

Agent or non-agent subject topics in English expository and fictional proeses

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English is typologically claimed to be a subject-prominent language, as opposed to a topic-prominent language (Li & Thompson 1976). The initial position of the subject in a sentence, however, overlaps with the position of the topic. Some scholars, therefore, consider English subject the UNMARKED TOPIC (Lambrecht 1994: 132). Also, the subject is seen as being affiliated to the semantic role AGENT (Li & Thompson 1976), which is supported by Jackendoff's (1990) Thematic Hierarchy that grants AGENT the highest priority, among other semantic roles, in the subject position. Nevertheless, other non-AGENT semantic roles are found to appear often as the subjects in English sentences. It is, therefore, proposed that the argument in the subject position in English encodes topic information primarily and AGENT semantic role secondarily (Tomlin 1983). This study further explores the entangled relations among the subject, the topic, and the semantic roles in English. From the authentic data, we found that the three are independent but interrelated. More specifically, AGENT is not always the subject and the subject is not always the topic. AGENT or non-AGENT semantic roles of the subject are influenced by the topic status of the subject, and the topic-comment information structure of the sentence in a given discourse.

Keywords: AGENT, subject, topic, topic-comment, semantic roles

1. Introduction

English sentences, such as (1), are usually construed in isolation as subject-predicate structure as well as topic-comment structure.

(1) **Sam** drives a van.

In (1), *Sam* assumes the functions of the subject, the topic and AGENT of the sentence (Radford 2009). The frequent mapping of the pragmatic function of the topic into the syntactic function of the subject makes some scholars apply the term *topic* to the syntactic subject and even deem the subject the UNMARKED TOPIC in English sentences (Chafe 1976; Prince 1981; Gundel 1988; Lambrecht 1994).

It is, however, controversial to conflate the subject, the topic and AGENT into a single element because there are subjects that can be neither topics nor AGENTS, as shown in (2).

(2) a. **There's** still time to conserve what's standing for scholars, tourists, and posterity.
(*National Geographic* 2016)

b. **A telephone** was ringing in the darkness. (*The Da Vinci Code*)

In (2), *there* is an expletive subject and *a telephone* is an indefinite subject which are neither the topic nor AGENT. In (2a), the expletive subject *there* is semantically null and non-referential (Svenonius 2002). The main purpose of the expletive subjects in English is to satisfy the Extended Projection Principle (i.e. EPP), which states that a finite tense constituent T must be extended into a TP projection containing a subject¹ (Radford 2009: 45). In (2b), *a telephone* is indefinite and non-specific (Chafe 1976; Gundel 1988) while it is the THEME subject rather than AGENT. It is apparent that the subject, the topic and AGENT do not always overlap with each other, although they all frequently appear in the initial position of the sentence.

Li & Thompson (1976: 463) claim that English is a subject-prominent language with AGENT as the preferred subject unless a particular construction, such as the passive, is resorted to. Likewise, Gernsbacher & Hargreaves (1992: 89) propose that in English declarative sentences, the first mentioned argument is typically the subject which is also AGENT. More succinctly, “perceptually salient, animate, definite, and presupposed concepts are likely to be mentioned first as the subjects, and appear to constitute particularly good foundations in English” (Payne 1992: 5-6). Jackendoff (1990) also notes that AGENT is preferred as the semantic role for the subject position rather than other semantic roles. Tomlin (1983: 414) finds that the subject encodes pragmatic information primarily while it fleshes out AGENT semantic role secondarily. According to the above scholars, the subject in English is the UNMARKED TOPIC, with AGENT as the preferable semantic role in the declarative sentences.

In order to uncover the entangled relationship between the subject, the topic and AGENT, and check whether AGENT subject always represents the topic of the sentence, this study comes up with the following research questions:

RQ1: What is the connection between the subject and the topic in English?

RQ2: Are AGENT semantic roles more frequent than non-AGENT ones for the subject topics?

RQ3: What factors influence the choice of the AGENT or non-AGENT semantic roles of the subject?

Through the investigation of authentic data extracted from two genres of written discourse: expository proses and a novel, we intend to claim that the pragmatic function, such as the topic, is the determinant factor for the selection of the subject in the initial position of the sentence, and it in turn affects the selection of the semantic interpretation of the subject as AGENT or non-AGENT.

2. Literature review

¹ Some languages do not require a preceding subject of TP projection, like Italian (Radford 2009).

Regarding the relationship between the semantic roles and the argument position, linguists sought to depict a universal typology of the semantic roles played by arguments in relation to the predicates (Radford 2009). Haegeman (1994: 49) defines AGENT or ACTOR as “the one who intentionally initiates the action expressed by the predicate”, as shown in (3).

(3) **Mary** ate the blueberry muffin.

In (3), *Mary* is AGENT since *Mary* is considered the volitional instigator of the action identified by the verb.

To systematically identify the semantic roles, Reinhart’s (2016: 29) *Theta Theory* proposes the features [\pm c] and [\pm m] to clarify the semantic property of each argument. [c] refers to *cause* and [m], *mental state*. Cause is the capability of an argument to be the causer of an action, while mental state is the capability of an argument to have intention. Thus, AGENT is semantically marked as [+c +m], INSTRUMENT, [+c -m], EXPERIENCER, [-c +m], and THEME [-c -m]. This unified binary specification systematically distinguishes the above arguments from one another. It, however, cannot ideally distinguish all the traditional semantic roles, for instance, LOCATION, GOAL, and SOURCE, etc.

Rather than specifying the semantic roles, some scholars attempt to correlate the semantic interpretation of an argument to a specific syntactic position. Jackendoff (1990, as cited in Zhang Jingyu 2007: 14) denotes the thematic hierarchy in (4) below to show that AGENT, being the instigator, receives the priority, among other arguments, to be selected as the subject of a sentence.

(4) AGENT > EXPERIENCER > GOAL/SOURCE/LOCATION > THEME

In this hierarchy, the preference is from left to right, with the left end as the highest position (e.g. the subject position). The semantic role AGENT typically maps into the syntactic subject position in canonical transitive structures while THEME typically maps into the object position (White et al 1999).

In line with the thematic hierarchy, Baker (1988, as cited in Haegeman 1997: 27) proposes Uniform Theta Assignment Hypothesis/UTAH as in (5).

(5) Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

Based on UTAH, the subject position is usually associated with an AGENT argument. Nevertheless, different rankings were advocated in the literature as shown in (6) below.

(6) a. AGENT > BENEFACTIVE/GOAL > THEME > LOCATION
b. AGENT > GOAL/EXPERIENCER/LOCATION > THEME
c. AGENT > THEME > GOAL/EXPERIENCER/LOCATION

(Baker 1996, as cited in Haegeman 1997: 27)

In (6), AGENT is always the preferred semantic role for the subject position. However, the thematic hierarchy is challenged by double object constructions as in (7) and the passive constructions as in (8) (Larson 1990, as cited in Griffin 1999).

- (7) a. John gave/showed/sent [Mary] [a book].
b. John gave/showed/sent [a book] [to Mary].
- (8) a. [A book] was given/shown/sent to Mary (by John).
b. [Mary] was given/shown/sent a book (by John).

(Griffin 1999: 1)

In (7), the order of the semantic roles for the object position is different from each other. In (7a), BENEFACTIVE precedes THEME, whereas in (7b) THEME precedes GOAL, which can also be interpreted as BENEFACTIVE. In (8), the semantic roles of the subject position are different. In (8a), the subject in the passive construction is THEME while in (8b), it is the BENEFACTIVE.

In addition, middle constructions appear to violate Baker's (1988) UTAH because "their surface subjects bear theta roles typical of objects" (Ahn & Sailor 2010: 2). The connection between the subject position and the AGENT semantic role is more complicated than a rigid mapping seen in the thematic hierarchy.

With regard to the argument in the subject position, Marantz (1984) and Chomsky (1986) conclude that the semantic role of the subject is determined by the verb + complement structure (Radford 2009: 248), as shown in example (9).

- (9) a. John threw a ball.
b. John threw a fit. (Radford 2009: 248)

Though *throw* is the predicate in both sentences, *John* is assigned the AGENT semantic role in (9a) while EXPERIENCER in (9b). *John* is the instigator of the action *throwing a ball* in (9a) whereas *throw a fit* is an idiom which assigns the EXPERIENCER semantic role to the subject *John* in (9b).

Apart from the semantic role AGENT, the subject is also connected to the pragmatic concept of topic. Li & Thompson (1976: 464) assume that topic is the "centre of attention", and "the theme of the discourse". Topic is always in the initial position which encodes given or known information, while comment follows topic to provide new or unknown information (Li & Thompson 1976). The study of topic can trace back to the Systemic Functional viewpoint of *theme*. According to Mathesius (1939, as cited in Hasan & Fries 1995), theme is assigned two functions, namely, the known or at least obvious in the given situation; from which the speaker proceeds. In English, theme is subcategorized into Textual theme (e.g. the conjunctives), Interpersonal theme (e.g. Modal adjunct and Finite), and Topical theme (e.g. the subject) (Hasan & Fries 1995: xxx). Topic in this study resembles the Topical theme which refers to the preverbal subject. Firbas (1992: 125) follows Mathesius that topic is an item in the

initial position, but he notes that topic is not a “position-bound” concept. Sgall (1984: 72) remarks that topic is contextually-bound, which supports that topic represents given and definite information known in the context.

Regarding givenness, Gundel (1988: 212) considers it the activated knowledge, which refers to “an entity which the speaker and the addressee are not only familiar with but are actually attending to or thinking of at the time of utterance”. Based on the fact that the topic is the contextually known information, it is assumed that the topic is *definite* (e.g. Li & Thompson 1976; Schachter 1976; Fuller 1985, as cited in Gundel 1988: 213). Concerning the definiteness, Abbott (2004: 123) proposes the list from the most definite to the least as in (10).

- (10) [NP_e] (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

Although one constituent may assume the functions as the subject, AGENT, and the topic of the sentence simultaneously, they show different perspectives of a language. The subject represents the grammatical (structural) function, and AGENT is the semantic role that the argument, *inter alia*, the subject affords while the topic belongs to the discourse pragmatic perspective (i.e. information structure).

The distinction between the subject and the topic also reflects their syntactic analysis. Rizzi’s (1997) split CP dissolves Complementizer Phrase (CP) into Force Phrase, Topic Phrase (TopP), Focus Phrase (FocP) and Finite Phrase (FP), respectively. Topicalisation is the preposing of arguments and adjuncts to the spec-TopP position. The process marks the preposed constituent as the topic of the sentence (Radford 2009: 326).

An element which qualifies as both the subject and the topic is termed as the *subject topic* in this study. It undergoes the movement from the specifier of TP (spec-TP) position, i.e. the subject position, to the specifier of TopicP (spec-TopP) position, i.e. the topic position. The fronted constituent co-refers to its deleted copy and satisfies the requirement of the topic pragmatically, as demonstrated in (11).

- (11) a. [_{spec-TP} The cat] ate a fish.
 b. [_{spec-TopicP} The cat] [_{spec-TP} ~~The cat~~] ate a fish.

In (11a), [the cat] is the subject of the sentence, which locates in spec-TP position. [The cat] in (11b), moves to the spec-TopP position to function as the topic of the sentence. [The cat] is the *subject topic* of the sentence.

Other topicalized constituents rather than the subject are claimed to be another kind of topic which sets the frame and provides the background information for the main predication (Lambrecht 1994; Erteschik-Shir 2007). Lambrecht (1994: 147) marks the topicalized constituent as the “secondary topic”, while the subject serves as the “primary topic”, as shown in (12).

(12) [_{secondary topic} The product] [_{primary topic} I] feel less good about. (Lambrecht 1994: 147)

The subject topic is the same as the “primary topic” by Lambrecht. This study narrows down the scope to the subject topics in the initial position of the sentence in accordance with Li & Thompson (1976) and the Systemic Functional School. Following the previous studies, the subject topic of a sentence, therefore, contains the properties of *givenness*, *definiteness* and *aboutness* (Gundel 1988). Syntactically, the subject moves from the spec-TP position to the spec-TopP position and becomes the subject topic. The study explores the relationship between the AGENT or non-AGENT semantic roles, the subject, and the topic.

3. Methodology

To investigate the relationship between the subject, the topic, and the AGENT or non-AGENT semantic roles in authentic data, *National Geographic* (NG) and *The Da Vinci Code* (DC) are selected to explore the sentence structures across genres. The selection is based on the belief that commercialized publications target wider ranges of audience. Popularity among the audience proves the wide acceptance of the language to some extent. The texts in *National Geographic* (NG) are expository in general while *The Da Vinci Code* (DC), on the other hand, is a bestselling novel originally written in English. The selected *National Geographic* texts were dated December 2016, while *The Da Vinci Code* was published in 2003.

As topicalization mainly operates in the main clause in English (Emonds 2004, as cited in Haegeman 2012: 151), only main clauses were extracted. Based on the related previous research (e.g. Jayaraman 2011), 300 main clauses were collected from each data set, respectively. Coordinators (e.g. *and*, *but*, *or*) are excluded because they function to connect the main clauses. The interrogative clauses as shown in (13), are not included since this study focuses on the preverbal subject topics in the initial position of the declarative sentences in English.

- (13) a. How did writing *The Martian* begin? (NG)
b. Is it a secret you will die for? (DC)

In order to check the connections between the subject and the topic, the subjects of these 600 main clauses are identified as the non-initial subject-topics and the initial subject topics. Pragmatically, the subject topic employs the properties of *givenness*, *definiteness*, and *aboutness*. Syntactically, the subject topic is in the initial position (spec-TopP position) of the declarative sentence in this study.

The non-initial subject-topics are shown as in (14).

- (14) a. *There* existed only one person on earth to whom he could pass the torch. (DC)
b. *A dark stubble* was shrouding his strong jaw and dimpled chin. (DC)

- c. But [_{Secondary Topic} for those who would sample], *there* is a shortcut. (NG)

In (14a) and (14c), the subjects are expletives which are semantically null and non-referential. In (14b), the subject is an indefinite DP, which does not meet the requirement of the topic properties of givenness and definiteness.

The subject topics are shown as in (15).

- (15) a. [_{Subject Topic} The meaty fruit] also comes prepackaged and in cans. (NG)
 b. [_{Subject Topic} Breaking one down] takes time. (NG)
 c. [_{Secondary Topic} Twenty-four hours later], [_{Subject Topic} he] had almost lost his life inside Vatican City. (DC)

The meaty fruit in (15a) is the DP subject of the sentence, which is definite, given and what the sentence is about. Therefore, it is eligible to move to the spec-TopP position to satisfy the pragmatic requirement as the topic of the sentence. In (15b), the subject topic is a Complementizer Phrase (CP), which denotes a specific proposition. In (15c), multiple topics *Twenty-four hours later* and *he* are preposed. This study confines its scope to the subject topic of Determiner Phrase (DP) because the semantic roles are assigned to DPs. Therefore, the subject topic in the initial position of the sentence, as demonstrated in (15a), will be explored.

The semantic roles of the subject topic are distinguished in accordance with the definitions proposed by Haegeman (1994), all well as the binary features of [_{±c}] and [_{±m}] by Reinhart (2016). The semantic roles of the subject topic are demonstrated as in (16).

- (16) a. *The attacker* aimed his gun again. (DC AGENT)
 b. *The curator's eyes* flew open. (DC THEME)
 c. *Richard Mödl* had recently broken his heel. (NG EXPERIENCER)
 d. *The quest to find life on other planets* has intrigued scientists for eons.
 (NG INSTRUMENT)

In (16a), *the attacker* is the one who intentionally initiates the action of aiming his gun, and it is featured as [_{+c +m}], so it is AGENT. In (16b), *the curator's eyes* is the thing undergoing the change of state, and with the features [_{-c -m}], it, hence, is THEME. *Richard Mödl* in (16c), is the entity that experiences some (psychological) state of breaking his heel, and it has the features [_{-c +m}], therefore, it is EXPERIENCER. *The quest to find life on other planets* in (16d) is the means used to perform the action of intriguing the scientist, with the features [_{+c -m}], so it is regarded as INSTRUMENT. Other semantic roles are identified in accordance with the definitions by Haegeman (1994: 50). For example, LOCATION is the place where the action or state expressed by the predicate is situated while BENEFACTIVE is the entity that benefits from the action expressed by the predicate.

4. Results

In both genres, the sentences with the initial subject topics outnumber the sentences with non-initial subject topics. The majority of the initial subject topics are DPs, as shown in Table 1. Similar number of non-initial-subject-topics were found in both *NG* and *DC*, as 126 instances and 122 instances, respectively.

Table 1: Initial subject topics and non-initial subject topics in *NG* and *DC*

NG/DC	N	Examples
A. Initial Subject Topic (NG)	174	
a. DP	171	<i>They [Random House] offered me a book deal.</i>
b. CP	3	<i>Keeping your mate extraordinarily close—as in permanently fused to your body—has its advantages.</i>
B. Non-initial Subject Topic (NG)	126	<i>It’s a long way from Costa Rica’s rain forests to a Washington State prison.</i>
A. Initial Subject Topic (DC)	178	
a. DP	178	<i>He lunged for the nearest painting he could see, a Caravaggio.</i>
B. Non-initial Subject Topic (DC)	122	<i>Far off, an alarm began to ring.</i>

In *NG*, 174 instances are observed as the subject topics in the initial position, among which, 171 instances are DPs as shown in (17a) while three instances are CPs, as in (17b).

- (17) a. *She aims to boost that to 300 liters a day to support new product development.*
 b. *Winnowing 19 days of food and supplies to fit into a 60-pound backpack is still daunting.*

In *DC*, 178 instances with the initial subject topics are DPs, as in (18).

- (18) *The woman showed no signs of letting up.*

In Table 2, within these 171 instances of the DP subject topics in *NG*, the majority, with 82 instances (48.0%) are THEME. Being second to THEME subject topics, 43 instances (25.1%) of AGENT subject topics were noted. 30 instances (17.5%) of EXPERIENCER subject topics were also found. In addition, INSTRUMENT and LOCATION subject topics appear 13 times (7.6%) and three times (1.8%), respectively. The hierarchy of the semantic roles for the subject topics in *NG* appears to be as in (19).

- (19) THEME >AGENT >EXPERIENCER >INSTRUMENT >LOCATION

Table 2: Semantic roles in *NG*

Semantic roles	N	%	Examples
AGENT	43	25.1	But <i>she</i> eventually persuaded her family and her village of Enosaen to allow her to leave and get an education.
INSTRUMENT	13	7.6	<i>The comic books</i> help educate Rwanda's youth about conservation and biodiversity.
EXPERIENCER	30	17.5	But <i>I</i> also liked eating regular meals.
LOCATION	3	1.8	<i>It [The jackfruit]</i> has a texture (though not a protein content) like meat's.
THEME	82	48.0	
a. passive	10	12.2	But <i>their way of life</i> is threatened by disappearing grazing lands, mechanized farming, and falling demand for camels.
b. unaccusative	72	87.8	<i>The whole one [jackfruit] seen here</i> weighs about 20 pounds.
Total	171	100	

As a result, non-AGENT subject topics outnumber AGENT subject topics in *NG* with the ratio of 74.9% versus 25.1%. Particularly, THEME subject topics appear frequently in the unaccusative sentences (72 instances), which are followed by the passive sentences (10 instances).

Within the 300 main clauses in *The Da Vinci Code*, 178 DP subject topics were observed (see Table 3). Being slightly different from that in *NG*, AGENT subject topics in *DC* occur more frequently with 78 instances (43.8%). In terms of the THEME and EXPERIENCER subject topics, there are 60 instances (33.7%) and 33 instances (18.6%), respectively. Five instances of INSTRUMENT (2.8%) and two instances of LOCATION subject topics (1.1%) were also found in the data.

Table 3: Semantic roles in *DC*

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

Likewise, non-AGENT subject topics in *DC* outnumber AGENT subject topics as well. In line with the findings in *NG*, THEME subjects appear more often in unaccusative sentences (50

instances, 83.3%) than in passive sentences (10 instances, 16.7%). And the hierarchy of the semantic roles for the subject topics in *DC* is shown as in (20).

(20) AGENT> THEME> EXPERIENCER> INSTRUMENT> LOCATION

5. Discussion

5.1 Subjects and topics

The findings in Table 1 reveal that the majority of the subjects represent the topics of the sentences. These subject topics are featured by givenness, definiteness and aboutness, which are demonstrated in (21).

- (21) a. *Pauletich* didn't deteriorate as much as his doctor predicted. (NG)
b. But *he* struggled with the disease and with depression, as talking and writing became ever harder. (NG)

In (21), the subjects *Pauletich* and *he* are proper names and pronoun, respectively, which are given and definite in accordance with Abbott (2004). These two sentences were extracted from a passage about *Pauletich* who recovered from Parkinson's disease because of the religious faith, as shown in (22) with the previous clause.

- (22) At 42 years old, *Pauletich* had early onset Parkinson's disease. [...] (21a) *Pauletich* didn't deteriorate as much as his doctor predicted, (21b) but *he* struggled with the disease and with depression, as talking and writing became ever harder.

From the context, *Pauletich* is the given information mentioned previously. It is the continuous topic of this passage. The pronoun *he* takes *Pauletich* as the antecedent, which makes the discourse coherent.

As the initial topic of the sentence plays an important role in making the discourse coherent, the choice of the subject topics are not at random, as demonstrated in (23).

- (23) Kakenya Ntaiya's life was mapped out at an early age, as it is for many traditional Kenyan girls [...]. (NG)
a. She eventually persuaded her family and her village of Enoosaen to allow her to leave and get an education. (NG)
b. Her family and her village of Enoosaen were eventually persuaded by her to allow her to leave and get an education.
c. Her family and her village of Enoosaen, she eventually persuaded to allow her to leave and get an education.
d. It was her family and her village of Enoosaen that she eventually persuaded to

allow her to leave and get an education.

The sentences in (23 a-d) express the same proposition and share the similar meaning. Compared with other sentences, (23a) is selected because the pronoun *she* is the continuous topic of the discourse, with the antecedent *Kakenya Ntaiya* in the previous sentence. Therefore, the topic-comment information structure of the sentence together with the coherence of the discourse affects the choice of the subject topics in the initial position of the sentence.

5.2 AGENT subject topics

In both data, non-AGENT subject topics occur more frequently than AGENT ones, which contradicts the claim that AGENT is the privileged semantic role of the subject in English declarative sentences. The findings in *DC* seem to support Jackendoff's thematic hierarchy that AGENT is preferred in the subject position. AGENT, however, is not always the preferred semantic role of the sentence. As shown in Table 2, THEME is the major semantic role rather than AGENT in *NG*.

The instances with AGENT subject topics are shown as in (24).

- (24) a. **The nomadic pastoralists** have herded camels in the remote regions of Rajasthan for centuries. (*NG* 2016)
b. **The man** leveled his gun at the curator's head. (*DC* Prologue)

In the above examples, the arguments in boldface are AGENTS with the features [+c +m]. In (24a), the arguments, namely, *the nomadic pastoralists*, *camels*, and *the remote regions of Rajasthan* are AGENT, THEME, and LOCATION semantic roles, respectively. They are all considered eligible 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: 418). Here, the “goal of the communicative event” refers to the communicative aim of the current activity expressed by the speaker. (24a) is from the article entitled *The secret sauce to save a culture*. It depicts the change of the grazing lands, which threatens the lives of the nomadic pastoralists. The aim of the communication is to describe the nomadic pastoralists who are affected by the change. Based on the relevance of the pragmatic information in this communicative event and the “center of attention” (Li & Thompson 1976), the arguments in (24a) are ranked according to Tomlin's (1983) thematic hierarchy as follows in (25).

- (25) *The nomadic pastoralists* (AGENT) > *camels* (THEME) > *the remote regions of Rajasthan* (LOCATION)

From the article title, “The secret sauce to save a culture”, *the nomadic pastoralists*, which is more connected to *a culture* than other arguments, is considered the “center of attention”. Its connection to the title makes it *given*, *definite*, and *specific* information, which qualifies it as

the topic of this sentence.

Likewise, in (24b), *the man* /AGENT is considered the topic of the sentence when compared with *his gun* / THEME and *the curator'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 chosen topic of this sentence, which contributes to the coherence of the discourse, as demonstrated in (26).

(26) **The albino** drew a pistol from his coat and aimed the barrel through the bars, directly at the curator. [...]. **The man** stared at him, perfectly immobile except for the glint in his ghostly eyes. [...]. (24b) **The man** leveled his gun at the curator's head. (DC)

Hence, AGENT is the chosen semantic role not only due to the characteristics of being more animate, more active, and more imageable (Johnson 1976, as cited in Gernsbacher & Hargreaves 1992), but also because of 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, which affects the choice of the sentence from those sentences sharing the same meaning. But if it is not the topic of the sentence, any other semantic roles, such as THEME, EXPERIENCER or INSTRUMENT are potential candidates for the subject position, which will be explored in detail in the following sections.

5.3 THEME subject topics

In both *National Geographic* and *The Da Vinci Code*, THEME subjects with the features [-c-m] are constantly found. THEMES appear even more often than the AGENT subjects in the former. Across the genres, THEME subjects are found in the passive and the unaccusative sentences. Within the unaccusative sentences, the sentences with unaccusative *be* (Radford 2009: 253) are prominent.

5.3.1 Passive sentences

The use of the active and the passive sentences in the discourse depends on the choice of perspective, which is strongly influenced by (i) the discourse cohesiveness and coherence; and (ii) the speaker's empathy with the entities involved in the state of affairs expressed (Risselada 1991: 401). *Empathy* is defined as “the speaker's identification, in varying degree, with a participant in an event” (Kuno 1976: 431).

The passive sentences found in both data are without by-AGENT phrases as shown in (27a, b). In other words, AGENT is not the topic of the passive structure. Only two instances as shown in (27c, d) are found with *by*-phrase.

- (27) a. *He* was trapped inside the Grand Gallery. (DC)
b. *This photo* was taken less than an hour ago. (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)

In (27c), the demoted AGENT is a collective noun rather than a specific person. It is also possible to claim that the THEME subject is the promoted sentence topic which represents the writer's empathy and makes the discourse coherent. The previous sentences preceding (27c) are about the failure of the experiment on gene therapy conducted by the company Ceregene as shown in (28a). In (27d), the *by*-phrase is not AGENT but the phenomena which cause the occurrence of the THEME. Therefore, the choice of the passive structure in (27d) is also due to the topic status of the THEME subject, as shown in (28b).

- (28) a. In April 2013, **Ceregene** announced the results of the trial: Neurturin had failed. [...].
(27c) **Ceregene** was bought by another company in 2013.
b. The nomadic pastoralists have herded camels in the remote regions of Rajasthan for centuries. (27d) **Their way of life** is threatened by disappearing grazing lands, mechanized farming, and falling demand for camels.

The THEME subjects of the passive sentences in the data show that topic-comment sentence structure and the discourse coherence are the main reasons for the promotion of the THEME subjects. In order to make the discourse coherent, a given sentence is selected, such as the passive sentence. Hence, the THEME subject in turn occurs as the topic rather than AGENT.

5.3.2 Unaccusative sentences

An unaccusative sentence has a THEME subject and a motion predicate indicating the change of state, the state of affairs or an existential predicate which indicates existence (Radford 2009: 252). THEME as the semantic role for the sole argument in unaccusative sentences, it is thus selected as the subject, as demonstrated in example (29).

- (29) a. **The movie** takes place in 2035. (NG)
b. **The buoyant mass of fertilized eggs** slowly rises to the ocean's upper reaches. (NG)
c. **The parquet floor** shook. (DC)
d. **The agent** looked grim. (DC)

In (29d), it depicts the state of the THEME *the agent* being grim. In (29a), it states the affairs of the movie, while in (29b, c), they are about the change of the THEME, *the fertilized eggs*' rising state and *the parquet floor*'s shaking state, respectively.

In unaccusative sentences, the THEME subject, therefore, is the candidate for the topic of the sentence. The choice of the unaccusative sentences is determined by topic-comment structure of the sentence and the discourse context, as demonstrated in (30).

- (30) a. That [science was a character unto itself] was part of the goal. (29a) **The movie** takes place in 2035.

- b. As he releases sperm, she releases a gelatinous egg mass that expands in water, absorbing the sperm. **(29b) The buoyant mass of fertilized eggs** slowly rises to the ocean's upper reaches.
- c. As he had anticipated, a thundering iron gate fell nearby, barricading the entrance to the suite. **(29c) The parquet floor** shook.
- d. The agent checked his watch. [...] **(29d) The agent** looked grim.

The THEME subjects in (30) are continued topics in the discourse or the information which can be inferred from the preceding sentences. These subject topics also facilitate the discourse coherence. If the unaccusative sentences are selected to accommodate to the topic-comment structure of the sentence and the pragmatic context, then the THEME subject topics are correspondingly chosen.

In particular, sentences with the unaccusative verb *be* are prominent in the data. In terms of their functions, they are mainly classified into three types, namely Predicational as in (31a), Specificational in (31b), and Identificational (i.e. Equative sentences) in (31c) (Higgins 1979: 193).

- (31) 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: Chapter 1:1)

Specificational sentences exhibit the topic-comment information structure (Higgins 1979; Declerck 1988; Heycock 1994; Mikkelsen 2005, as cited in Martinović 2013: 140). The subject is the topic providing given information while the latter part after the unaccusative *be* is the comment providing new information. In the same vein, Predicational sentences tell us something about the referent of the subject (Mikkelsen 2005: Chapter 1: 1), in which the subject preceding the unaccusative *be* is the topic.

Many of the sentences with the unaccusative *be*, among which 46 out of 51 instances in *National Geographic*, and 28 out of 32 instances in *The Da Vinci Code* are Predicational sentences, as shown below in (32).

- (32) a. **The gopher-like tuco-tuco** is native to Bolivia. (NG)
- b. **He** was broad and tall, with ghost-pale skin and thinning white hair. (DC)

In line with other unaccusative sentences, the THEME subjects of the sentences with unaccusative *be* are the subject topics as well. These subject topics are given, definite information mentioned in the previous sentences, which are felicitous in the discourse context, as shown in (33).

- (33) a. Conservation biologist Erika Cuéllar displayed such dedication to conservation in the Gran Chaco, [...]: Erika's tuco-tuco, aka *Ctenomys erikacuellarae*. **(32a) The**

gopher-like tuco-tuco is native to Bolivia.

- b. Only fifteen feet away, outside the sealed gate, the mountainous silhouette of his attacker stared through the iron bars. **(32b) He** was broad and tall, with ghost-pale skin and thinning white hair.

In the data, some Specificational sentences as in (34) and Equative sentences as in (35) are shown below, respectively.

- (34) a. **The best one could hope for** was a slowdown in the progression of the disease. (NG)
b. **The lie he told** was one he had rehearsed many times ... each time praying he would never have to use it. (DC)

- (35) a. **Her goal** is to have a prototype by the early 2020s and a commercial reactor by the 2030s. (NG)
b. **The DCPJ** was the rough equivalent of the U.S. FBI. (DC)

As shown above, the subjects of the sentences with unaccusative *be* are the topics. These topics connect to the information in the previous sentences, which make the discourse coherent. Meanwhile, topic-comment structure plays a prominent role in the linearization sequence of the sentential elements in which the subject in the initial position functions as the topic of the sentence.

Although the THEME subjects in both the passive and the unaccusative sentences function to represent the topics of the sentences, less THEME subject topics appear in the passives, which is possibly due to the relatively complicated derivation of the subject in passive sentences syntactically (Radford 2009: 255). In accordance with Emonds (1976, as cited in Thompson 1978: 28), the passive sentence is one kind of structure-preserving constructions, which help maintain the subject-predicate word order in English, while locate the subject as the first element in a sentence under most circumstances. Passives do not appear as frequent as the canonical sentences in English, such as the transitive sentences and the unaccusative sentences.

5.4 EXPERIENCER subject topics

EXPERIENCER often occurs with psych verbs, such as *like*, *enjoy*, *please*, *frighten*, and *fear* because psych effects can be obtained only in non-agentive context (Jiménez & Rozwadowska 2016: 102), as shown in (36).

- (36) a. **The dog** fears John.
b. **Mary** likes the dog.

In (36), *the dog* and *Mary* are EXPERIENCER rather than AGENT because they are entities which experience some psychological state and they have the features [-c +m].

The examples of EXPERIENCER subject topics from the data are shown as in (37) below.

- (37) a. **I** also liked eating regular meals. (NG)
b. but **he** felt like the dead. (DC)

The EXPERIENCER subjects are found as the topics of the sentences in the data. These subject topics look back to the information in the preceding sentence, as demonstrated in (38).

- (38) a. **I**'d always wanted to be a writer, even when I was in high school. **(37a)** **I** also liked eating regular meals.
b. **He** had been asleep only an hour, **(37b)** but **he** felt like the dead.

In (38), *I* and *he* are the continued topics of the sentences, which refer back to the subject topics in the preceding sentences. In this regard, the sentences with EXPERIENCER subjects are chosen due to the topic status of the subjects as well.

5.5 Other semantic roles

In English, INSTRUMENT can be realized in the position of the subject, as in (39a) or a complement of the Prepositional Phrase (PP), as shown in (39b).

- (39) a. **The ball** broke the glass door.
b. I broke the glass door **with a ball**.

In the data, INSTRUMENTS are found in the subject position, as shown in (40).

- (40) a. **The comic books** help educate Rwanda's youth about conservation and biodiversity. (NG)
b. **The spiked cilice belt that he wore around his thigh** cut into his flesh. (DC)

It is seen that the INSTRUMENT subjects are the topics which echo the information of the preceding sentences as shown in (41).

- (41) a. To save Rwanda's endangered gray crowned crane from extinction, veterinarian Olivier Nsengimana is using everything from *comic books* to hightech drones. **(40a)** **The comic books** help educate Rwanda's youth about conservation and biodiversity.
b. One mile away, the hulking albino named Silas limped through the front gate of the luxurious brownstone residence on Rue La Bruyère. **(40b)** **The spiked cilice belt that he wore around his thigh** cut into his flesh.

Apart from INSTRUMENTS, LOCATION is observed as the subject topic in the data, as seen in (42). The locational phrase is topicalized as the topic of the sentence.

- (42) 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)

The choice of LOCATION as the subject is also due to the topic status of the subject and the topic-comment information structure of the sentences, as demonstrated in (43).

- (43) a. That may explain why some chefs and food companies have begun promoting jackfruit. (42b) **It /The jackfruit** has a texture (though not a protein content) like meat's.
 b. You are lying. [...]. (42c) **You and your brethren** possess something that is not yours.
 c. She held up a copy of *Boston Magazine*. [...]. (42d) **Boston Magazine** clearly has a gift for fiction.

In (42a), *Venezuela's Lake Maracaibo* is assumed to be the presupposed information known by the audience because it is South America's largest lake by area. From the context provided in (43), the LOCATION subjects correspond to the information in the previous sentences.

Briefly, the topic-comment structure of the sentence is the optimal choice to make the discourse coherent. The topic status of the initial subjects influences the writer to select one sentence from others sharing the same proposition. In turn, the semantic roles of the subject topics are affected by the choice of a given sentence. For instance, if the transitive sentence is chosen, AGENT, EXPERIENCER and INSTRUMENT subjects are likely to occur as the subject topics. Meanwhile, if the passive or the unaccusative sentences are chosen, THEME subjects probably appear as the topics. Therefore, the occurrences of AGENT or non-AGENT semantic roles of the subjects are determined to a large extent by the topic status of the subjects and the topic-comment information structure of the sentences in the discourse.

6. Conclusions

To conclude, the subject and the topic in English sentences do not have the one to one mapping connection, but the majority of the subjects represent the topics of the sentences. Syntactically, subjects locate in the specifier position of the TPs, while topics are in the specifier position of the TopPs. As for the subject topic, it moves from spec-TP to spec-TopP position to satisfy the pragmatic requirement of the sentence.

Regarding the semantic roles of the DP subject topics, non-AGENT semantic roles outnumber AGENT ones in the data, which disagrees with the previous claim that AGENT is the privileged semantic role for the subject position in English declarative sentences. This study finds that the occurrences of the non-AGENT semantic roles are influenced by the choice of the

subjects of the sentences in a given discourse. In order to form the coherent discourse, a certain sentence is chosen because it is more appropriate and felicitous in the context. In this regard, the subject topics can be either AGENT or non-AGENT. If the transitive sentence is chosen in the discourse, AGENT, EXPERIENCER, and INSTRUMENT subjects are likely to appear. By contrast, if the passive or the unaccusative sentences are selected in the context, non-AGENT subjects are probably to occur. Therefore, AGENT or non-AGENT semantic roles are influenced by the selection of the sentence with the initial subject topic in the discourse. In other words, the subject topic position encodes the information of the topic on the discourse level, which can go with either AGENT or non-AGENT semantic roles on the sentence level. As this study only investigates the two genres, namely, expository and narrative proses, further studies on different genres are needed to support the claim.

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