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A Multi-perspective and Functional Analysis of English Abstract Nouns in Academic Texts

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Abstract

It is well acknowledged that abstract nouns, characterized by their generalized meanings and broad references, are frequently employed in English academic discourse to express complex ideas and content. Moreover, they serve as one of the primary means for authors to construct arguments, which play a crucial role in knowledge accumulation. Given the significance of abstract nouns in English academic texts, the author contends that a more comprehensive and in-depth investigation of such nouns is warranted. Building upon previous studies and incorporating concrete examples, this paper attempts to describe and analyze the diverse functions of abstract nouns in English academic discourse from the perspectives of textual cohesion, cognitive linguistics, and appraisal theory. The aim is to enhance understanding of these nouns and promote their effective application in practical English academic writing.

1. Introduction

Academic discourse serves not only as a factual and objective presentation of research findings but also as an ongoing dialogue between authors and readers within a disciplinary community. Consequently, the interactive nature of academic discourse has become a focal point of research over the past two decades. These studies have identified and analyzed numerous linguistic devices or discursive features that embody interpersonal and evaluative functions, such as hedges, reporting verbs, directives, and choices of tense and voice. However, research specifically targeting abstract nouns remains limited. Internationally, scholars have examined nominalization in science and humanities textbooks, analyzed grammatical subjects in psychology, history, and literature research articles, and explored the cohesive functions of such nouns in academic discourse. Domestically, studies on interpersonal features in academic discourse have predominantly focused on modality and evaluative language resources, while discussions on abstract nouns have been confined largely to nominalization and textual functions, with scant attention paid to their other roles.

It is widely recognized that academic discourse often conveys complex ideas, and abstract nouns—characterized by their generalized meanings, broad referential scope, and conceptual breadth—are particularly suited for such expression. Consequently, they are extensively employed in English, especially in social science treatises, official documents, press commentaries, legal texts, and business correspondence. Moreover, abstract nouns serve as one of the primary means for authors to construct arguments, a process critical to knowledge accumulation. Given the significance of abstract nouns in academic discourse and the current gaps in research, this study aims to undertake a more comprehensive and in-depth exploration. Building on prior scholarship and concrete examples, we analyze the multifunctional roles of abstract nouns in English academic texts from perspectives of textual cohesion, cognition, and evaluation, with the goal of deepening theoretical understanding and enhancing their practical application in academic writing.

2. Definition, Characteristics, and Classification of Abstract Nouns

The concept of abstract nouns traces back to Halliday & Hasan's *Cohesion in English*, which introduced the category of "general nouns"—equivalent to the abstract nouns under discussion here—whose precise meanings are context-dependent. For example, in the following sentences, the specific sense of *way* is resolved by the preceding clause, while *issues* is clarified by the subsequent clause:

In the case illustrated in Fig. 3.1, the secretion is released from the free surface of the cells. Mucus is secreted this way, as is sweat from the sweat glands in the skin.
The issues which emerge have beset the personal social services for generations—accountability,

relationships with voluntary bodies, what their role is, for example, but the context is different.

Domestic research has primarily approached these nouns through English-Chinese contrastive studies, emphasizing their semantic traits and functions. Scholars note that English exhibits a stronger preference for abstract nouns compared to Chinese. These nouns often carry vague, "abstract," "generalized," or "implicit" connotations, functioning as lofty, weighty lexical items.

How many such nouns exist in English, and what are their defining features? While numerous linguists have investigated this question, a definitive lexical system or classification remains elusive. Studies have adopted diverse perspectives, terminologies, and definitions. Winter categorized them as "Vocabulary 3" or "unspecific nouns," noting their hybrid status between "full words" and "empty words," or "content" and "function" lexemes. His work aimed to provide pedagogical wordlists for teachers and material developers. Francis termed them "anaphoric nouns" or "labels," demonstrating their role in referencing prior discourse segments. Jordan compiled a "vocabulary index" from corpus data, offering resources for teaching materials. McCarthy analyzed their text-organizing function under lexical cohesion, proposing they act as "discourse organizers" for argument construction rather than content exposition. Hunston & Francis introduced "shell nouns," arguing for their recognition as a distinct word class based on lexico-grammatical patterns.

The most systematic study to date is Schmid's corpus-based analysis, which theorized "shell nouns" from semantic, cognitive, and discourse-connective angles. Charles, expanding on Francis et al., proposed a semantic classification into five groups:

a)   Idea Group: Concepts related to thoughts, assumptions, or mental processes (e.g., *idea, assumption, belief, hypothesis*);

b)   Argument Group: Expressions of claims or viewpoints (e.g., *argument, contention, point, claim*);

c)   Evidence Group: Grounds or indications (e.g., *evidence, indication, observation, indicator*);

d)   Possibility Group: Potentialities (e.g., *possibility, probability, danger*);

e)   Other Group: Residual items (e.g., *fact, case, concern, sense*).

Charles's comparative analysis of these nouns in master's theses across disciplines highlighted correlations between discursive features and disciplinary conventions.

Collectively, these studies underscore abstract nouns as a hallmark of English academic discourse, warranting further functional analysis as elaborated in subsequent sections.

3. The Discourse Cohesion Function of Abstract Nouns

In discourse analysis, it is necessary to identify the signal words that appear in the discourse first. Because they indicate the discourse organization intention of the author or speaker, and they are also the main means for the reader or listener to correctly "decode" the discourse. Therefore, their importance is self-evident. Abstract nouns have the functions of "discourse organizing words" and "signal words." In the discourse, they can not only establish the interconnection between propositions, but also predict the organization form of the discourse. Therefore, relevant research mostly focuses on their usage patterns between sentences, highlighting their indicative signal functions of "back-reference" or "forward-reference." For example, Winter explored their "predictive" characteristics in written discourse and regarded them as "predictive vocabulary"; Tadros and Francis also specifically explored the cohesion function of these words in the discourse. McCarthy classified this type of nouns into lexical cohesion, believing that their function in the discourse is equivalent to that of pronouns, referring to the discourse segments in the discourse (such as one or several sentences, a paragraph or a larger unit), and also marking a larger discourse pattern, helping the reader to establish a prediction of the entire discourse structure.

3.1 Referential Function

a)   Endophoric reference: Endophoric reference includes two types: forward reference and back-reference. As referential words, abstract nouns are often used to refer to the content or entities involved before and after in the discourse, that is, the referents, and the distance between them can be large or small. When the abstract noun and the referent are far apart, the identification of the latter becomes the key to understanding the exact meaning of the abstract noun. For example:
This supports the claim in Section 2.3 above and it further shows that there are systematic ideological differences in the way Justices vote in significant and nonsignificant cases.

b)   Exophoric reference: It means that the referent (the information reflecting the meaning of the

abstract noun) does not exist in the discourse. Therefore, the meaning of the signal word cannot be determined, and it is necessary to resort to the knowledge outside the discourse. For example:

It is only necessary to glance through the current issues of the British scientific journal, Nature, or its American equivalent to appreciate the extensiveness and ramifications of biology, both pure and applied.

In the above example, the meanings of the words "extensiveness" and "ramifications" are not specifically explained. Therefore, the reader needs to infer their specific meanings according to the author's intention. Since exophoric reference involves background knowledge and reasoning outside the discourse, this article will conduct further analysis and explanation of them in the cognitive function part later.

3.2 Theme and Information Structure

The selection and use of abstract nouns are sometimes out of the needs of discourse cohesion, information distribution, structural balance, etc. The theme in the discourse represents the starting point and topic of the sentence, providing a framework for the propositional content of the entire sentence. Therefore, they are generally the familiar content for the reader, that is, the known information or old information; the rheme conveys new information and promotes the development of the discourse content. Since abstract nouns are generally rather general and comprehensive, they are often used as themes in academic discourse. They can summarize the content of the previous sentences, which is equivalent to a highly generalized "re-semantization"; at the same time, the selection of abstract nouns also reflects the author's intention. Therefore, the phenomenon of their "thematization" is relatively common in academic discourse. For example:

Some models of state socialization stress the importance of interstate rivalry as the key mechanism of international homogenization. Such a model of "competitive socialization" could be said to correspond to a realist perspective in the study of international relations. The notion that interstate competitive and military rivalry gives rise to pressures towards convergence in the international realm is by no means new.

In the above example, the word "notion" once again indicates the main content (new information) of the previous two sentences in a summarizing way, and appears in the position of the theme as the known information in the current sentence, becoming the focus of the proposition, and it also introduces new information, further promoting the development of the discourse, reflecting the transformation of the theme and rheme and the old and new information between sentences; at the same time, the choice of the word "notion" instead of nouns like "fact" or "knowledge" also reflects the author's view on the propositional content in the clause. In this sense, the use of abstract nouns is helpful for the construction of arguments, because the author can push the argument from the information that the reader is already familiar with to new information, which is particularly important for academic discourse.

In addition, some domestic and foreign studies have also tried to describe and analyze their discourse cohesion function from the perspective of discourse metaphor. Martin pointed out that discourse can be organized through meta-proposals and meta-propositions. This can be regarded as a kind of discourse metaphor. In a more comprehensive discussion later, he believed that grammatical metaphor becomes a tool for text organization by unfolding the thematic structure and information structure of a discourse, and proposed two arguments of discourse metaphor, namely metaphorical themes and metaphorical news. In the following example, the noun phrase with "movement" as the head word summarizes the content described before and serves as the starting point, that is, the theme, of the next sentence.

When a solution of any substance is separated from a solute-free solvent by a membrane that is freely permeable to solvent molecules, but not to molecules of the solute, the solvent tends to be drawn through the membrane into the solution, thus diluting it. Movement of the solvent across the membrane can be prevented by applying a certain hydrostatic pressure to the solution.

The above analysis and examples show that abstract nouns have strong referential, cohesive and text-organizing functions. Different from other forms of reference and cohesion, they often refer to larger discourse units, providing more choices for the expression of language and the organization of content in academic discourse, and meeting the needs of academic writing.

4. The Cognitive Function of Abstract Nouns

Abstract nouns generally refer to abstract entities that are separated from the objective world, reflecting the complexity of cognition. Their cognitive functions are mainly reflected in the following two aspects:

4.1 Nominalization Expression

The way of thinking is closely related to language, which is the deep mechanism for the formation and development of language, and language also promotes the formation and development of the way of thinking. Language is the main tool of thinking, and thinking is manifested in the form of language in a

certain way. Due to the rapid development of science and technology and the refinement of research in academic fields, the perceptual expression is no longer sufficient to reflect complex rational concepts, so it is necessary to resort to abstract and general ways. Halliday also mentioned that with the development of science in the 18th century, academic discourse shows the characteristic of constantly using nouns when expressing processes and the attributes of things. This kind of language of "events into things" has been developing until today and has become a dominant style in the educational system. G. M. Young pointed out that the practice of relying too much on nouns at the expense of verbs finally makes the author's thoughts deviate from the reality of the present situation, and be isolated from the time, manner and situation of the development of things, thus forming the habits of abstract, generalized and ambiguous expressions. In English academic discourse, one of the main means to reflect this complex thinking is nominalization expression.

4.2 Cognitive Processing Process

Abstract nouns generally have a semantic connection with a certain part before and after the discourse, and this mechanism of looking ahead and behind can activate the cognitive process. The dynamic analysis view of cognitive grammar holds that the language structure itself contains discourse expectations and the focus of attention in the window. Each window represents the observed scene and the behavioral scene of the speaker and listener at a specific moment, and a discourse is composed of such continuous windows. The order of several windows in a discourse corresponds to the continuously updated current discourse space. Abstract nouns form the focus frame in the current discourse space, with a minus frame before it and a plus frame following it. When abstract nouns are used for back-reference, they introduce the propositional content into the minus frame; when they are used for forward-reference, they play a role in guiding propositional expectations. When the meaning of the reference exists outside the discourse, it is necessary to mobilize background knowledge to establish a semantic connection. Ivanic pointed out that in such a situation, the application of background knowledge is not optional, but an essential part of the understanding process. The more background knowledge the listener/reader brings into the discourse, the better the understanding; as a kind of language signal, abstract nouns guide them to find the referents of the signals. In the following example related to a course lecture, the current discourse does not provide the specific content of "purpose" and "functions," and students need to apply background knowledge to understand these abstract nouns (signal words).

So think about that as we discuss the structure of plants/try and think about the purpose and the functions of many of these structures we'll be talking about.

Here, in terms of cognitive processing, the speaker can use abstract nouns to establish an expectation, prompting the audience to use the background knowledge outside the discourse to understand these signal words. Therefore, instead of simply finding the connections between words in the discourse, we should focus on methods such as the interaction mode between the mind and the discourse, the cognitive world, encyclopedic knowledge, and the context framework, and analyze the referential phenomena, the relationships between sentences, and even the entire discourse dynamically.

5. The Evaluative Function of Abstract Nouns

Academic discourse can be regarded as a platform for communication and continuous dialogue among researchers. The author not only provides information and explains their research, but also tries to persuade the reader to accept their views or opinions. Therefore, the arguments in the article must be accompanied by explanations and evaluations of their possibilities, and these evaluations inevitably involve subjective judgments. Evaluation refers to the positioning of attitudes, which is composed of three subsystems: affect, judgment, and appreciation, and the evaluation dimension also has different degrees of strength. The choice of evaluative resources has a great relationship with the genre. In academic discourse, "attitude" often involves the author's judgment of the possibility of knowledge and the evaluation of value. The author engages in a dialogue with the holders of other views on the discussed issues and puts forward their own positions and views. Therefore, "positioning" reflects the "voice" of the discourse, that is, how the author presents themselves, makes judgments, expresses views, and makes commitments in the discourse. These rhetorical strategies can be realized through the selection and use of abstract nouns.

Specifically, the evaluative function of abstract nouns is mainly reflected in the following three aspects.

5.1 Constructing Perspectives by Means of the Semantic Characteristics of Abstract Nouns

Abstract nouns have different semantic characteristics. Therefore, in academic discourse, authors can select appropriate nouns according to the needs of expression to make judgments about the goodness or badness, possibility, or value of a certain proposition or argument, reflecting different perspectives.

Attitudinal and cognitive nouns are often used to express the stance positioning of a certain proposition. Cognitive nouns represent different states of knowledge, reflecting a certain degree of certainty or factual judgment, indicating whether a certain proposition is a proven fact, an unproven hypothesis, an assertion, etc. For example:

This approach is based on the assumption that there's divergence between the actual environment faced by decision makers, and their perceptions of this environment.

Attitudinal abstract nouns illustrate the author's personal views and feelings about a certain proposition. For instance, the propositional content of the clause in the following example is regarded as "deficient" or "disadvantageous."

The idea has the disadvantages that, currently, CMCs are very expensive and the entire turbine would also need redesigning.

Generally speaking, the construction of perspectives is jointly realized through lexical selection and grammatical means. For example, the author's views are reflected together by abstract nouns and the that-clause structure.

5.2 Constructing an Objective Perspective

Abstract nouns also contribute to constructing a seemingly "objective" perspective. Because authors can avoid using personal pronouns, the evaluations or views expressed by abstract nouns can be without any attribution, thus implicitly hiding the source of the evaluation, making it difficult for readers to identify the subjective stance constructed by the author and also preventing them from raising any questions. In the following example, "evidence" is an evaluation of the reliability of the proposition. Although the author does not indicate that this evaluation comes from himself, it is clear to the reader from the context that it is the author's own view.

There is evidence that traders may reduce their cost from trading by splitting orders so as to dampen the pressure on inventory holding.

Since abstract nouns do not carry any attribution components, readers can only infer that they represent the author's perspective. Therefore, such expressions seem more objective and are less likely to be questioned. However, even without attribution components, abstract nouns still reflect the author's perspective. Sinclair believes that all propositions in a discourse can be put forward by the author or attributed by the author to others or another entity through quotation. But if the assertions in the discourse have no attribution, they can all be regarded as the author's own expressions or views. When making any judgment, the author is responsible for the truthfulness of the proposed proposition.

When a certain expression is attributed to a specific object through quotation, the quoted author is responsible for the truthfulness of the propositional content. However, it should be noted that the author of the paper is still ultimately responsible for all the propositions in the discourse, because those expressions containing attribution objects are still the author's personal views. By using specific abstract nouns, the author constructs a perspective for the quoted person, and this also indicates the author's own view of the described things. In this sense, abstract nouns have the function of expressing dual perspectives. Sinclair calls this "multi-layering." With this function, when quoting or reporting others, the author can embed their own evaluations. For example, in the following example, "claim" not only illustrates Halliday's view on the abstract expression in English, but also implicitly contains the evaluation of the author of the paper.

There was a claim that much abstract English, esp. science, is characterized by high levels of nominalization.

6. Conclusion

Regarding the functions of English abstract nouns in academic discourse, this article has explored them from aspects such as cohesion, cognition, and evaluation, and analyzed and illustrated them through some specific examples. Such multi-perspective research helps to deepen people's understanding of this type of vocabulary, enriches and supplements the previous relevant theories to a certain extent, and has certain theoretical significance. In addition, it also has a certain practical guiding role in English academic writing, especially in the expression at the lexicogrammatical level. Because successful academic writing should be a combination of the macro-genre structure and the micro-linguistic or discursive features. However, the examples of abstract nouns selected in this study come from different research papers and lack a certain degree of systematicness. Future research can make use of relevant corpora to conduct detailed and in-depth analysis of the abstract nouns in research papers in a certain field.

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