fell forward...struggling against the pain. (45c) **Slowly, Saunière rolled over and stared back through the bars at his attacker.** (DC)

The adverbs in (45) are the scene-setting topics of the constructions which also serve as the cohesive devices to make the discourse coherent.

Just as adverbs, which are single words or phrases to modify the predicates or the main predication, Adverb Phrases (i.e. AdvPs) modify main clauses. In addition to functioning like adverbs in expressing time, location, and manner relationship, AdvPs can convey the meanings of purpose, reason, and concession (S. A. Thompson, Longacre, & Hwang, 1985), as shown in (49).

(49)

- a) When the time came to choose a career, I went with software engineering. (NG)
- b) Although his female colleagues insisted the gray only accentuated his bookish appeal, Langdon knew better. (DC)
- c) To save Rwanda's endangered gray crowned crane from extinction, veterinarian Olivier Nsengimana is using everything from comic books to hightech drones. (NG)
- d) And if I find which one of you provided that article, I'll have the consulate deport you." (DC)

The AdvP in (49a) is an adjunct expressing the time frame for the main clause, which functions the same way as adverbs like *then*, *finally* etc. under certain circumstances. By comparison, the concessional AdvP in (49b), the purpose AdvP in (49c) and the conditional AdvP in (49d), function as the adverbial or ad-sentential modifiers (S. A. Thompson et al., 1985).

AdvPs were found either before or after the main clause (Diessel, 2001). The AdvPs preceding the main clause provide given or background information (Tomlin, 1985; Thompson, 1987; as cited in Diessel, 2001, p. 437). They are distinct from the counterparts in the final position because they serve the discourse function, for example, linking back to the prior clause or introducing new frames for the upcoming clause (Thompson, 1985; Ramsay, 1987; Givón, 1990; Ford, 1993, as cited in Verstraete, 2004, p. 819). In the data, AdvPs were found preceding the main clauses, as in (50)

(50)

- a) But if parts of structures crumble, Akasheh's database can provide references of how the originals looked. (NG)
- b) When the curator had finished speaking, his assailant smiled smugly. (DC)
- c) Using cutting-edge technology to monitor the movements of sharks, billfish, and bluefin tuna, marine biologist Barbara Block has developed a trove of information on the secret lives of ocean predators. (NG)
- d) Staggering to his feet, he pictured his three murdered brethren. (DC)

In (50a), the underlined AdvP identifies the condition for the main predication while in (50b), the AdvP specifies the time for the main clause. In (50c) and (50d), the AdvPs are control constructions modifying the main clauses, which specify the reason, and the accompanying circumstance, respectively. The covert subjects of the AdvPs in (50c) and (50d) are PROs referring to the subjects in the main clauses.

According to Kortmann (1991; 1995, as cited in Killie, 2006), the control clauses as in (50c) and (50d) refer to time, including “simultaneity, anteriority, and posterity, condition, cause, concession, contrast, instrument, manner, purpose, result, accompanying circumstance, exemplification/specification” (p. 448), and so on. Canonically, the subject of a control clause co-refers to the subject of the main clause, but English control clauses may have arbitrary subjects referring to *anyone* (Radford, 2009), as in (51).

(51) Strictly speaking, Parkinson’s had never been reversed in humans. (NG)

The subject of the underlined AdvP in (51) is arbitrary PRO which is different from the subject of the main clause *Parkinson*. Nevertheless, the control clause in (51) sets the condition frame for the main predication.

Multiple scene-setting topics in a sentence were occasionally found in the data, as demonstrated in (52).

(52)

- a) [T₁Today], [T₂ at 74], [S_T Mödl] has a warm smile and a wiry frame that looks as if it could survive a charging rhinoceros. (NG)

Adverb + PP + ST

- b) [T₁Suddenly], [T₂now], [T₃despite all the precautions] ... [T₄despite all the fail-safes] ... [S_T Jacques Saunière] was the only remaining link, the sole guardian of one of the most powerful secrets ever kept. (DC)

Adverb + Adverb + PP + PP + ST

- c) [T₁Tonight], [T₂three thousand miles from home], [S_T the accolade] had resurfaced to haunt him at the lecture he had given. (DC)

Adverb+ Adverb + ST

As for the order of the topicalized adverbs, they do not follow the relative sequence of the adverbs proposed by Ernst (2007) based on the semantic meaning of the adverbs, as shown in (53).

(53) Speech-act (e.g. frankly) > Evaluative (e.g. luckily) > Epistemic
 (e.g. probably) > Subject-oriented (cleverly) > Manner (loudly)
 (Ernst, 2007, p. 1009)

According to Ernst (2007), the order of the adverbs in a sentence is determined by the meaning of the adverbs. He generates that the adverbs in the left end should precede the adverbs in the right end. However, the multiple topics in the data do not show such pattern, but they usually occur to echo the information in the previous clauses and set the frame for the main predication.

Adverbs and PPs are the major constituents topicalized preceding the subject topic. In terms of the order of the topicalized adverbs and PPs in (52), PPs either precede adverbs or position themselves after adverbs. However, it was noted that the short constituents precede the long ones. Hence, the order of the PPs and adverbs in (52) observes the PEW.

5.4.3 Complement CP topics

Complement clauses are claimed to function as the core arguments of a predicate, which is obligatory for transitive verbs (Noonan, 1985, p. 42, as cited in Diessel, 2001, p. 435). Normally, a complement clause (i.e. complement CP) is supposed to follow the verb, as shown in (54).

(54)

- a) She answered, "he is correct."
- b) He says, "she is a good doctor."

The complement clause topicalization was found in both *NG* and *DC*, as in (55).

(55)

- a) "Noise is considered a form of pollution," André says. (*NG*)
- b) "I found them, too," the huge man taunted. (*DC*)

In (55), the underlined complement clauses are topicalized to the Spec-TopP position of the main clauses, and hence become the topic of the sentence.

The complement clauses are the arguments of the verbs *say* and *taunt*, respectively. The inversion of the subject-verb, for instance *says André*, occurs under the same conditions as the subject-verb order (i.e. *André says*) in the reporting

clause¹² (Biber et al., 1999, p. 921). The conditions of inversion imply the weight and communicative importance of the subject versus the verb. In other words, whichever is placed rightwards is relatively more salient and newer (Biber et al., 1999, pp. 921-922).

The preposing of the complement clause is due to its topic status. For (55a), the information in the previous discourse is shown as in (56).

(56) [...] how human-caused ocean noise affects marine life's ability to hunt, feed, and dwell in ocean waters. (55a) "**Noise is considered a form of pollution,**" André says.

The *noise* is the given information which is associated more closely with the preceding clause rather than the constituents VP *says* or DP *André*. Therefore, the complement CP about the *noise* is chosen as the topic of the sentence.

Similarly, the preceding clauses of (55b) are shown as in (57).

(57) "This is exactly what the others told me. Saunière recoiled. The others?"

(55b) "**I found them, too,**" the huge man taunted.

In (57), *the others* in these clauses is the antecedent of *them* in (55b). Therefore, the underlined complement CP refers back to the preceding discourse and expresses the given information. The topicalization of the complement CP conforms to the topic-comment structure and makes the discourse coherent.

5.4.4 Dislocated DP topics

The dislocation sentence only exists in informal English constructions while topicalization is used in formal English constructions (Gundel, 1988). In dislocation constructions (58a), the dislocated DP *the woman* co-refers to the resumptive pronoun *she* in the main clause, while the dislocated DP *the man* is co-referential with the resumptive pronoun *him* in (58b). In topicalization of (58c) and (58d), the fronted DPs refer back to the deleted copy in the main clauses.

(58)

- a) The woman, she came yesterday. (Left-Dislocation, SUBJ)
- b) The man, she saw him. (Left-Dislocation, OBJ) (Givón, 1988, p. 246)
- c) The woman, ~~the woman~~ came yesterday. (Topicalization, SUBJ)

¹² This clause is termed as "reporting clause", which is appended to direct reports of a person's speech or thought (Biber et al., 1999).

d) The man, she saw (~~the man~~). (Topicalization, OBJ) (Givón, p. 246)

By comparison, left-dislocation in (58a) and (58b) and topicalization in (58c) and (58d) prepose the subject or the object in the Spec-TopP position which makes the preposed DP the topic of the sentence. Unlike left dislocation where the fronted DP co-refers to the resumptive pronoun, the topicalized DP co-refers to the deleted copy in the sentence. In written English, topicalization is employed to encode the contrastive topic rather than dislocation (Gundel, 1988). It was observed that left dislocation appears often in casual, spoken English. Unsurprisingly, only two left-dislocated constructions as in (59) were found in *DC*, but not in *NG*.

(59)

a) “But the church, it is a fortress. Especially at night.”

b) “but a man like this ... I cannot presume the authority to stop him.”

In (59a), *the church* is left-dislocated which co-refers to the resumptive pronoun *it* in the full sentence. In (59b), *a man like this* is preposed from the complement position of the verb *stop* to the topic position. Like topicalization, left dislocation specifies the preposed constituent as the topic of the sentence. Thus, dislocation is also a movement to prepose the topic to the initial position of the sentence. Hence, the preposed DP in dislocation sentence serves as the topic.

DPs were prevailingly found as the subject topics in both *NG* and *DC*. As for the multiple topics, PPs, adverbs, AdvPs, Complement CPs and DPs are topicalized to the initial position preceding the subject, among which PPs are prominent in *NG* and AdvPs were often found in *DC*. The constituent hierarchies for the multiple topics in the data are shown as in (60).

(60)

a) *NG*: *PP* > *Adverb* > *Complement CP* > *AdvP*

b) *DC*: *AdvP* > *Adverb* > *Complement CP* > *PP* > *DP*

Multiple topics led to the question with regards to their order. The data reveals that DP subject topics usually abide by the PEW and the EIC, except the heavy DP and the CP subject topics. Unlike the DP subject topics, these two principles do not suffice to explain the order of the scene-setting topics, the complement CP topics, and the dislocated DP topics preceding the subject topics. Instead, it was discovered that the topic status determines the constituents topicalized to the initial position of the sentence.

In the data, subject topics are predominantly DPs, while CPs, which are derived through the same process, were occasionally found in *NG*. The occurrences of the CP subjects in *NG* are possibly due to the property of CPs as control clauses denoting the action instigated by an arbitrary covert subject, which is more common in expository prose in the data. Thus, the genre-effect is assumed to influence the appearance of the CP subjects in *NG*.

Multiple topics in English are found to be possible. Adjuncts topicalization preceding the subject in the sentence initial position appears frequently in the data. They provide background information and set the scene for the main predication. The scene-setting topics are PPs, adverbs, AdvPs, CPs, and DPs, among which PPs are salient in *NG* and CPs are prominent in *DC*.

Prepositional Phrases (PPs) preceding the subject (topics) are noted to be commonly used in academic writing partly because they provide information with a compact structure which may also help avoid repetition (Hinkel, 2004, as cited in Deveci, 2019, p. 255). In other words, PPs are often used as the sentence openers in academic writing. The finding of this study that PP topics appear frequently in *NG* supports the previous claims. In addition, PPs as the scene-setting topics are found to echo the information in the preceding clauses in expository texts which make the discourse coherent.

Complementizer Phrases (CPs) as the scene-setting topics preceding the subject (topics) prevail in *DC*, which include the complement CPs and the adverbial CPs. The complement CPs appear 13 times in *NG* while 20 instances occur in *DC*. The complement CPs are the direct quotation which refers back to the previous clauses to make the discourse coherent. More adverbial CPs in *DC* (29 instances) than in *NG* (14 instances) is partly because the narrative texts are connected closely with the time sequence. Among the 29 instances of the adverbial CPs, 13 instances of control constructions and five adverbial CPs are specifying the time and accompanying circumstances while other 11 instances of adverbial CPs expressing the condition, concession, and result. Narrative texts manifest the chronological linkage by temporal adverbial CPs, so adverbial CPs are conspicuous in *DC*.

More than two topics ordering shows the sequence as *Adverb + PP + Subject topic* or *Adverb + Adverb + Subject topic*, which is found to be idiosyncratic. This

means that the order is not governed by the PEW and the EIC, but more likely to observe the topic-comment structure.

5.5 Semantic roles of subject topics

Traditionally, the subject is also seen as being associated with the semantic role AGENT (Li & Thompson, 1976). This is supported by Jackendoff's (1990) Thematic Hierarchy as in (61), which grants AGENT the highest priority, among other semantic roles, to be in the subject position. In this regard, AGENT is typically chosen as the subject while THEME is as the object in transitive constructions (White et al., 1999).

(61) AGENT>EXPERIENCER>GOAL>SOURCE>LOCATION>THEME

Tomlin (1983) proposes that the argument in the subject position in English encodes topic information primarily and AGENT semantic role secondarily. Nevertheless, other non-AGENT semantic roles are also frequently found as the subjects in English constructions. The entangled relations among subject, topic, and semantic roles in English are further explored in this section.

In the data, the three are independent but interrelated. AGENT is not always the subject and the subject is not always the topic. However, the AGENT or non-AGENT semantic roles of the subject is affected by the topic status of the subject, and in turn by the topic-comment structure.

5.5.1 Agent, instrument, and experiencer subject topics

Corresponding to Jackendoff's (1990) Thematic Hierarchy in (61), AGENT, EXPERIENCER are the prioritized semantic roles for the subject position, although INSTRUMENT is not included in the hierarchy. In accordance with Reinhart (2000), semantic roles can be defined with the binary features $[\pm c]$ and $[\pm m]$, where $[c]$ refers to cause and $[m]$, mental state. AGENT is with the features $[+c+m]$, and INSTRUMENT is $[+c-m]$, while EXPERIENCER is with the feature $[-c+m]$. AGENT, INSTRUMENT and EXPERIENCER are either with the features $[+c]$ or $[+m]$ or both.

The findings in *DC* support Jackendoff's Thematic Hierarchy that AGENT is preferred in the subject position. In line with C. Thompson (1994), AGENT can normally be more topical than non-AGENT in the same clause. The examples as in (62) were found both in *NG* and *DC*.

(62)

- a) Nadkarni, [...], has also spread her gospel about nature to minority groups and faith congregations. (NG)
- b) The man was now taking dead aim at Saunière's head. (DC)

In the above examples (62), the arguments in the initial position are AGENTS. It was noted that in (62a), the arguments, namely, *Nadkarni*, *her gospel about nature*, and *minority groups and faith congregations* are AGENT, THEME, and RECIPIENT/BENEFICIARY semantic roles, respectively. They all qualify for the subject position. Generally, “the items of greatest relevance to the goal of the communicative event will be the key centers of attention in the extralinguistic situation” (Tomlin, 1983, p. 418). The “goal of the communicative event” means the communicative aim of the current activity expressed by the speaker. (62a) is from the article about the biologist *Nadkarni*, which describes *Nadkarni*’s career of studying plant life and developing the nature program. The aim of the communication is about *Nadkarni*. Based on the “center of attention” (i.e. topic) (Li & Thompson, 1976), the arguments in (62a) are ranked as follows in (63).

(63) *Nadkarni* (AGENT) > *her gospel about nature* (THEME) > *minority groups and faith congregations* (RECIPIENT/BENEFICIARY)

Nadkarni which is considered the “center of attention” is the continued topic of the discourse. It refers back to the preceding clauses, and echoes with the related information *Nalini Nadkarni, the field biologist, her penchant, her Sustainability in Prisons Project*. Therefore, compared with other two arguments, *Nadkarni* is chosen as the subject topic, as demonstrated in (64).

(64)

Nalini Nadkarni is comfortable in both. The field biologist has spent much of her career studying plant life dwelling in the forest canopy. Her penchant for scaling 200-foot-tall ceiba trees once spurred her to develop a Treetop Barbie doll. But after years of fieldwork, she turned to developing nature programs for prison inmates [...]. Her Sustainability in Prisons Project has since spread to several states. (62a) **Nadkarni, [...], has also spread her gospel about nature to minority groups and faith congregations.**

In (62b), *the man* /AGENT is considered the topic of the sentence when compared to *dead aim* / THEME and *Saunière’s head* /GOAL because *the man*, being *definite* and

given, is the perspective the writer chose to develop the plot and it is what the sentence is *about*. From the context, the action of *the man* is the expected information for the audience, as *the man* instigates the action and it is the topic of this sentence, as shown in (65).

(65)

The attacker aimed his gun again. [...]. (62b) **The man was now taking dead aim at Saunière's head.** [...]. The man glanced down at his weapon, looking almost amused. He reached for a second clip, but then (he) seemed to reconsider, smirking calmly at Saunière's gut.

Hence, AGENT is the chosen semantic role lies in the fact that it is “the center of attention” (Li & Thompson, 1976) for “the current communicative event” (Tomlin, 1983). AGENT as a preferable semantic role is due to the topic status of the subject. If it is not the topic of the sentence, any other non-AGENT semantic roles, such as THEME, GOAL or BENEFICIARY are potential candidates for the subject position.

INSTRUMENT can occur in the subject position in English as in (66a) or a complement of PP in (66b). INSTRUMENT functions as the subject if the event is not instigated by a human AGENT, or the AGENT is unknown or no longer on the stage (Schlesinger, 1989). When attention is drawn away from the AGENT, INSTRUMENT plays the part as an AGENT. INSTRUMENT as AGENT is different from the prototypical AGENT because it is not the instigator of the event (Fillmore, 1971, as cited in Schlesinger, 1989, p. 193). Nevertheless, INSTRUMENT resembles AGENT because it is the cause of the action with the feature [+c-m]. In this regard, it is also termed as CAUSER (Alexiadou & Schäfer, 2006, p. 40).

(66)

- a) The ball broke the window.
- b) He broke the window with a ball.

Similar to (66a), INSTRUMENTS were found in the subject position in the data, as shown in (67). It was also found that AGENTS are explicit in the constructions as *him* (the astrobiologist Kevin Hand) in (67a), *her* (the biologist Nalini Nadkarni) in (67b), *him* (Professor Langdon) in (67c) and *his* (Silas') in (67d). That is to say, AGENT is not absent or out of stage in the examples of (67).

(67)

- a) His research has taken him from ocean floors to Antarctic glaciers. (NG)
- b) Her penchant for scaling 200-foot-tall ceiba trees once spurred her to develop a Treetop Barbie doll. (NG)
- c) His books on religious paintings and cult symbology had made him a reluctant celebrity in the art world. (DC)
- d) The spiked cilice belt that he wore around his thigh cut into his flesh. (DC)

Therefore, the INSTRUMENT occurring in the subject position is not motivated by the agentivity or causality of the INSTRUMENT but due to its topic status. The INSTRUMENT as the subject topic refers back to the information in the previous discourse as in (68).

(68)

- a) Hand is a 2014 Rolex Awards juror and 2011 National Geographic emerging explorer. [...], he oversees the development of a concept for a lander. (67a) **His research has taken him from ocean floors to Antarctic glaciers.**
- b) Nalini Nadkarni is comfortable in both. The field biologist has spent much of her career studying plant life [...]. (67b) **Her penchant for scaling 200-foot-tall ceiba trees once spurred her to develop a Treetop Barbie doll.**
- c) Langdon had little doubt. (67c) **His books on religious paintings and cult symbology had made him a reluctant celebrity in the art world.**
- d) One mile away, the hulking albino named Silas limped through the front gate of the luxurious brownstone residence on Rue La Bruyère. (67d) **The spiked cilice belt that he wore around his thigh cut into his flesh.**

EXPERIENCER usually occurs with psych verbs, for instance, *like*, *enjoy*, *please*, *frighten*, and *fear* because psych effects can be gained only in non-agentive context (Jiménez Fernández & Rozwadowska, 2016, p. 102), as shown in (69a).

(69)

- a) The cat fears Joe.
- b) Joe (intentionally) frightens the cat.

In (69a), *the cat* normally cannot fear Joe intentionally and volitionally, so *the cat* is EXPERIENCER with the features [-c+m], rather than AGENT. If AGENT exists in the sentence with a psych verb, and has the properties of topic, namely *definiteness*, *givenness* and *aboutness*, AGENT becomes the subject as in (69b). *Joe* in (69b), volitionally initiates the action of frightening, which makes it the AGENT with the features [+c+m], while *the cat* behaves like the PATIENT of the action. If AGENT is not the topic, EXPERIENCER is usually preferred as the subject in the constructions with the psych verbs, as in (69a).

The instances with EXPERIENCER subject topics from the data are shown in (70).

(70)

- a) But then she looked at the data and noticed something. (NG)
- b) He had gotten the placebo. (NG)
- c) You understand the stakes. (DC)
- d) He thought of the generations who had come before them [...]. (DC)

In (70), the subjects do not instigate the actions intentionally as EXPERIENCER subjects have the features of [-c+m]. The subjects in (70) are pronouns related to the information in the preceding discourse as shown in (71).

(71)

- a) Poston was crushed. (70a) **But then she looked at the data and noticed something that stopped her cold.**
- b) Mike Pauletich hadn't gotten the real surgery. (70b) **He had gotten the placebo.**
- c) You must retrieve the stone for me. Immediately. Tonight. (70c) **You understand the stakes.**
- d) Staggering to his feet, he pictured his three murdered brethren. (70d) **He thought of the generations who had come before them [...].**

5.5.2 THEME subject topic

Unlike the AGENT, INSTRUMENT and EXPERIENCER, THEME subjects are with the features [-c-m]. THEME subjects appear even more often than AGENT subjects in *NG*.

They appear in the unaccusative and the passive constructions.

5.5.2.1 Unaccusatives

An unaccusative sentence takes a THEME subject and a predicate describing the change of state, state of affairs or an existential predicate (Radford, 2009). The unaccusative constructions with the motion predicates are demonstrated in example (72).

(72)

- a) The meaty fruit also comes prepackaged and in cans. (NG)
- b) His usually sharp blue eyes looked hazy and drawn tonight. (DC)
- c) His hand shook a little. (NG)
- d) The gun roared. (DC)

In (72a) and (72b), *the meaty fruit* being prepackaged and in cans while *his usually sharp blue eyes* appearing hazy and drawn are the state of the THEME. In (72c) and (72d), the shaking state of *his hands* and roaring state of *the gun* represent the change of the THEME.

The unaccusative constructions with the existential predicates, in particular with the verb *be* are extensively found. Based on the functions, three kinds of constructions were found with the unaccusative *be*, namely predicational, specificational, identificational (or equative) (Higgins, 1979), as shown in (73).

(73)

- a) Ingrid Bergman is the lead actress in that movie. (predicational)
- b) The lead actress in that movie is Ingrid Bergman. (specificational)
- c) She is Ingrid Bergman. (identificational or equative)

(Mikkelsen, 2005, p. 1)

Predicational clauses follow the subject-predicate order. The elements after the unaccusative *be* elaborate something about the referent of the subject as in (73a) (Mikkelsen, 2005). On the other hand, specificational clauses have information structure as topic-comment (Higgins, 1979; Declerck, 1988; Heycock, 1994, and Mikkelsen, 2005, as cited in Martinović, 2013, p. 140). The subject is the topic encoding the given information while the latter part after the unaccusative *be* is the comment showing new information as shown in (73b). Unlike the above types, equatives involve two expressions identifying the same individual.

Most of the instances, among which 46 out of 51 in *NG*, and 28 out of 32 in *DC* were found to be the predicational clauses, as shown below in (74).

(74)

- a) Their global population is down nearly 80 percent over the past five decades. (NG)
- b) Mongolia's Gobi Desert is one of the world's most diverse fossil areas. (NG)
- c) The man's English was accented—a sharp, authoritative bark. (DC)
- d) The man was exceptionally lean, dressed in an official-looking blue uniform. (DC)

In (74), the subjects function as the topics while the elements after the unaccusative *be* are the comment about the subject topics. (74a) is about the decrease number of the gray crowned cranes. (74b) is about the status of the desert. (74c) and (74d) are description of the man's language and appearance.

And the specificational clauses as in (75) and the equative clauses as in (76) were occasionally found in the data.

(75)

- a) “The one thing I allow myself is a good cup of coffee.” (NG)
- b) The lie he told was one he had rehearsed many times... each time praying he would never have to use it. (DC)

(76)

- a) The first guest: (is) self-described science geek Weir. (NG)
- b) The DCPJ was the rough equivalent of the U.S. FBI. (DC)

Although the unaccusatives are the majority in the data, most of them are identificational constructions with unaccusative *be*. All THEME subjects, are, nevertheless, topics of the constructions which are modified by the subjective complements as the comments.

5.5.2.2 Passives

Three functions of the passive construction are, assigning topic status to a non-AGENT, suppressing the AGENT, and making the verb less active (Givón, 1981, as cited in C. Thompson, 1994, p. 47). The choice of active or passive constructions relies on two factors, namely the discourse cohesiveness and coherence, and the speaker's

empathy with the entities involved in the state of affairs (Risselada, 1991). Empathy refers to “the speaker’s identification with a participant in an event” (Kuno, 1976, p. 431).

The AGENT is suppressed in the constructions when there is no *by*-phrase. The ones with the *by*-phrase has the AGENT as part of the comment. The majority of the passive constructions found in the data are without the AGENT *by* - phrase as in (77a) and (77b). Only four instances were found with the *by*-phrase, as shown in (77c, d, e, f).

(77)

- a) It [The book] did not get published. (NG)
- b) The doors could not be reopened for at least twenty minutes. (DC)
- c) Ceregene was bought by another company in 2013. (NG)
- d) Their way of life is threatened by disappearing grazing lands, mechanized farming, and falling demand for camels. (NG)
- e) His captivating presence is punctuated by an unusually low, baritone speaking voice, which his female students describe as ‘chocolate for the ears.’ (DC)
- f) It (The bullet hole) was framed by a small circle of blood a few inches below his breastbone. (DC)

In (77a) and (77b), the subjects are the topics. With the occurrence of the AGENT, the motivation of the passive structure in (77c) is considered as assigning the topic status to the THEME subject. Furthermore, the THEME subjects make the discourse more coherent in that the prior constructions preceding (77c) are the depiction of the company Ceregene’s failure of the gene therapy experiment. In (77d), the complement of the *by*-phrase is not AGENT but INSTRUMENT. Likewise, the complement of the *by*-phrases in (77e) and (77f) are not the AGENT at all. Therefore, the promotion of the subjects in the passive constructions in the data is not to suppress the AGENT. The passive constructions in the data are due to the topic status of the non-AGENT subjects because the subjects have the topic properties.

5.5.3 LOCATION subject topics

LOCATION subject topic was occasionally found in the data. It is similar to THEME that LOCATION is with the feature [-m] which denotes the place, as demonstrated in (78).

(78)

- a) Venezuela's Lake Maracaibo holds the distinction of being South America's largest lake by area. (NG)
- b) It [The jackfruit] has a texture (though not a protein content) like meat's. (NG)
- c) You and your brethren possess something that is not yours. (DC)
- d) Boston Magazine clearly has a gift for fiction. (DC)

In (78a), the subject *Venezuela's Lake Maracaibo* is assumed to be the presupposed known information as *being South America's largest lake by area* in the beginning of a text, while *it/the jackfruit* in (78b) refers back to the preceding clause about the promotion of the jackfruit. In the same vein, in (78c) the subject is inferred from the context specifying the curator and his three *sénéchaux*. The subject *Boston Magazine* in (78d) is known information from the previous discourse. These examples (78b-d) with the preceding clauses are demonstrated as in (79).

(79)

- a) That may explain why some chefs and food companies have begun promoting jackfruit. (78b) **It [The jackfruit] has a texture (though not a protein content) like meat's.**
- b) You are lying. [...]. (78c) **You and your brethren possess something that is not yours.**
- c) She held up a copy of *Boston Magazine*. [...]. (78d) **Boston Magazine clearly has a gift for fiction.**

The choice of LOCATION as the subject of the sentence is due to the topic status of the subject which makes the discourse coherent. LOCATION in the initial position of the clause echoes the information in the preceding clause and the sentence follows the given-new information structure.

AGENTS are assumed to be more privileged than other non-agentive semantic roles for the subject position due to the characteristics of being more animate, more active, more positively evaluated, and more imageable (Johnson, 1976; Osgood, 1971; James, 1972, as cited in Gernsbacher & Hargreaves, 1992, p. 90). Nevertheless, non-AGENT semantic roles occur more often than AGENT in the subject topic position in the data, which disagrees with the previous claims. The investigation finds that the

occurrence of the non-AGENT semantic roles is influenced by the choice of the sentential subjects in a given discourse. In order to make the discourse coherent, speakers tend to select the appropriate construction from the allosentences. In this regard, the subjects can be either AGENT or non-AGENT. For instance, if the speaker prefers the transitive construction in a given discourse, then AGENT appears initially whereas if (s)/he chooses the passive construction, so THEME occurs in the initial position as the subject topic. Therefore, AGENT or non-AGENT semantic roles of the subject topic is affected by the choice of the construction and the subject in a given discourse. In other words, the subject topic position encodes the information as a topic on the discourse level, which can go with either AGENT or non-AGENT semantic roles.

5.6 Summary of the chapter

In a nutshell, English makes use of the subject-predicate structure syntactically and the topic-comment structure pragmatically. The study suggests that in the typological classification of a language, both syntax and pragmatics must be involved. The investigation of the appearance of English constructions as they appear in the authentic context shows that English is better classified as a subject-prominent and topic-prominent language. The investigation confirms the psychological intuition that English subject is the unmarked topic, and topic-comment structure is a natural sentential articulation. The intuition of the subject topic and the topic-comment structure is not only psychologically real, but also psychologically true. The topic-comment structure in English is represented differently from that in other topic-prominent languages. English constructions in general, including the canonical constructions and the structure-preserving constructions, map the subject to the topic while the predicate, the comment. As subject topicalization is syntactically the most economical way to represent the topics, the canonical transitive, unergative, and unaccusative constructions play an important role in representing the topic-comment structure in English. In addition, the structure-preserving constructions, such as the passive, the *tough*, and the *have* constructions are also found in the data to maintain the subject-predicate structure syntactically and to represent the topic-comment structure on the discourse level. The derived subjects are motivated by the topic status pragmatically. The non-topic properties of the expletives add new information or introduce new topics to the subsequent clause in the discourse. Topics also exist in

covert subject constructions. Imperatives are found in *DC* with the covert subject topic *you*, while the indicative elliptical constructions in the data are with the covert subjects recoverable from the context. Hence, English constructions abide by the subject-predicate structure on the syntactic level while it observes the topic-comment structure on the discourse pragmatic level. Both the syntactic level and the discourse pragmatic level are crucial factors to consider when analyzing sentence structures because a sentence always has its context.

In the data, the majority of the subjects are found to represent the topics of the sentences, which also supports the claim that the subjects are the UNMARKED TOPICS (Lambrecht, 1996). The subject and the topic cannot be conflated due to their syntactic and pragmatic differences. Subject topics are mainly DPs in the data, and CPs were occasionally found in *NG*. DPs and CPs are the most typical subjects mapping to the subject topics. CPs in *NG* is partly due to the genre-effect and the property of the control clause which denotes the arbitrary covert subject.

Multiple topics preceding the subjects are PPs, adverbs, AdvPs, CPs and DPs, among which PPs are prominent in *NG* while CPs are salient in *DC*. The prominence of the PPs in *NG* lies in the fact that PPs are compact structures to represent information which help avoid repetition in academic and expository texts. The conspicuous occurrences of CPs in *DC* is due to the genre-effect. As narrative proses relate closely to the time sequence in structuring the information, the temporal adverbial CPs appear frequently in *DC*, including the control constructions and the adverbial clauses denoting time.

The data demonstrate that the topic-comment structure is the dominant factor to explain the occurrences of the constituents. With respect to the elements order, the linearization of the DP subject topics in a sentence abides by the PEW and the EIC, whereas the order of the multiple topics is governed by the topic status of the constituents.

The subject topics are found to acquire non-AGENT rather than AGENT semantic roles which disagrees with the claims that AGENT is the privileged semantic role for the subject in English declarative clauses. This finding also challenges Jackendoff's (1990) Thematic Hierarchy which prioritizes AGENT in the subject position to some extent. It in turn supports the viewpoint that the subject position encodes topic

primarily and AGENT secondarily (Tomlin, 1983). In fact, the occurrences of AGENT or non-AGENT semantic roles in the data are influenced by the choice of the subjects. In order to make the discourse coherent, the speakers may select a certain construction from the allosentences. If the speaker selects the transitive construction to represent the topic-comment structure in a given discourse, AGENT subject appears initially as the subject topic to encode the topic information. Otherwise, if the passive construction is chosen, a non-AGENT subject occurs in the initial position to represent the topic.



CHAPTER 6

CONCLUSION

This study finds that English makes use of both the subject-predicate structure syntactically and the topic-comment structure pragmatically, which suggests that English is better claimed as a subject-prominent and topic-prominent language. English sentence structure can be subject-prominent, sentence internally, but topic-prominent in relation to the context. The study explores both the canonical constructions and the structure-preserving constructions. The subjects of these constructions are found to map to the topic while the predicate, the comment. The mapping relation of the sentential elements to the pragmatic structure confirms the psychological intuition that the subject is the unmarked topic and the topic-comment structure is the common articulation of the constructions.

Syntactically, subject topics undergo A-bar movement to realize the topics of the sentence (Rizzi, 1997). Subject topicalization is syntactically the most economical way to represent topics in English (see section 5.4.1) because it is a covert movement which needs the least syntactic operation. Subject topics are mainly DPs in both data sets, and CPs are occasionally found in *NG*. The appearance of CPs in *NG* is partly because CPs, which are control constructions, demonstrate the property of depersonalized generic meaning which is more common in expository texts.

As topics are recursive, multiple topics are possible. They can be PPs, DPs, adverbs, CPs and AdvPs, among which PPs are prominent in *NG* and CPs are salient in *DC*. The prominence of PPs in *NG* supports the claims that PPs are compact structures which exist commonly in academic writing to avoid repetition and PPs are usually used as the sentence openers in academic writing. In addition, PPs as the scene-setting topics in this study provides another motivation for their occurrence in the initial position of the sentence. The conspicuous appearance of the CPs in *DC* is mainly due to the genre effect. The control constructions and the temporal adverbial CPs are the majority in *DC*, which conforms to the characteristics of chronological linkage in narrative proeses.

Semantically, non-AGENT outnumbers AGENT as subjects in the data. Particularly, non-AGENT subjects were prevailingly found in *NG*. This in turn challenges

Jackendoff's (1990) Thematic Hierarchy which prioritizes AGENT rather than other semantic roles for the subject position. This study finds that AGENT or non-AGENT semantic roles of the subject is influenced by the topic status of the subject. In order to follow the topic-comment structure on the discourse level, the writers may cull a certain construction from the allosentences. If a transitive construction is chosen, an AGENT subject possibly occurs in the initial position of the construction. If a passive construction is selected, non-AGENT subject probably appears as the subject topic.

The findings confirm the hypotheses of this study as follows.

Hypothesis 1: The topic-comment structures appear more often than the non-topic-comment structures in written English.

The results from both data sets comply with hypothesis 1. The topic-comment constructions found in *NG* and *DC* are 87.7% and 88% respectively.

Typologically, it is better to classify English as a subject-prominent and topic-prominent language since English makes use of both the subject-predicate structure syntactically and the topic-comment structure pragmatically. In the unmarked cases, the subject is regarded as the topic while the predicate is the comment, as in (1).

(1)

- a) [_{Subject} Conservation biologist Erika Cuéllar] [_{predicate} displayed such dedication to conservation in the Gran Chaco]. (NG)
- b) [_{Topic} Conservation biologist Erika Cuéllar] [_{comment} displayed such dedication to conservation in the Gran Chaco]. (NG)

As shown in (1), the phenomenon that subject-predicate sentence mapping to topic-comment structure is prevailing. If the subject expresses given, definite information and is what the sentence is about, it is eligible to move to the topic position and function as the topic of the sentence.

The relatively fixed subject-predicate structure makes the topic-comment structure in English different from topic-prominent languages in general. When the canonical constructions above are unable to express topic-comment relations, the structure-preserving constructions, such as the passive, the *tough*, and the *have* constructions as subject-predicate language constructions are employed to support the topic-comment structure, as demonstrated in (2).

(2)

- a) [Subject topic *The doors*] [comment *could not be reopened for at least twenty minutes*]. (DC)
- b) [Subject topic *His accent*] [comment *was not easy to place*]. (DC)
- c) [Subject topic *Pauletich*] [comment *had early onset Parkinson's disease*]. (NG)

In (2), the subject topics *the doors*, *his accent*, and *Pauletich* are considered derived subjects which surface in the subject position (Radford, 2009). Since *the doors*, *his accent*, and *Pauletich* are what the sentence is about and they refer back to the previous clauses as shown in (3), they are preposed to the topic position and in turn represent the topic of the sentence.

(3)

- a) Alone now, Jacques Saunière turned his gaze again to the iron gate. [...] (2a) and **the doors could not be reopened for at least twenty minutes**.
- b) He was broad and tall, with ghost-pale skin and thinning white hair. His irises were pink with dark red pupils. [...] "You should not have run." (2b) **His accent was not easy to place**.
- c) Mike Pauletich first noticed he had a problem in 2004. His aim with a baseball was off, and his arm hurt. His hand shook a little, [...] (2c) **Pauletich had early onset Parkinson's disease**.

In addition to subject topicalization, non-subject topicalization is another effective way to realize topic-comment structure in English. Topicalization preposes the arguments and the adjuncts to the topic position, which is initial in the constructions, as in (4).

(4)

- a) [Topic1 "Fuel is the number one priority,"] [subject topic *he*] says. (NG)
- b) [Scene-setting topic *For many years*] [subject topic *he*] had been blessed with a similar sanctuary in New York City. (DC)

In (4a), the complement CP *fuel is the number one priority* is topic1 (Lambrecht, 1996), while *he* is the subject topic. Likewise, the PP *for many years* in (4b) is the scene-setting topic for the main predication while *he* is the subject topic.

In accordance with Lambrecht (1996), topic-comment is a major structure to arrange the information of the sentence in English. It was found that the information represented by the subject topics and the scene-setting topics refers back to the

information in the previous clauses, which makes the discourse coherent, as demonstrated in (5).

(5)

- a) [_{Scene-setting Topic} Since the healing of his foot], [_{subject topic} he]’s made the pilgrimage 12 more times. (NG)
- b) [_{Subject topic} The students in the crowd] nodded enthusiastically. (DC)

In (5a), both the scene-setting topic and the subject topic *he* refer back to the information mentioned in the previous clause which depicted Richard Mödl’s recovery of his heel because of the pilgrimage. In the same vein, the subject topic *the students* in (5b) echoes the information in the prior clause which is about a lecture given by Mr. Langdon, and the students as the audience are the default information. Therefore, discourse coherence is the fine-grained motivation for topic-comment structure of the constructions.

Additionally, the expletives and all-focus constructions serve to introduce a new topic and add unknown information to the discourse, as in (6).

(6)

- a) (It is) my stomach. (DC)
- b) Fewer than 500 (gray crowned crane) remain in the wild in Rwanda. (NG)

(6a) is an expletive sentence and (6b) is a non-topic-comment sentence with the indefinite subject (see section 2.2.2 and section 5.1). They do not arrange information following the topic-comment structure, but they introduce new topics to the upcoming clause. Corresponding to the information in (6a), the following sentence as in (7) describes that the bullet missed the man’s heart but hit his stomach.

(7) (It is) my stomach. Almost cruelly, the bullet had missed his heart. (DC)

Similarly, due to the information mentioned in (6b) that the gray crown cranes are in danger, it results in the situation in the subsequent clause as in (8).

- (8) Fewer than 500 (gray crowned crane) remain in the wild in Rwanda. Nsengimana, a 2014 Rolex laureate, stepped in to stop the illegal trade, promote breeding, protect habitat, and return captive birds to the wild.

The data manifest that topic-comment structure plays a dominant role in the linearization of the elements in English constructions. English constructions abide by the subject-predicate structure syntactically and they also follow the topic-comment

structure on the discourse pragmatic level, which suggests that English is better claimed as a subject-prominent and topic-prominent language. Topic-comment structure is an interface issue which involves both the syntactic and the pragmatic perspectives.

Hypothesis 2: Canonical constructions as well as structure-preserving constructions represent topic-comment structures in written English.

As indicated in hypothesis 1, topic-comment sentences are the majority in written English. The majority of clausal constructions focused in the data, including canonical constructions and structure-preserving constructions, reflect topic-comment structures. When subject topicalization is syntactically the most economical way to represent the topic of a sentence, the subject maps to the topic, while the predicate maps to the comment.

Transitive constructions are prominent in representing the topic-comment structures, with 116 instances in *NG* and 98 instances in *DC*. The topic is typically represented by the subject in transitive constructions while the predicate as the comment, as in (9).

(9)

- a) [Subject topic Physicians] [comment sometimes call these trappings around hospitals the theater of medicine]. (NG)
- b) [Subject topic Langdon] [comment forced an awkward smile]. (DC)

Similar to transitive constructions, the subject of the unergative constructions represents the topic and the predicate, the comment, as in (10). There are 22 instances of the unergative constructions in *NG* and 57 instances in *DC*.

(10)

- a) [Subject topic You] [comment 're talking about the sandstorm. (NG)
- b) [Subject topic I] [comment apologize for this intrusion]. (DC)

In the same vein, the subject of the unaccusative constructions represents the topic and the predicate, the comment. Unaccusatives are pervasive in both data, with 91 instances in *NG* and 77 instances in *DC*, which are shown in (11).

(11)

- a) [Subject topic His speech] [comment became markedly clearer]. (NG)
- b) [Subject topic Saunière] [comment had never shown up]. (DC)

When it comes to the structure-preserving constructions (23 instances in *NG* and 20 instances in *DC*), the passive, the *tough* and the *have* constructions were found shouldering the responsibility of maintaining the subject-predicate structure as well as satisfying the requirement of topic-comment structure, as shown in (12).

(12)

- a) [Subject topic Its work on neurturin for Parkinson's] [comment has not been continued]. (NG)
- b) [Subject topic Langdon] [comment had little doubt]. (DC)
- c) [Subject topic His accent] [comment was not easy to place]. (DC)

The mapping relations confirm the psychological intuition that an English subject is the unmarked topic and the topic-comment structure is the common articulation of the sentence information structure.

Hypothesis 3: Topics are mainly represented by subjects, while multiple topics are represented by various constituents.

The results show that the topics are mainly the subjects, while multiple topics vary. Subjects are the UNMARKED TOPICS (Lambrecht, 1996) because they generally occur in the initial position of the sentences. The subjects, however, are not always the topics and the topics are not always the subjects. The findings demonstrate that the topics are mainly DP subjects, while multiple topics are PPs, CPs, adverbs, AdvPs, and DPs, among which PPs are prominent in *NG* and CPs are salient in *DC*. The order of DP subject topics and other elements in the same clause abide by the PEW and the EIC, whereas the order of multiple topics violates these principles but follows the topic-comment structure (see section 5.4).

The topic represented by DP subjects are shown in (13).

(13)

- a) [Subject topic Pauletich] [Subject ~~Pauletich~~] didn't deteriorate as much as his doctor predicted. (NG)
- b) [Subject topic The Lord] [Subject ~~The Lord~~] has provided me shelter and purpose in my life. (DC)

The DPs *Pauletich* in (13a) and *the Lord* in (13b) are the subjects of the constructions. They refer to the given and definite information and are what the sentence is about. To function as topics, they move to the Spec-TopP position leaving

the co-referring deleted copy in the original position. As subject topicalization is a covert movement which is the most economical way syntactically (Chomsky, 1993, as cited in C. Collins, 2001, p. 55), subject topics are unmarked in the data.

Multiple topics with such scene-setting topics as PP in (14a), AdvP in (14b), the adverb in (14c), the dislocated DP topic in (14d), and the complement CP topic in (14e) are shown below.

(14)

- a) [_{Scene-setting topic} At Alaska’s Sukok Lake], [_{subject topic} astrobiologist Kevin Hand] tests a rover designed to move beneath ice on Jupiter’s moon Europa. (Scene-setting topic as PP, NG)
- b) [_{Scene-setting topic} When Langdon saw the photo], [_{subject topic} his entire body] went rigid.
(Scene-setting topic as AdvP, DC)
- c) [_{Scene-setting topic} Often] [_{subject topic} fake injections] work better than fake pills.
(Scene-setting topic as Adverb, NG)
- d) But [_{Topic1} the church], [_{subject topic} it] is a fortress. Especially at night.
(Dislocated DP topic, DC)
- e) [_{Topic1} “Eventually the skin of male and female grows together,”] [_{subject topic} Pietsch] says.
(Complement CP topic, NG)

In (14a), the PP adjunct moves to the topic position preceding the subject topic to provide the spatial background information. Likewise, the AdvP in (14b) moves to the topic position to set the temporal frame for the main predication. In the same vein, the adverb *often* in (14c) moves to the topic position denoting the frequency of the main predication. In particular, *the church* in (14d) is in the topic position which co-refers to the resumptive pronoun *it* in the subject position of the main clause. The complement CP in (14e) precedes the subject topic.

Multiple topics in a sentence appear in both data, as shown in (15).

(15)

- a) [_{Topic1} Today], [_{Topic2} at 74], [_{Subject topic} Mödl] has a warm smile and a wiry frame that looks as if it could survive a charging rhinoceros.

(Adverb+PP+ST, NG)

- b) [Topic1 Tonight], [Topic2 three thousand miles from home], [Subject topic the accolade] had resurfaced to haunt him at the lecture he had given.

(Adverb+Adverb+ST, DC)

As assumed that topics are recursive (Rizzi, 1997; Haegeman, 2012), multiple topics are found in the data. Adverbs and PPs are preceding the subject topic to provide the spatial, and temporal framework for the main predication.

Hypothesis 4: Non-AGENT subject topics outnumber AGENT subject topics in written English.

The results support that non-AGENT subject topics outnumber AGENT subject topics in written English. The ratios between non-AGENT and AGENT subjects are 128:43 and 99:78 in *NG* and *DC*, respectively. As AGENT is prioritized as the subject (Li & Thompson, 1976; Jackendoff, 1990; Payne, 1992), it was assumed that AGENTS appear more often than other semantic roles in the subject position. Conversely, it was found that non-AGENT subject topics occur more frequently in the data. Particularly, THEME subject topics are prominent in the data, especially in *NG*.

Non-AGENT subject topics outnumber the AGENT ones in both data sets. The AGENT subject topic is demonstrated in (16).

(16)

- a) [AGENT subject I] just decided writing is going to be my hobby. (NG)
 b) [AGENT subject He] climbed the stairs quietly, not wanting to awaken any of his fellow numeraries. (DC)

By comparison, non-AGENT semantic roles, for instance, THEME in (17a), EXPERIENCER in (17b), INSTRUMENT in (17c), and LOCATION in (17d) are found frequently in the data.

(17)

- a) [THEME subject His speech] became markedly clearer. (NG)
 b) [EXPERIENCER subject You] understand the stakes. (DC)
 c) [INSTRUMENT subject These expectations] drive the so-called placebo effect, which can affect what happens in our bodies as well. (NG)
 d) [LOCATION subject You and your brethren] possess something that is not yours. (DC)

Non-AGENT subjects appear more frequently in the data. Specifically, the non-AGENT semantic roles are influenced by the topic status of the subject. In order to follow the topic-comment structure on the discourse level, a certain construction is more felicitous than other allosentences. If the transitive construction is selected, an AGENT/EXPERIENCER/INSTRUMENT subject becomes the topic. If the unaccusative construction is chosen, a non-AGENT subject appears as the subject topic.

This study contributes to the research of the topic-comment structure in written English theoretically and practically.

Firstly, this study casts light on the typological classification of English. English makes use of the subject-predicate structure syntactically and the topic-comment structure pragmatically, which suggests that English is classified as a subject-prominent and topic-prominent language.

Secondly, this study adds to the literature of the topic-comment studies. Regarding the topic-comment structure of English, the majority of the previous studies focus on the constructions with non-canonical word order, such as VP inversion, focus-preposing and the preposing constructions, such as DP, PP, VP and AP (Birner (Ward, 1988; Birner, 1994; Dorgeloh, 1997; Birner & Ward, 1992). This study explores the canonical constructions and structure-preserving constructions.

Thirdly, this study explains the connections between the subjects and the topics in English constructions syntactically and pragmatically. It uncovers the reasons why the subjects are the UNMARKED TOPICS in English. Moreover, it spells out the constituents which represent subject topics and multiple topics, their frequency, and their order in authentic context. It is of significance for English writing, especially for the expository and narrative genres. Due to the genre-effect, PPs as the compact structures are prioritized as the scene-setting topics in expository writing while the control constructions and the time adverbial CPs are optimal for the narrative writing to follow the chronological sequence.

Fourthly, it sheds light on the selection and the reasons of AGENT or non-AGENT semantic roles for the subject topics in English constructions. The choice of a certain construction with an AGENT or a non-AGENT subject from the allosentences is subject to the topic-comment structure on the discourse pragmatic level.

The results in this research, finally, throw light on the overview of the topic-

comment structure in written English with the findings being based on the expository genre and the narrative genre. This study investigates the topic-comment structure in written English, which could be expanded to spoken English and other subject-prominent and topic-prominent languages.



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