

PROCEEDINGS OF JASFL

Vol. 12 October 2018

論文

Functional Language Analysis in Teaching English Reading 1
Kaori TERAOKA

**Comparative Study of natural disasters' news reports from
the National Geographic US and Japan websites:
A Systemic Functional analysis** 11
Crystal LAM

**A SFL Model for Developing Digital Literacies in
the Academic Classroom** 21
Peter McDONALD

**Classroom Systemic-Functional Multimodal Discourse Analysis (SF-MDA):
Looking at gesture in teacher-student in-class consultations** 33
Thomas AMUNDRUD

大学初年次向け「理系」教科書（英語）が扱う「物」 47
鷲嶽正道

絵の中の結束生：Painter, et al.のシステム拡充 61
早川知江

テーマ・パークの Regulation におけるコンテクスト依存度の差異 71
三宅英文

日本機能言語学会第 25 回秋期大会プログラム 85

Proceedings of JASFL 2018 第 12 号 発行によせて

今年も本学会の活動の結実として Proceedings of JASFL 第 12 巻を発行することができました。これもひとえに会員諸氏の精力的な研究活動と学会活動へのご尽力の賜物と感謝しております。

今回発行されました Proceedings of JASFL Vol. 12 2018 は昨年 10 月 7 日、8 日に同志社大学（今出川キャンパス）で開催された日本機能言語学会第 25 回秋期大会の研究発表内容を論文に改定した論文集です。本学会も 25 年という節目を迎えることができたことは、とりもなおさず会員の皆様方のご尽力の賜物と、改めてここに感謝の言葉を申し上げます。また、長年本学会の会長としてご指導いただいた龍城正明先生に変わり、本年四月より会長の任を賜ることとなりました。日本機能言語学会をさらに発展できるよう務めてまいりますので、お力添えを賜りますよう、お願い申し上げます。

さて、本論文集は、新しい視点からの発表、テーマを深く掘り下げた発表とその内容は広範で多岐にわたり、2 日間にわたる有意義な質疑応答や議論の成果が反映された力作ぞろいとなっています。経験的意味に焦点を当てた英語の読解指導、観念構成的機能とテキスト形成的機能を枠組みとした日英のテキスト比較分析、マルチモーダルなデジタルテキストのリテラシーをどのように促進させるべきかをメタ機能の観点から論じたもの、教室内での教員と学生のジェスチャーに焦点を当てたマルチモーダル談話の分析、英語で書かれた自然科学の教科書の中で「物」がどのように具現されているかを分析したもの、マルチモーダルな絵本というテキストの中で、絵がどのような結束性を伴っているか分析したもの、規則や注意書きがコンテキストへの関連性の差異に着目して論じたものと、いずれも最新の SFL 理論を準用した秀作ぞろいとなっています。中でも今回は教育に関する研究が増え、SFL が現実的な教育場面で有効な理論であることが示されているように思えます。

また特別講演としては、山梨正明先生をお迎えして、「認知言語学の研究プログラムー機能言語学との関連性ー」と題して講演していただき、認知言語学の歴史から、考え方、そして SFL との共通点と相違点をわかりやすく解説していただきました。山梨先生の引き込まれる話術に魅了されながら、参加者一同、認知言語学のみならず、SFL の理解をも深めたことと確信しております。

SFL に関する最新の研究、知見などが満載された Proceedings of JASFL Vol. 12 2018 が会員諸氏にとって今後の SFL 研究の一助になれば、本学会を代表するものとして、これにまさる喜びはありません。

日本機能言語学会会長
ヴァージニア・パン

PROCEEDINGS OF JASFL

Vol. 12 October 2018

論文

Functional Language Analysis in Teaching English Reading 1
Kaori TERAOKA

**Comparative Study of natural disasters' news reports from
the National Geographic US and Japan websites:
A Systemic Functional analysis** 11
Crystal LAM

**A SFL Model for Developing Digital Literacies in
the Academic Classroom** 21
Peter McDONALD

**Classroom Systemic-Functional Multimodal Discourse Analysis (SF-MDA):
Looking at gesture in teacher-student in-class consultations** 33
Thomas AMUNDRUD

大学初年次向け「理系」教科書（英語）が扱う「物」 47
鷲嶽正道

絵の中の結束生 : Painter, et al. のシステム拡充 61
早川知江

テーマ・パークの Regulation におけるコンテクスト依存度の差異 71
三宅英文

日本機能言語学会第 25 回秋期大会プログラム 85

Japan Association of Systemic Functional Linguistics

『機能言語学研究』
Proceedings of JASFL

編集委員

Editorial Board of *Japanese Journal of Systemic Functional Linguistics* and
Proceedings of JASFL

編集長 Chief Editor

綾野誠紀（三重大学） AYANO, Seiki (Mie University)

副編集長 Vice Chief Editor

デビット・ダイクス（四日市大学） DYKES, David (Yokkaichi University)

編集委員 Editorial Board Members (Alphabetical Order)

福田一雄（新潟大学名誉教授） FUKUDA, Kazuo (Niigata University, Emeritus)

飯村龍一（玉川大学） IIMURA, Ryuichi (Tamagawa University)

伊藤紀子（同志社大学） ITO, Noriko (Doshisha University)

岩本和良（杏林大学） IWAMOTO, Kazuyoshi (Kyorin University)

角岡賢一（龍谷大学） KADOOKA, Ken-ichi (Ryukoku University)

小林一郎（お茶の水女子大学） KOBAYASHI, Ichiro (Ochanomizu University)

佐々木真（愛知学院大学） SASAKI, Makoto (Aichi Gakuin University)

南里敬三（大分大学） NANRI, Keizo (Oita University)

船本弘史（北陸大学） FUNAMOTO, Hiroshi (Hokuriku University)

三宅英文（安田女子大学） MIYAKE, Hidefumi (Yasuda Women's University)

バー吉ニア・パン（立命館大学） PENG, Virginia (Ristumeikan University)

パトリック・キアナン（明治大学） KIERNAN, Patrick (Meiji University)

佐藤勝之（武庫川女子大学） SATO, Katsuyuki (Mukogawa Women's University)

龍城正明（同志社大学） TATSUKI, Masa-aki (Doshisha University)

照屋一博（香港理工大学） TERUYA, Kazuhiro (Hong Kong Polytechnic University)

鷺嶽正道（愛知学院大学） WASHITAKE, Masamichi (Aichi Gakuin University)

Functional Language Analysis in Teaching English Reading

Kaori Terakawa
Dokkyo University

Abstract

The main purpose of this paper is to explore ways of applying Systemic Functional Linguistics (SFL) to teaching English reading in the context of Japanese universities. Japanese college students often have difficulty reading long and complex texts in English or understanding the main idea of a text (Ushiro, 2009). However, by examining the experiential meaning of a text, e.g., processes, participants, and circumstances, readers may be able to understand the text better and more fully. To examine the effectiveness of the SFL approach in teaching reading, an experiential analysis of an article from *The Economist* is presented in this study. Furthermore, using this article as an example, classroom activities are also introduced. For readers, understanding how experiential meaning is constructed in a text will not only increase their awareness of language but also enable them to read closely and critically.

1. Introduction

I have been teaching English at the university level for more than 10 years. As an instructor, I have had concerns about how to improve the reading skills of Japanese college students. When I observe students reading a long English text in class, I find them struggling. They tend to read word by word or sentence by sentence and often miss out on understanding the main idea of a text. Ushiro et al. (2008) also point out that understanding the macrostructure of a text and generating a topic sentence is difficult for Japanese university students.

Moreover, similar challenges are seen in English-speaking countries. Fang and Schleppegrell (2008, p. 1) wrote of secondary school students in the United States that “many adolescents are unable to read the often dense and complex texts of secondary school subjects and are not prepared for the challenges they will face in college and workplace reading.” They further argue that many secondary school students find texts from content areas such as science challenging and even avoid reading them. In Australia, Rose and Martin (2012, p. 2) call their country “a nation of immigrants,” and explain that “by the 1980s a third of Australians had been born overseas, many from non-English-speaking backgrounds and often from rural areas with relatively little formal education.” It is not difficult to imagine the challenges that school teachers face to overcome the gaps between pupils from English-speaking families and non-English-speaking families.

As I explore ways to teach English reading, I have encountered research that combines content learning and the acquisition of academic language in schools (Brisk, 2015; Gibbons, 2009; Zwiers, 2014). Further research investigation has confirmed that Systemic Functional Linguistics (SFL) has been applied to the teaching of content areas in schools in Australia and the United States (Fang and Schleppegrell, 2008; Rose and Martin, 2012; Gibbons, 2009). Many studies have discussed ways to teach English reading and improve learners' comprehension in Japan (Ushiro et al., 2008; Ushiro et al., 2009); however, little research has investigated the specific application of SFL to the teaching of English reading in Japan. The present study aims to answer the following questions:

- (1) Is SFL applicable to teaching English reading in the Japanese college context?
- (2) How can English teachers scaffold the reading of long English texts and provide support for reading complex texts?

2. Literature Review

2.1 Functional Language Analysis by Fang and Schleppegrell (2008)

As mentioned earlier, an increasing number of researchers has reported teaching methods that utilize SFL theory. In this section, two distinct studies will be introduced, as these are the most influential to my present study.

Fang and Schleppegrell provided detailed analyses of texts in secondary content areas such as science, history, and language arts, utilizing methods developed from SFL. They analyzed texts in terms of three meta-functions used in the theory and suggested an analytical framework for use in classrooms. They had students analyze texts in four core secondary school subject areas: science, history, mathematics, and language arts. Students then interpreted the texts according to the findings from their analyses. Fang and Schleppegrell argue that by using an SFL-derived analytical method when reading and interpreting texts, readers are supposed to get a better understanding of the texts (Fang and Schleppegrell; 2008).

Using SFL in secondary school content areas, as Fang and Schleppegrell illustrate (2008), seems to work well when teaching reading, as it can unpack the meaning of texts. However, doing the same in the Japanese college context could be challenging because students may not be able to understand technical terms such as experiential meta-function, process, or circumstance. Unless the students are English majors, teaching and using these technical SFL theory terms is not realistic in Japanese college English classes.

2.2 Genre-based Approach by Rose and Martin (2012)

In Australia, Rose and Martin have reported work on a genre-based literacy pedagogy called the Sydney School project or the Write it Right and Reading to Learn projects. Like the work by Fang and Schleppegrell (2008), this pedagogy was also developed from Michael Halliday's SFL. As Rose and Martin argue, "genre pedagogy has grown from a theory of how speakers use language in social life (a functional theory of language), and more specifically out of the systemic functional linguistics (SFL) theory developed by MAK Halliday and colleagues over the past six decades." (p. 18).

This pedagogy is widely known as "genre pedagogy." This method was first

created in the hope of shrinking the inequality of educational opportunity, especially for children from rural areas or from indigenous communities. However, Rose and Martin (2012) mention that the pedagogy can work well at all levels of education, at different grade levels, and in different subject areas.

The concept of genre is often defined as “a staged goal-oriented process” (Rose and Martin, 2012, p. 1). In other words, there are stages in learning to achieve a goal. They divide the teaching of reading into three levels of three sub-levels each. The diagram below summarizes the process of teaching / learning.

Level 1			
Preparing for Reading	Joint Construction	Individual Construction	
Level 2			
Detailed Reading	Joint Rewriting	Individual Rewriting	
Level 3			
Sentence Making	Spelling	Sentence Writing	
(cited from Rose and Martin, 2014, p.147)			

Level 1 is the preparing for reading phase. It starts with a discussion of the field or background information on the text to prepare for reading, and then focuses on the reading of the texts. The purpose of this level is to acquire knowledge or content through reading. Level 2 provides a higher level of reading to guide students towards a detailed comprehension of the text. This is done through analysis, training to use the language they have acquired through reading in the form of writing, or production of different sentences using the same words or structures. They may practice rewriting the content of the reading using the same language patterns. At Level 3, students produce their own writing.

The advantage of these teaching / learning strategies is that they include procedures for students to reproduce sentences or passages, using the wordings found in the reading passage. As some research has shown that students can learn “a large amount of academic language from reading” (Shefelbine, 1998; Wallace, 1992, cited in Zwiers, 2014, p.184), this post-reading reproduction phase may help students acquire the specific language used in the reading, and may work well in the Japanese college context.

Based on the two studies mentioned in this section, I would like to provide some teaching ideas to enhance the understanding of a text. Before presenting the method, it will be helpful to clarify the theoretical background and the meaning of technical terms.

2.3 Systemic Functional Linguistics (SFL) Theory by Halliday (1994, 2014)

As mentioned, SFL is a theory of language developed by Michael Halliday (Halliday, 1994; Halliday, 2014). According to this theory, context regulates language. Even in the case of the same message, the way it is delivered may differ depending on the situation. For example, a greeting is different depending on whether one is talking to a superior or to a friend. Halliday claims that among countless choices for the meaning of something, people consciously or unconsciously choose a single best

suitable way to speak according to the situation.

Halliday (1994, 2014) proposes three meta-functions relating to language. These are the experiential, interpersonal, and textual meta-functions. The experiential meta-function concerns the content of a text. The interpersonal meta-function reveals the writer's stance or point of view, and the textual meta-function expresses how a text is structured in a coherent way. The meta-functions are summarized as follows:

- (1) Experiential meta-function: the language used to express experiences or content
- (2) Interpersonal meta-function: the interactions or relationships between writer and reader (speaker and hearer)
- (3) Textual meta-function: features of a cohesive message

Among these three meta-functions, I chose the experiential meta-function to analyze an article in this study. Given that the experiential meta-function is associated with the content of the text, understanding the experiential meaning of the text should lead to better comprehension.

The experiential meta-function is realized through the participant, process, and circumstances. Participants are expressed through nouns or noun groups meaning who or what to whom. Processes are verbs or verb groups, conveying doing, sensing, saying, and being of someone or something. Circumstances are realized in adverbials or prepositional phrases expressing where, when, and how.

So far, I have outlined the two outstanding practical applications of the theory to teaching reading, and summarized the theoretical information. I have borrowed and utilized some methods from the two practical methods of teaching and tried to adapt them to be suitable for teaching in Japanese college reading classes. The article chosen as an example text is one from *The Economist* magazine.

3. Functional Language Analysis of a Magazine Article

3.1 Why *The Economist*?

An article from *The Economist* magazine was chosen for analysis in this study for several reasons. First, the article is probably of interest. The topic is current, and it is something that has been talked about and discussed in current news. Therefore, students may be interested in reading it. Second, it is challenging for readers, especially Japanese learners of English; the content and the English language used in the article are both difficult. The main aim of this study is to show how to scaffold reading of a dense and complex text to make it readable and teachable. Thus, the text should be challenging for Japanese college students. Third, the article uses authentic and sophisticated language. The words used in the article are academic rather than casual. In terms of language, there is much to be learned in this text.

I chose the first section of the article to analyze. The first section sets out three paragraphs. This part of the article was chosen because the first section usually contains the most important information or thesis statement of the paper.

3.2 Analysis of Participants

To analyze the experiential elements of the article, I picked up the participants, processes, and circumstances. I will start by discussing the participants.

The following are all the participants taken from the first section of the article. By counting the number of the same or synonymous words, it can be seen that some words are repeated more.

Table 1: Participants

Humans, Technology, EARTH, It, all the planet's water, it, the ocean, Fishing and aquaculture, Climate and weather systems, anything, it, Humans, the ocean's size, they, they, overfishing and pollution, The ocean, Coral reefs, scientists, the ocean, it, Appetite for fish, 90 % of stocks, The ocean, Humanity, The ocean, the scale of the problem, some solutions, three-quarters of the planet, five basins, the Atlantic, the Indian, the Arctic, the Southern oceans, the United States, a fifth of their protein, a bigger source of the stuff, beef, a column of liquid 132 km tall, 3 bn people, fish, the livelihoods, one in ten of the world's people, temperature patterns of the ocean and its interactions with the atmosphere, the ocean, anything, anything, temperatures and chemistry, ecosystems, nine-tenths of the heat, all corals, plastic, Earth, greenhouse-gas emissions, more plastic, fish, fish, people, effects on human health, sustainable limits, humanity, contempt

These words can be categorized into three groups whose meanings are similar. The three groups are “humans,” “the ocean (or the Earth),” and “environment.” The words in each category are shown in the chart below.

Table 2: Participants in Groups

Humans	The Ocean / The Earth	Environment
Humans (2)	Earth (2)	Climate and weather systems
They / them (3)	The ocean (10) + it (3)	The heat (1)
Scientists (1)	All the planet's water (2)	Plastic (1) + it (1)
Humanity (2)	+ it (1)	Temperatures and chemistry
People (3)	Fishing and aquaculture (2) + fish (4)	ecosystems
Livelihoods (1)	The ocean's size (1)	
(overfishing and pollution) (1)	Coral reef (1) + all corals (1)	
(appetite for fish) (1)		

The numbers in brackets refer to the number of times the word is repeated. For example, “humans” is repeated twice and referred to three times as “they / them.” In addition, “humanity,” “people,” “scientists,” and “livelihoods” can be considered synonymous.

The last two phrases in the “humans” group are in brackets. The reason these two are categorized in this group is that, despite being hidden, the subject of each nominal group is human. For instance, the cause of overfishing and pollution is human, and humans have an appetite for fish.

3.3 Analysis of Process

After discussing participants, the focus of analysis was process. According to Halliday (1994, 2014), processes are divided into four major process types: material, relational, mental, and verbal. Grouping each verb into one of these process types reveals what is primarily happening in the text. The following are all the processes found in the first section of the article.

Table 3: Process Types

Process Types	No. of Processes	Processes
Material	22	<i>are wrecking, offers, is named, is divided, were placed, provides, assure, depend, allowed, to put, to take, changing, have stressed, stores, trapped, to be gone, ground, is eaten, grows, are fished, nurtures, treats</i>
Relational*	6	<i>covers, would form, making, ought to be, is, could contain</i>
Mental	5	<i>have long assumed, wanted, wanted, are suffering, expect</i>
Verbal	1	<i>shows</i>

* Be verbs are included in the relational process in this study. Other studies consider be verbs as existential verbs.

There are 34 processes in total in the first three paragraphs of the article, and most of them are material processes. Therefore, it can be argued that there are many activities or actions taking place as described by this article. The next frequent process is relational. According to Derewianka (2011, cited in Brisk (2015, p. 50)), reports and explanations include numerous relational verbs, action verbs, and existential verbs. Therefore, learning these verbs is perhaps useful for college students.

3.4 Analysis of Circumstances

Lastly, the analysis of circumstances is shown below. Circumstances refer to place, time, and manner, indicating where, when, and how activities are taking place. Identifying circumstance makes readers to understand where and when the problem mentioned in the text takes place.

Table 4: Circumstances

Place	Time	Manner
<i>the United States, on Earth, it (the ocean), out (of the ocean), either at or beyond their sustainable limits</i>	<i>for decades, by 2050, by the middle of the century</i>	<i>than beef, than fish by weight, down into tiny pieces, with uncertain effects, with contempt</i>

Once words for participants, processes, and circumstances have been gathered, students can work to rewrite the content using these words. In the Rose and Martin's Reading to Write Cycle, this practice occurs in the Joint Rewriting and Individual Rewriting phases. By looking at experiential elements of the text, especially the participants and processes, we can generate the main idea of the text.

Table 5: Main Idea of the Text

- *The ocean* (actor) > *provide, nurture, allow* (processes)
⇒ The ocean is giving.
- *Humans* (actor) > *put, take, stress* (processes)
⇒ Humans are damaging the ocean.
- *The ocean* (actor) > *store, contain* (processes)
⇒ The ocean is taking in something harmful.

By searching for sentences in which the subject is either the ocean or a human, the processes used with the participants can be found. When *the ocean* is an actor or a subject in a sentence, processes used with it include *provide* and *nurture*. Their goals or the direct objects are either *human* or *people*. This means that "the ocean is giving human something" in a sense. When *humans* is an actor, on the other hand, processes used are *put* (*anything they wanted into it*), *take* (*anything they wanted out*), and *stress* (*its ecosystems*). Overall, these processes can mean "humans are damaging the ocean." Other processes whose actor is *the ocean* are *store* and *contain*. The goal of *store* is *heat* and the attribute of *contain* is *plastic*. This can be interpreted to mean that "the ocean is taking in something harmful."

It should be pointed out here that it is in looking at the primary participants and processes that the general idea of the text is revealed, as shown above. It is probably safe to summarize the article's main idea as the following: "The ocean and humans are doing something opposite: The ocean is giving (providing and nurturing), while humans are damaging it". This summary coincides with the last two sentences of the first section: "*The ocean nurtures humanity. Humanity treats it with contempt.*"

Some of the recommended classroom activities, based on the analyses of participants, processes, and circumstances, are to have students interpret what is going on in the text and make up sentences using the same words or sentence structures used in the text.

4. Language Practice

The language used in *The Economist* magazine article is formal and academic. Some of the major characteristics of this kind of language are nominalization, passive voice, and the use of non-human participants. In this section, the words relating to these features will be extracted from the article for students to practice reproducing them.

4.1 Nominalization

According to Gibbons (2009), nominalization and nominal groups are features of

academic language that distinguish it from everyday language. The examples of nominalization and nominal groups used in the article are displayed below.

Table 6: Nouns and Nominal Groups

Nouns (Verbs)
solution (solve) interactions (interact) pollution (pollute) emission (emit) weight (weigh) effects (effect)
Nominal Groups
the scale of the problem three-quarters of the planet a column of liquid 132km tall a fifth of their protein a bigger source of the stuff temperature patterns greenhouse-gas emissions appetite for fish sustainable limits

From this list, language teachers can have students make sentences using one or some of the words / phrases; in so doing, students can learn how to use the words. Meanings are packed in a word or two when nominalization occurs. Even though Japanese learners of English are able to understand the words by reading, it may be difficult for them to actually produce them in writing. Therefore, this practice of reproduction helps students acquire how to use words of nominalization.

4.2 Passive Voice and Non-human Participants

Some other distinct features of academic language are the use of the passive voice and the use of non-human participants as subject or object in the sentence. The sentences that include these features have been extracted from the article and listed below.

Table 7: Passive Voice and Non-human Participants

Passive voice	EARTH is poorly named. Almost 90% of stocks are fished either at or beyond their sustainable limits.
Non-human participants	Overfishing and pollution have stressed its ecosystems for decades. Coral reefs are suffering as a result. Appetite for fish grows nevertheless.

Reading the sentences carefully, one can argue that the cause is hidden. The use of the passive voice and non-human participants makes it possible to hide the real

cause, namely human beings. Language teachers can have students think about the real cause and come up with reasons for the author of the article not to specifically express it in the sentence. While they cannot be certain about the answer unless they ask the author directly, they can guess. This inference activity may train students in critical reading and help them to acquire the skill to read the writer's message.

5. Conclusion

Utilizing SFL theory as background, a method for scaffolding the reading of a difficult text to adapt it to classroom use is presented in this study. As shown in the analysis of *The Economist* article, experiential analyses make it possible for readers to comprehend the text more fully and gain a deeper understanding of it. SFL has been shown to be applicable to teaching reading. The downside of the functional language analysis is that it takes time to analyze a text. Moreover, the presence of unclear words makes the analysis more difficult. Therefore, it is highly recommended that the analysis is conducted solely by the instructor, while students focus on interpreting it. However, it may be possible for students to participate if the instructor does not use technical SFL theory terms such as participant and process, but normal terminology such as subject, object, and verb. Either way, by interpreting experiential analyses, readers will be able to extract the main idea from a text and read it in a critical way.

References

- Bloor, T. and Bloor, M. (2004) *The functional analysis of English*. 2nd edition London: Hodder Arnold.
- Brisk, M. E. (2015) *Engaging students in academic literacies: Genre-based pedagogy for K-5 classrooms*. New York: Routledge.
- Deep Trouble. (2017, May 27) *The Economist*. 423(9042): 9
- Deep Trouble. (2017, May 27) *The Economist*. Retrieved August 8, 2017, from <https://www.economist.com/news/leaders/21722647-ocean-sustains-humanity-humanity-treats-it-contempt-how-improve-health>.
- Fang, Z. and Schleppegrell, M. J. (2008) *Reading in secondary content areas: A language-based pedagogy*. Ann Arbor: The University of Michigan Press.
- Gibbons, P. (2009) *English learners, academic literacy, and thinking: Learning in the challenge zone*. Portsmouth: Heinemann.
- Halliday, M. A. K. (1994) *Introduction to functional grammar*. 2nd edition. London: Edward Arnold.
- Halliday, M. A. K. (2014) *Halliday's introduction to functional grammar*. 4th edition. revised by M. I. M. Matthiessen, London: Routledge.
- Mickan, P. (2017) 'Text-based research and teaching from a social semiotic perspective: Transformative research and pedagogy'. In P. Mickan and E. Lopez (eds), *Text-based research and teaching: A social semiotic perspective on language in use* 15-35. London: Palgrave Macmillan.
- Rose, D. and Martin, J. R. (2012) *Learning to write, reading to learn: Genre, knowledge and pedagogy in the Sydney School*. Sheffield: Equinox.
- Thompson, G. (2004) *Introducing functional grammar*. 2nd edition. London: Arnold.

- Ushiro, Y., Nakagawa, C., Kai, A., Watanabe, F., and Shimizu, H. (2008) Construction of a macroproposition from supporting details: Investigation from Japanese EFL reader's summary and importance rating. *JACET Journal*, 47:111-125.
- Ushiro, Y. (ed.). (2009) *Eigo reading no kagaku: Yometatsumotino nazowo toku* [The science of English reading: Unraveling the mystery of the feeling of understanding]. Tokyo: Kenkyusha.
- Zwiers, J. (2014) *Building academic language: Meeting common core standards across disciplines* 2nd edition. San Francisco: Jossey-Bass.

Appendix: The Lead and the First Section (Three Paragraphs) of the Article

Humans are wrecking the ocean. Technology shows the scale of the problem – and offers some solutions.

EARTH is poorly named. The ocean covers almost three-quarters of the planet. It is divided into five basins: the Pacific, the Atlantic, the Indian, the Arctic and the Southern oceans. Were all the planet's water placed over the United States, it would form a column of liquid 132km tall. The ocean provides 3bn people with almost a fifth of their protein (making fish a bigger source of the stuff than beef). Fishing and aquaculture assure the livelihoods of one in ten of the world's people. Climate and weather systems depend on the temperature patterns of the ocean and its interactions with the atmosphere. If anything ought to be too big to fail, it is the ocean.

Humans have long assumed that the ocean's size allowed them to put anything they wanted into it and to take anything they wanted out. Changing temperatures and chemistry, overfishing and pollution have stressed its ecosystems for decades. The ocean stores more than nine-tenths of the heat trapped on Earth by greenhouse-gas emissions. Coral reefs are suffering as a result; scientists expect almost all corals to be gone by 2050.

By the middle of the century the ocean could contain more plastic than fish by weight. Ground down into tiny pieces, it is eaten by fish and then by people, with uncertain effects on human health. Appetite for fish grows nevertheless: almost 90% of stocks are fished either at or beyond their sustainable limits (see pages 18-20). The ocean nurtures humanity. Humanity treats it with contempt.
(The article is fully available on the Internet.)

Comparative Study of natural disasters' news reports from the National Geographic US and Japan websites: A Systemic Functional analysis

Crystal Lam
The Hong Kong Polytechnic University

Abstract

This study aims to identify systemic-functionally a number of language-specific strategies that are adopted to describe natural events, both dynamic and static natural disasters such as hurricanes and volcanoes respectively in Japanese and English reporting texts. This study begins by locating National Geographic reporting texts and their characteristics against the background of SOCIAL-SEMIOTIC PROCESSES. In order to identify characteristics of the texts, the systems of THEME and TRANSITIVITY (Halliday and Matthiessen, 2014; Teruya, 2007) are adopted as they help reveal their characteristics as those of both reporting and expounding texts. Once language specific characteristics of Japanese target language texts and English source language texts have been identified, the study will compare and contrast textual and experiential strategies of two language texts and also of construing dynamic and static natural disasters. Finally, the study will identify different experiential and textual strategies that are adopted to describe dynamic and static natural disasters in the reporting and expounding texts in Japanese and English. This helps to show that the methodology adopted here could be applied to the analysis of different kind of texts but also used to identify translation shifts (Matthiessen, 2014).

1. Introduction

Natural events such as volcanic eruptions, hurricanes, tsunamis occur throughout the history of Earth. These natural phenomena often bring about an undesirable impact on us thus we collectively call it natural disasters. I have come to be interested in such natural phenomena through National Geographic magazines over the years. Humans from different cultures and regions come to experience natural disasters in many different ways; and these differences are evident in the language that construes these natural phenomena. In other words, language is differently and variously deployed to represent different aspects of our experiences of the world around us and inside us, in particular, in construing natural disasters we have encountered in the history of human kind. This study aims to identify systemic-functionally a number of language-specific strategies that are adopted to describe both dynamic and static natural disasters such as hurricanes and volcanoes respectively in Japanese and English reporting texts.

2. Research Methodology

This is a comparative study of Japanese and English written discourse. Two sets of

texts that consists 2 natural events, volcano eruption and hurricane, (3,974 words) which is selected randomly from the US and Japan News website of National Geographic. Both translated and original texts in Japanese and English are analyzed to identify linguistic features that characterize the variation of language strategies use in both texts.

In order to identify characteristics of the texts, this study begins by locating National Geographic reporting texts and their characteristics against the background of SOCIAL-SEMIOTIC PROCESSES (Matthiessen, 2015). Next, the systems of THEME and TRANSITIVITY (Halliday and Matthiessen, 2014; Teruya, 2007) are adopted as they help reveal their characteristics as those of both reporting and expounding texts. These transitivity systems also help identify different ways of construing dynamic and static natural disasters.

2.1 SOCIO-SEMIOTIC PROCESSES

Socio-semiotic process is a parameter with eight sectors – expounding, reporting, recreating, sharing, doing, recommending, enabling and exploring (see Matthiessen, 2015: 6).

2.2 THEME and TRANSITIVITY

THEME and TRANSITIVITY (Halliday and Matthiessen, 2014; Teruya, 2007) is a framework from Systemic Functional Grammar where language is seen by three dimensions – textual, interpersonal and experiential. Figure 1 demonstrates the relation of THEME and TRANSITIVITY. (Halliday, Matthiessen, 2014: 83)

Table 2-7 Three lines of meaning in the clause

Metafunction	Clause as ...	System	Structure
textual	message	THEME	Theme + Rheme
interpersonal	exchange	MOOD	Mood [Subject + Finite] + Residue [Predicator (+ Complement) (+ Adjunct)]
experiential	representation	TRANSITIVITY	process + participant(s) (+ circumstances), e.g. Process + Actor + Goal

Figure 1 : Three lines of meaning in the clause.(Halliday, Matthiessen, 2014: 83)

This study adopts the system of metafunctions of English and Japanese for text analysis. (Halliday and Matthiessen, 2014; Teruya, 2007). The discussion will be focused on Theme – content organization and Transitivity – process types .

2.2.1 Theme

The choice of theme creates the flow of the text and show how the message is delivered to the reader. Halliday (2014) defines that “The theme is the speaker’s (or writer’s) point of departure for the message: that tells you where the clause is going”. In English, theme is the first element occurring in a clause; while in Japanese it is often marked by the particle は *WA*. An example from one of the selected texts (text

2 & 2.1, clause 1), is illustrated as below.

Language	Theme	Rheme
English	Volcanoes	are awesome manifestations of the fiery power contained deep within the Earth.
Japanese	火山とは、 kazantowa	噴火中に噴出する物質が噴火口の周囲に固まって形成される地形だ。Funnkachuuni funnshutsurubutsushitsuga funnkaguchino shuunikatamattekeiseisareruchikeida

In Japanese, there is another indication of theme; according to Teruya(2007) “...whatever precedes the element marked by wa は or other theme markers is an unmarked Theme; if there is a marked participant or circumstance, the Theme always extends up to and includes that element marked by wa は or other theme markers; if, however, the element described in the above is absent, the Theme likewise extends up to and includes the topical theme, which may be marked by ga が.”

An example from text 1, clause 17 is illustrated as below.

Textual	Circumstantial	Topical	Rheme
しかし shikashi	眼を取り巻いている「雲の壁」では me o torimaiteiru kumonokabe dewa	暴風雨が boufuuu ga	激しく吹き荒れている。 hageshikufukiaereteiru

2.2.2 TRANSITIVITY

In SFL, TRANSITIVITY represents our experience as a flow of events. As Matthiessen and Halliday (2014) states: “the system of TRANSITIVITY provides the lexicogrammatical resources for construing a quantum of change in the flow of events as a figure – as a configuration of elements centred on a process. Processes are construed into a manageable set of PROCESS TYPES.” The process types are material, behavioral, verbal, mental, relational and existential. In this study, the process types of the selected texts are identified and observe the characteristics of process types in each selected text.

3. Summary of findings

3.1 Context of selected texts

The selected texts is categorized under the socio-semiotic process of ‘expounding’ with the subtype of ‘explaining’, ‘reporting’ and ‘chronicling’(see Halliday and Matthiessen, 2014; Teruya, 2007 for eight primary types of socio-semiotic processes). The characteristics of expounding text is that it is explanation and general knowledge of phenomena; whereas reporting text is about particular events that are recorded chronically. According to Matthiessen, the features of the text types is that : (Matthiessen , 2015: 6)

“Expounding –Contexts where natural phenomena such as cold fronts are explained to help readers or listeners as part of the construction “knowledge” about general classes of phenomena.” Reporting – ““Contexts where the flow of particular

human events are chronicled to help readers or listeners construct keep up with or review events.”

Table 1.1 and 1.2 gives a summary of texts selected of this study.

Table 1.1: Selected texts (Expounding) of this study

Text	Language	Title	Expounding
1	Japanese	ハリケーン - 破壊する力の源	General knowledge of Hurricane
1.1	English	Hurricanes – Engines of Destruction	
2	Japanese	火山 - 地球が秘めた火の威力	General knowledge of Volcanoes
2.1	English	Volcanoes	

Table 1.2: Selected texts (Reporting) of this study

Text	Language	Title	Date	Reporting
3	Japanese	噴煙を上げる桜島、大噴火のおそれも	11-Oct-13	Record of a particular event happened at particular place on a specific date
3.1	English	Ongoing eruptions could escalate, threatening the Japanese city of Kagoshima.	10-Oct-13	
4	Japanese	ハリケーン、サイクロン、台風の違い？	17-Oct-13	
4.1	English	Typhoon, Hurricane, Cyclone: What's the Difference?	13-Oct-13	

3.2 THEME

3.2.1 Expounding text

This section summarizes the findings of different types of theme that are identified in the selected texts. In the expounding text of volcano, it is observed that there are 80% of topical theme, 66% of topical theme is about the volcano properties such as Magma and ash. Volcanoes are static natural phenomenon, the static part of volcanoes which described in the mechanism of eruption is categorized in a part-whole relationship.

In contrast, expounding text of hurricane has 22% circumstantial theme and 72% of topical theme; 66% of topical theme is about hurricane and its properties. Hurricanes are dynamic natural phenomenon and appear under certain conditions. Circumstantial theme construes the condition of hurricanes.

Themes of volcano expounding text focus on part-whole relationship. Volcano is a static natural structure that has its own mechanism; the different parts of volcano are interrelated to each other. In contrast, themes of hurricane expounding text focus on conditions, as hurricanes would only appear when these conditions are present.

3.2.2 Reporting text

In the reporting text of volcano, 73% is topical theme and 44% of the topical theme is about the effects and participants such as Sakurajima and residents near Sakurajima. The text focused on a particular incident which happened in Sakurajima and its effect to the surrounding environment by looking at the organization of topical themes. Part of the text is shown below.

Text 3.1 Ongoing eruptions could escalate, threatening the Japanese city of Kagoshima. (clause 1-6)

[1]Ongoing eruptions could escalate,[2]threatening the Japanese city of Kagoshima.[3]Lava spewed several hundred feet high during an exceptionally active phase of the Sakurajima volcano in southern Japan last month.[4]Bolts of lightning crackled at the same time.[5]it ignited by electrostatic charges in the ejected ash.[6]As one of the world's most active volcanoes, Sakurajima can erupt more than a thousand times a year.

In the reporting text of hurricane, 21% is circumstantial theme, 70% is topical theme and within it is 31% is participantal. Despite it was published as news, regarding the title of the text, "Typhoon, Hurricane, Cyclone: What's the Difference?" ;the text is part explanation text by summarizing recent hurricane occurrence incidents. Part of the text is shown below and Table 2 summarizes the findings of different types of theme from the theme analysis of selected texts of this study.

Text 4.1 English Typhoon, Hurricane, Cyclone: What's the Difference? (clause 1-6)

[1] Typhoon, Hurricane, Cyclone: [2]What's the Difference?[3]A massive cyclone that slammed into India's east coast on Saturday has left more than a dozen dead and forced more than a half a million people to flee homes that lie in vulnerable coastal and low-lying areas.[4]"This is one of the largest evacuations undertaken in India,"[5] M. Shashidhar Reddy, vice chairman of the National Disaster Management Authority, told reporters in the capital, New Delhi.[6]Cyclone Phailin (a Thai word for "sapphire") is officially the strongest storm to batter India since Cyclone Odisha made landfall in the same region in 1999 and killed 10,000 people.

Table2: Percentage of themes in reporting and expounding text of Volcano and Hurricane

Text	Language	Theme			
		Textual %	Circumstantial %	topical	
				Whole & Part%	Effect % (Participant)
Volcano (Expounding)	Japanese	9.52	9.52	66.67	14.29
	English	4.35	0.00	0.87	0.09
Hurricane (Expounding)	Japanese	5.56	22.22	66.67	5.56
	English	18.18	9.09	63.64	9.09
Volcano (Reporting)	Japanese	6.67	20.00	28.89	44.44
	English	20.97	6.45	32.26	40.32
Hurricane (Reporting)	Japanese	5.88	23.53	39.22	31.37
	English	23.53	11.76	35.29	29.41

3.3TRANSITIVITY

The selected texts that are identified as reporting text, substantially includes material, relational and verbal processes; whilst those are identified as expounding text contains only relational processes Martin et al. (2010) described that:

"Material Clauses construe doings and happenings. Prototypically, these are

concrete; changes in the material world that can be perceived, such as motion and space and change in physical make up (the lake froze; he melted the butter). Each of the six types of process has its own small set of participant roles.” (See Figure 4.3: the typology of process types (Martin et al., 2010: 102)

Material processes represent doings and happenings, reporting texts record the events that actually took place in the real world, therefore material clauses were found in texts. A material clause always includes an actor who performs an action (process) that causes some effects to something as a result (goal). The clause is organized by a generic structure of Actor[^]Process[^]Goal. An example of a material clause from the selected text of this study is illustrated in the table below. (Text 3.1 clause 4)

Bolts of lightning	ignited	by electrostatic charges	in the ejected ash.
Actor (Recipient)	Process	Actor (Client)	Goal

According to Martin et al. (2010), relational clauses construe being or existence of certain things in two different modes that is identification and attribution. Attributive clauses are construed with the generic structure of carrier[^]attribute and that of identifying clauses are token[^]value. An example from the selected text illustrates the attribute of the carrier (Hurricane) and its attribute (the properties of hurricane).

Hurricanes	are	giant, spiraling tropical storms that can pack wind speeds of over 160 miles (257 kilometers) an hour and unleash more than 2.4 trillion gallons (9 trillion liters) of rain a day.
Carrier	Process	Attribute

Table 3 and 4 summarizes the findings of process types of selected text of this study.

Table 3: Comparison between process types in News Report (Reporting text)

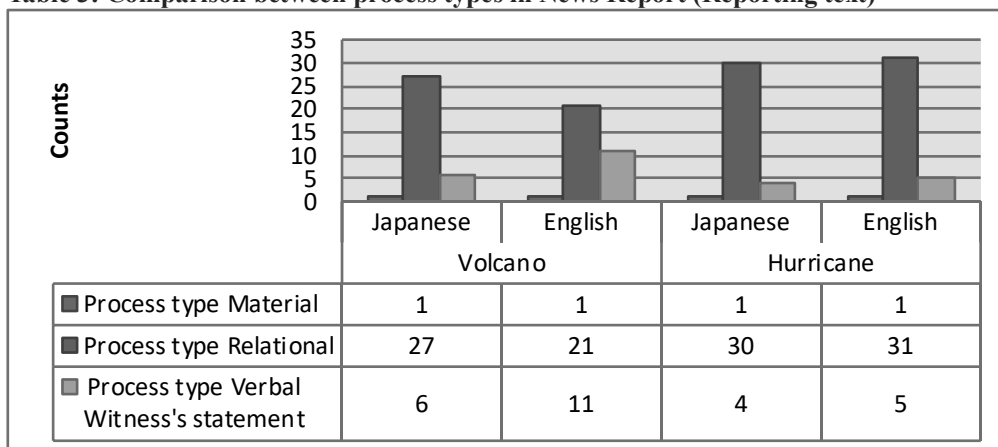


Table 4: Comparison between process types in Explanation text (Expounding text)

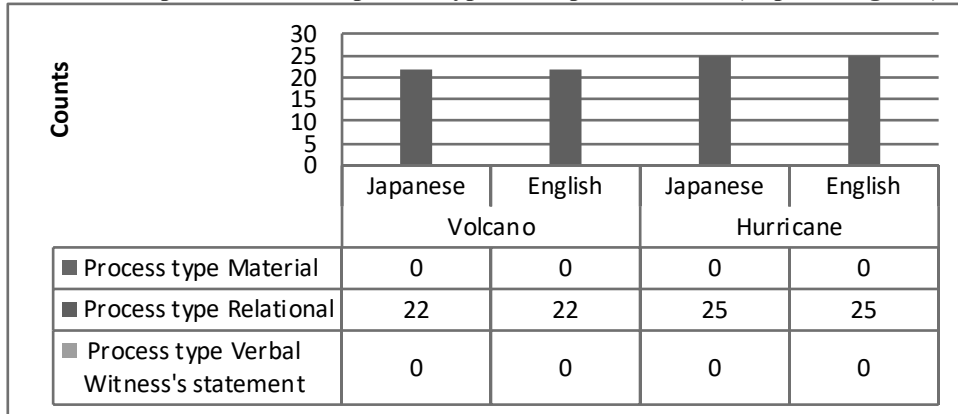


Table 3 shows that there are material, relational and verbal processes in reporting text. Verbal process is a characteristic of reporting text, they are usually witnesses' statements. In table 4, surprisingly, there are only relational processes in all selected expounding text. It is observed that it is a characteristic of expounding texts as only existence and identifying clauses are used to describe an object to readers.

3.4 Comparison of static and dynamic natural disasters

This section will discuss the difference in describing static and dynamic natural disasters. Hurricanes are considered as dynamic as it is mobile and bring disaster by its route; it occurs depending on different conditions. Volcanoes are considered as static as it is naturally formed structure in a fixed position and the mechanism within itself creates eruptions.

In the volcano expounding text, theme was organized to focus on part-whole relationship; volcano is the carrier-domain and crust, ashes, lava etc. are the carrier. They are characterized and related to each other. According to Teruya (2007), Part-whole relationship is that an object that is characterized and related to the part of the object. Teruya (2007) describes that:

“... the semantic relations between the Carrier-domain and the Carrier are classified according to trans-phenomenal or fractal principles, i.e. as part-whole relations (elaborating where the relationship between an entity and one of the dimensions in terms of which it can be characterized established). These fractals of the domain-specified type are motivated partly by their possible agnates.”

Figure 2 shows a diagram of hurricane formation and structure of volcano. The reader should bear in mind that this diagram simplified the actual descriptions of the phenomena and its purpose is to illustrate the idea of dynamic and static phenomenon that was mentioned in this study.

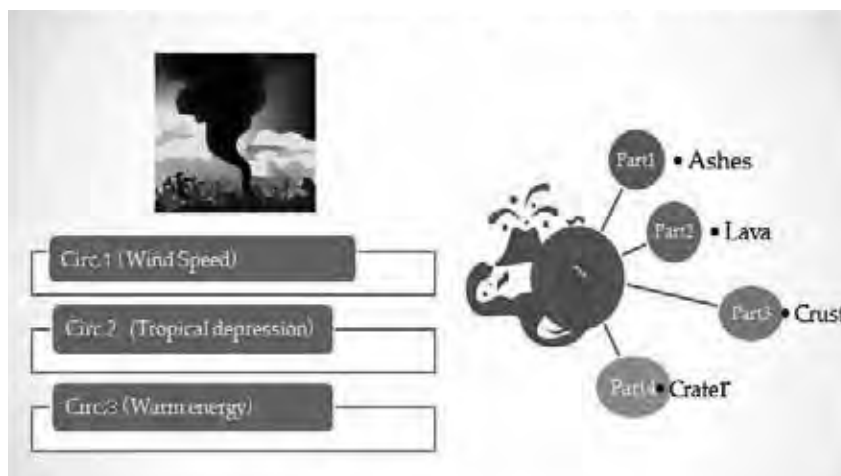


Figure 2: Hurricane formation and structure of volcano

3.5 Comparison of Expounding and Reporting text

This section will compare and summarize the findings of expounding and reporting text. However, with a small sample size, caution must be applied; it might not be transferable to all cases. Table 6 gives a summary of the findings of different characteristics of expounding and reporting text. The results, as shown in Table 6, indicate that reporting text is always about a specific event in terms of theme, title and content. What is interesting in the finding is that most of the clauses are relational in expounding text and verbal clauses exist in reporting texts.

Table 6: Summary of comparison of Expounding and Reporting Text.

	Expounding Text	Reporting Text
Photos	General photos of the phenomenon	Specific, the photo of where the event happened
Content	General knowledge	Specific incident/event
Title	General content	Specifically and gives information of the particular incident/event
Process Types	Relational	Relational; material and verbal
Theme development and choice of theme	Focus on what is being described	Focus on the details of the incident/event

3.6 Comparison of Japanese and English

Due to practical constraints, this study cannot provide a comprehensive review of comparison of Japanese and English and the reader should bear in mind that the study is based on the findings in this study to discuss the differences of Japanese and English.

In terms of theme, there is an interesting finding in the percentage of themes of Japanese and English. There is a tendency that few or no circumstantial theme is present in English texts while it exists in Japanese texts.

One example from the text 2.1 is illustrated below. In this example, the English text used scientists as a participant who performs an estimation of how much death was caused by volcanic eruptions while in Japanese; the phrase “According to scientists” was used and number of death was expressed by the scientists’ angle.

A possible explanation is that; in English, theme often focus on participants which are Human or objects (topical theme - participant focus) whereas in Japanese, theme often focus on situation rather than the participants even though they exist (circumstantial theme – situation focus). Further work is required to find out the differences of choice of words in Japanese and English.

Text 2.1 clause 14

Theme:Topical (participant)	Rheme
Scientists	estimate that more than 260,000 people have died in the past 300 years from volcanic eruptions and their aftermath.

Text 2 Clause 25

Theme:circumstantial- angle	Rheme
科学者によれば、 Kagakushaniyoreba	火山の噴火やそのときに <u>受けた</u> 後遺症によって、過去 300 年間に 26 万人以上が <u>死亡</u> しているという。 Kazannnofunnkayasonotokiniuketakouishouniyott kako300nennkannni26manninnijyogashiboushiteirutoiu

4. Concluding remarks

This study set out to identify features of different text typology; compare and contrast textual and experiential strategies of two language texts and also of construing dynamic and static natural disasters by looking at two sets of texts from the website of national geographic. The study has gone some way towards enhancing my understanding of language in textual and experiential level.

In the textual level of text, the findings show that the significance of organization of theme for different texts for different purposes. Expounding text is observed to provide objective information, features and general information of a certain phenomenon or object; whereas reporting text is observed to provide information of a specific incident with witnesses’ statement. In the experiential level of text, the findings of this study indicate that expounding text only contains relational clauses as the purpose of text is to give general information to readers while reporting text has verbal clauses as it consists of witnesses’ statement to report a certain event.

Identifying features of different texts (registers) could be useful in several ways. Firstly, in terms of future research, it is useful to understand analysis of “hybrid” texts (Matthiessen, 2014: 5). Language keeps evolving with technology and information

flows through social media to people around the globe. It is interesting to see how new forms of registers emerge such as fake news and social media posts. Secondly, it could be a part of a research in comparing different languages. Thirdly, the understanding of theme analysis of different text types could help to upgrade language learners' comprehension and composition skills. Further research in this field would also be of great help in understanding the translation choices.

The generalizability of these results is subject to certain limitations. For instance; the current study has only examined few sample text; a larger number of sample is needed for a greater degree of accuracy. It is unfortunate that the study did not include enough analysis to compare Japanese and English; a detailed analysis in the experiential level is needed for more results and further research regarding the Japanese and English would be interesting.

References

- Halliday, M.A.K. and Matthiessen, C. M. I. M. (2014) *An introduction to functional grammar*. 4th edition. London: Routledge.
- Martin, J.R., Matthiessen, C. M. I. M. and Painter, C. (2010) *Deploying functional grammar*. Beijing: Commercial Press.
- Matthiessen, C. M. I. M. (2014) 'Choice in translation: Metafunctional considerations'. In K. Kunz, E. Teich, S. Hansen-Schirra, S. Neumann and P. Daut (eds) *Caught in the Middle – Language Use and Translation: A Festschrift for Erich Steiner on the Occasion of his 60th Birthday* 271 - 333. Saarland: Saarland University Press.
- Matthiessen, C. M. I. M. (2014) Registerial cartography: context-based mapping of text types and their rhetorical-relational organization. *Proceedings of 28th Pacific Asia Conference on Language, Information and Computation*: 5-26
- Matthiessen, C. M. I. M. (2015) Register in the round: registerial cartography. *Functional linguistics* 2.9: 1-48.
- Teruya, K. (2007) *A systemic functional grammar of Japanese*. 2 volumes. London & New York: Continuum.

A SFL Model for Developing Digital Literacies in the Academic Classroom

Peter McDonald
J. F. Obirin University

Abstract

This paper aims to use systemic functional linguistics (SFL) to investigate how multimodal platforms such as video can be used to support the teaching of academic research and writing. Learning how to produce academic research and writing is not only a matter of mastering cognitive skills, but also entails developing a social identity that enables the learner to demonstrate an affiliation with the academic discourse community. This process can be challenging because L2 students are often unfamiliar with both the language and the values of the discourse community that they are expected to join (Hyland, 2002). Hafner (2014) suggests that one way to address this challenge is by developing digital literacies in the language classroom. However, Street (2004) argues that because of the specialized nature of the academic discipline, language and literacy educators still need to focus on traditional literacy practices rather than seek to incorporate new multimodal approaches. The SFL model can be used to successfully decode videos because it can separate and analyze the interrelated modes that make up the text; the verbal and visual systems can be separated and then both their individual functions and their combined functions can be examined. Similarly, the SFL model can also be used to analyze the linguistic functions in academic papers. This SFL model can be used to make comparisons of the video text and the academic text, and teachers can use the model to raise students' awareness of the underlying rhetorical similarities and differences in both texts.

1. Introduction

A sociocultural approach to learning academic research and writing (Swales, 1990) suggests that second language (L2) learners are writing for a 'discourse community' which imposes rhetorical 'constraints' on the learner. These constraints include the form students use to communicate (essays must include an introduction, main body, conclusion, etc.), as well as the content (essays must adopt a balanced, critical approach to writing about current issues), style (paragraphs must follow clear textual patterns such as problem/solution, compare and contrast, etc.), and language (students must make different schematic, lexical, and syntactic choices based on the ideas they are trying to communicate).

In order to learn academic research and writing, students must master the cognitive skills commonly associated with language learning. More than this, however, students must also build a social identity that allows them to actively engage in communication with the academic community. A difficulty L2 students face is that they

lack an awareness of both the language and the values of the discourse community they are trying to join (Hyland, 2002). Hafner (2014) suggests that using multimodal texts such as video in the classroom is one way for students to build familiarity with the language and values of academia. Video is a communication platform with which most students will already be relatively familiar. By contrast, academic essays communicate through a genre of which students will have little intuitive understanding. Thus, the medium of videos can be used to introduce and develop the key skills needed for academic reading and writing. However, while multimodal texts such as video are becoming widespread in the classroom, strategies for their effective use in the classroom is under-researched (Early, Kendrick, and Potts, 2015). Indeed, Street (2004) argues that academia is a specialized field and the main focus of the academic literacy curriculum should be traditional literacy rather than the new literacy of multimodality.

This study suggests that an SFL approach to using multimodal texts in the academic classroom can help teachers use video effectively to familiarize students with the specialized nature of academic literacy. The SFL model (outlined below) can be used to make comparisons of the video text and the academic text; teachers can then use the model to raise students' awareness of the underlying rhetorical similarities and differences between the texts. Through awareness-raising activities, teachers can build a pedagogical bridge between the discourse community of which students are currently members and the discourse community they aspire to join.

The research questions are:

- (1) To what extent can the principles of SFL be used to analyze the rhetorical constraints in a multimodal text such as a video?
- (2) To what extent can the rhetorical constraints identified in the video be used to teach the skills needed for reading and writing traditional academic research articles?

The multimodal text *The Future of Food* (Greenpeace, 2017) is a video made by the environmental protection organization Greenpeace. The video was analyzed using the Baldry and Talbot (2005) system of multimodal transcription. Their model suggests that a video text can be sequenced into phases and shots. Phases are blocks of text within which units of meaning are organized. All phases are made up of shots (e.g., long shots, close-ups) that portray the scenes, characters, and events in the phase. This is a very useful model because the structure of the video can be closely equated to the structure of academic writing, where phases resemble paragraphs and shots resemble sentences and clauses. This will be explained in more detail in subsection 3.2. The verbal mode of the video text was analyzed using Halliday's 'trinocular' (Halliday & Matthiessen, 2004, p. 31) perspective on language, which analyzes written/spoken texts using three meta-functions: textual, experiential, and interpersonal. Many elements of the SFL model that apply to written texts can also be applied to a multimodal text such as a video.

The study will be in four parts. Part 1, this part, is the introduction. Part 2 will show how the SFL model can be used to analyze a video text to identify rhetorical

constraints that are relevant and meaningful to the specialized nature of academic literacy. Part 3 will show how identifying these rhetorical constraints in the video text can be related to teaching the traditional skills of academic reading and writing. Part 4 will conclude the study and discuss the limitations of the model.

2. Rhetorical Constraints Identified in the Video Text That Are Relevant to Teaching Academic Literacy

2.1 Textual Patterns in the Video Text

An analysis of the video text in question using the SFL model of Baldry and Talbot (2005) shows that it follows a clear textual pattern—the problem/solution pattern—in both the verbal and visual text. This is shown in Appendix 1. Phase 1, the problem phase, clearly uses problem signal-words and negative images to signal the problem to the viewer; phase 2, the first solution phase, uses positive words and positive images to outline a solution to the viewer; and phase 3, the second solution phase, uses words and images to suggest practical solutions to the viewer.

2.2 Theme/Rheme Mapping in the Video Text

The second rhetorical constraint that can be identified in both the visual text and the verbal text that is relevant to academic literacy is the pattern of Theme/Rheme choices. This is illustrated in Tables 1 and 2.

As shown in Table 1, Theme 1 introduces the main problem, industrial farming, and Rheme 1 makes a claim about the negative effects of industrial farming. Themes/Rhemes 2 to 5 all have the same function: to explain and support the claim of the text made in Theme/Rheme 1. Interestingly, and importantly for teaching academic literacy (which will be explained in more detail in part 3), the next functional change does not come until Theme/Rheme 6, where ‘predicted theme’ is used to conclude the paragraph. Thompson (2004), points out that predicted Theme is used to give empathic emphasis to one element of the text. This is clearly shown in Theme/Rheme 6: The anaphoric reference of ‘This’ is used to refer back to the main claim in Theme/Rheme 1 and the explanation and information in support of this claim in Themes/Rhemes 2 to 5, all of which is neatly summarized by the phrase ‘nature’s techno fix.’ Consequently, the predicted Theme structure of Theme/Rheme 6 homes the listener in on an evaluation of the ‘system’ by reporting results. The system is ‘failing us,’ ‘killing diversity,’ and causing unnatural change.

Importantly, the visual images are juxtaposed with the visual/verbal textual relations in the video text to support the Theme/Rheme choices in the verbal text. This is shown in Table 2, where the visual text changes to support the Theme/Rheme structure in the verbal text. For example, the warm, positive words in Theme 2, ‘love and recipes,’ are accompanied by cold, impersonal images of a factory conveyor belt producing ice cream. These images change to packages of ice cream to support Rheme 2: ‘transformed into ready-made packages.’ In Theme 5, the verbal text ‘plastic, flavour-enhanced unreality’ is directly supported by images of plastic food wrappers. These images change to images of combine harvesters and corporate offices to support Rheme 5: ‘produced by nature-slaying monocultures, enabled by corporate capture.’ In this way, the visual and verbal text set up a multimodal rhythm that supports

the main claims of the video. How an examination of the Theme/Rheme choices in the video are relevant to the academic classroom will be discussed further in part 3.

Table 1: Theme/Rheme Mapping in the Verbal Text

THEME		RHEME	
1	Industrial farming (introduces Theme)	1	has manufactured a broken food system (makes a claim about the Theme)
2	Love and recipes (explains/supports Theme/Rheme 1)	2	transformed into ready-made packages (explains/supports Theme/Rheme 1)
3	Beautiful, exotic imports (explains/supports Theme/Rheme 1)	3	zipped to unexotic parts of the world (explains/supports Theme/Rheme 1)
4	Chemically bloated crops (explains/supports Theme/Rheme 1)	4	served with a side of sickness (explains/supports Theme/Rheme 1)
5	A plastic, flavour-enhanced unreality (explains/supports Theme/Rheme 1)	5	produced by nature-slaying monocultures, enabled by corporate capture (explains/supports Theme/Rheme 1)
6	This is nature's techno-fix for a system (uses predicted Theme to summarize Themes/Rhemes 1–5)	6	that is failing us, killing beautiful diversity, causing unearthly change (uses predicted Theme to evaluate Themes/Rhemes 1–5)

Table 2: Theme/Rheme Mapping in the Visual Text

Theme		Rheme	
1	Industrial farming	1	has manufactured a broken food system
Visual Text	<i>Barren land, combine harvesters</i>		<i>Helicopter spraying crops</i>
2	<i>Love and recipes</i>	2	<i>transformed into ready-made packages</i>
Visual Text	<i>Factory production of ice cream</i>		<i>Packages of ice cream</i>
5	<i>A plastic flavour-enhanced unreality</i>	5	<i>produced by nature slaying mono-cultures, enabled by corporate capture.</i>
Visual Text	<i>Plastic fast-food wrappers</i>		<i>Combine harvesters cutting down fields, corporate offices</i>
6	<i>This is nature's techno-fix for a system</i>	6	<i>that is failing us killing beautiful diversity causing unearthly change.</i>
Visual Text	<i>Birds being destroyed in factory machine, Factory-produced food</i>		<i>Smoke from factories, Chemical being poured, Bee, Cows hemmed in</i>

2.3 Participants in and Process of the Video Text

The experiential/relational content of the video also supports the creation of the problem/solution discourse pattern through how it depicts participants and process clauses. In the problem paragraph (see Appendix 1 for the full text), the main participants are, in both the visual and verbal text, machines or inanimate objects or concepts—for example, ‘industrial farming,’ ‘ready-made packages,’ ‘junk food,’ ‘nature-slaying mono-cultures’ and ‘corporate capture.’ This lack of human participation helps to create a dystopian worldview that supports the video makers’ overall discourse goals: to set up a problem scenario in mind of the viewer.

To reinforce this pattern, human participants only appear in the concluding clause/shot of the problem paragraph: ‘This is nature’s techno fix for a system that is failing us.’ The use of *us* leads the viewer into the solution section of the video where human participants play a key role. The visual text shows warm images of humans interacting with food, agriculture, and animals to accompany the key phrases. For example, the phrase ‘today, that is our past,’ is accompanied by images of a farmer and his child working on a green farm, and images of human hands working with fresh food. ‘Our real food roots’ is illustrated with a family with a young child eating happily.

An examination of the process clauses in the text also illustrates how the creators of the video use human participants to signal to viewers that humans are the solution to the dystopian, machine-driven nightmare suggested by the problem paragraph. This

is shown in Figure 1, where *we* indicates that humans are the main actors that can generate the process of change in the future. The visual text reinforces the message, with the relational process in the verbal text being accompanied by images of human hands. In Figure 2, while the use of passive, material processes takes the actor (the agent who can make the changes) out of the spoken text, the images of human hands ensure that the actor is still present in the mind of the viewer.

Regarding the use of process clauses and academic literacy, Halliday (1985) points out that process clauses can be used to make unsupported claims because they can make opinions appear as facts. This can be seen in the process outlined in Figures 1 and 2. In Figure 1, the claims made by the text are very assertive: ‘Today we *change* the future’ (emphasis mine). In Figure 2, the choice of a passive material process creates an effective contrast in the mind of the reader. Thus, difficult solutions—‘grand-sounding choices’—are made to sound very easy: ‘the simplest of changes.’ The next section, part 3, will examine how identifying this choice of process in a text can be very useful for students in an academic environment.

(Today) we	change	the future of food
Actor	process; relational	Circumstances
Close-up of human hands working with freshly picked potatoes		Close-up of human hands working with lettuce

Figure 1: Relational Process in the Video Text

The beauty is these grand-sounding choices	are made	with the simplest of changes.
Goal	process; passive material	Circumstances
Cow and calf	Hands holding seeds in a jar, hands planting plants	Wheat being harvested by human hands

Figure 2: Passive Material Process in the Video Text

2.4 Mood and Modality in the Video Text

This SFL critical approach can also be applied to the interpersonal linguistic choices made by the creators of the text; in particular the mood and modal choices. Modalization is concerned with the degree of certainty in a speaker’s statements (Halliday and Matthiessen, 2004). When utilizing this modality technique, statements can become less assured, and when not utilizing it, they can become more assured. This is shown in Figures 3–6, which are taken from Phase 3 of the video text, the practical solution text.

Verbal Text		pluck	fresh
Interpersonal Analysis	Mood	Predicate	Complement
Visual Shots	Happy child picking pears		

Figure 3: Mood Choices in the Video Text, 1

Verbal Text		cook	fresh
Interpersonal Analysis	Mood	Predicate	Complement
Visual Shots	Homemaker cooking		

Figure 4: Mood Choices in the Video Text, 2

Verbal Text		go	local
Interpersonal Analysis	Mood	Predicate	Complement
Visual Shots	Street vendor cooking		

Figure 5: Mood Choices in the Video Text, 3

Verbal Text		choose	ecological
Interpersonal Analysis	Mood	Predicate	Complement
Visual Shots	Hands planting, pigs interacting		

Figure 6: Mood Choices in the Video Text, 4

As the figures show, modality is absent from the video text, thus making the verbal text sound very straightforward and confident. Here, the interpersonal choices of the verbal text, coupled with the powerful visual images, achieve the overall goal of the video text, which is to make the message clear, simple, and persuasive. However, these types of mood and choice make goals of the text very different to those of a text that might be written in the academic discourse community. Why this is important in the academic classroom will be discussed in part 3.

3. Utilizing the Rhetorical Functions Identified in the Video in the Academic Classroom

3.1 The Video Text and a Genre Approach to Academic Literacy

A genre approach to reading and writing holds that, in order for students to become members of a discourse community, they must learn to view language as a set of choices and understand that different genres dictate these different choices (Swales 1990, p. 53). Therefore, for students to become members of the academic discourse community teachers must raise students' awareness of how the schematic, lexical and syntactic choices that make texts effective may differ between genres. Consequently, rather than offering students only simplified models of genres that can be imitated—'reproductive language work'—students need to explore language as a 'set of choices' using authentic genres rather than simple textbook examples (Nunan, 1999).

The SFL model outlined in this paper is a very useful way to help students not only explore the multimodal video as a set of choices, but relate those choices to academic literacy. The choices made in the video are clearly different from the type of language choices students need to make when writing an academic paper. Most notably, the common feature of the video text is that it is designed to promote a particular point of view and to persuade viewers not only to agree with this point of view, but also to take positive action. In contrast, the common feature of an academic essay is for all opinions to be explained, discussed, and supported in a well-balanced manner. However, if students are to successfully enter the academic discourse community,

they must be able to distinguish between different styles and understand how they are constructed.

3.2 Utilizing Textual Patterns in the Video to Teach Academic Literacy

It is important for students to learn to identify the rhetorical constraint of the problem/solution pattern found in visual and verbal texts. Textual patterns are widely used in text construction, and raising students' awareness of how they can be used in text has pedagogical advantages (Hoey, 1994; McDonald, 2010).

The SFL model outlined above demonstrates how academic, easy style patterns can be identified in multimodal texts such as video. Using the system of phases and shots, the model allows the multimodal text to be broken down into manageable chunks, both at the macro level of the paragraph (phase) and at the micro level of the clause (shot). Thus, students can begin to compare and contrast the discourse choices made in a video text and relate those choices to the language choices needed for academic literacy. This paper is concerned exclusively with analyzing the problem/solution pattern, but it can easily be extended using other video texts to different patterns, such as the compare and contrast pattern and the chronological order pattern.

3.2 Utilizing Theme and Rheme Choices in the Video to Teach Academic Literacy

Breaking the text down into Theme and Rheme choices is another pedagogical device that can be used in the classroom. Theme/Rheme mapping allows the teacher to make students aware of the similarities in paragraph structure between the persuasive text contained in the video and the academic text students have to write.

Both styles of text are extremely limited in function. As Tables 2 and 3 show, the video text only makes three clear discourse moves. First, it makes a claim about a topic. Second, it explains or supports the claim. Third, it summarizes the claim and topic using different words. Interestingly, this is the type of paragraph structure that students must master to form effective academic paragraphs. Although lexical and semantic choices may be different in academic literature, the underlying discourse moves are very similar. Thus, for students aspiring to join the academic discourse community, faced with grappling with very difficult academic paragraphs on unfamiliar subjects, Theme/Rheme mapping in authentic, non-textbook, texts such as short videos can be a very helpful way of raising awareness of paragraph structure.

Another key element which can be explored using the SFL model is cohesion. Again, at a general level, there are many cohesion devices in the persuasive/action text of the video that can also be applied to an academic text. One example would be the use of linguistic reference. Reference is an important element of cohesion (Halliday & Hasan, 1985), and to join the academic community students must master a wide variety of referencing techniques. The video text is a motivational way to expand the teaching of reference to include other features relevant to an academic setting.

An example of how studying the use of references can be explored in the video text is using a predicted Theme, as is can be seen in Table 1. Thus, as discussed in section 2.2, in the clause 'This is nature's techno-fix,' *this* refers to all the sentences in Themes/Rhemes 2–5. This type of text can therefore be used to demonstrate to students how an anaphoric reference can be used to refer to long passages of text. In

this example, a predicted Theme for the anaphoric reference is being used in a video text. This is a common device used in academic writing. Consequently, awareness-raising activities can be designed for students, such as encouraging students to construct paragraphs with similar predicted Theme/Rheme patterns, or prompting them to find similar predicted Theme/Rheme patterns in other texts. Moreover, once students have a grasp of anaphoric reference, the instructor can build upon this knowledge to teach other types of reference, such as the cataphoric reference.

Another linguistic reference that can be illustrated to the students is exophoric reference, which refers to something outside the text (Halliday & Hasan, 1976). Here, writers reference another academic text to support their arguments and ideas. Tadros (1994) points out that this use of ‘averring’ gives the text authority. This is a common discourse constraint in academic writing but is not often a feature of popular persuasive texts, like video, where short, snappy arguments are used to make the text appealing and attractive to the general public. Thus, students can be made aware of the exclusion of references in the video text and be given activities such as rewriting the text to make it comply with the discourse constraints of an academic genre. This could include trying to find academic texts and facts that support or disprove the arguments presented in the video.

3.2 Utilizing Participants and Process in the Video to Teach Academic Literacy

This model of comparing and contrasting the video text with an academic text can also be extended to the experiential function of the text. For example, as discussed in section 2.3, Figures 1 and 2 illustrate how relational processes are used to make strong and clear statements about the solutions to the problem of industrial food production: Changes can be made, and those simple changes can be made by ‘us.’ The combination of verbal and visual elements shown in the video makes a very powerful and persuasive argument which is very effective given the genre of the video.

However, as Bakhtin (2001) points out, genres are not just made up of linguistic elements but also the writers’ ‘subjective evaluative attitude towards the subject’ (p. 128). Consequently, we cannot expect the underlying values contained in one genre, and the language used to express those values, to be the same as those in another genre. The academic discourse community that the students are trying to enter dictates that opinions be ‘explained’ and ‘discussed’ in a well-balanced style. Thus, the relational process used in the video can be examined by the teacher and students both for the underlying values contained in the statement and for the underlying language that communicates the statement, with the goal of changing the statement to fit into the genre of academic discourse.

For example, students could explore awareness-raising questions such as: To whom is the video referring when it uses *us*? How practical is it for governments and individuals to make ‘simple’ changes? What would the costs and benefits of these changes be? Thus, the video can be used to explore Halliday’s idea of opinions being turned into facts referred to in section 2.2, and how, while this is common and acceptable in some discourse communities, it is unacceptable in others. Students could write the results of their exploration in the genre of the academic discourse community. They could compare and contrast the relational process of the academic genre with the type of process used in the video.

3.3 Utilizing Mood Choices in the Video to Teach Academic Literacy

The type of critical analysis that is compulsory for an academic genre, outlined in section 3.2, can be extended to the exclusion of mood markers, shown in the interpersonal analysis in 2.4. As presented in Figures 3–6, the video excludes modality by using imperative statements to make the message of the video sound more assured. The need to introduce a more critical approach to academic writing means that imperatives used in the video genre are not acceptable in an academic genre.

In terms of consciousness-raising activities, students can be asked to compare the types of modality in these texts to those used in academic writing. From this starting point, students can explore how to change the mood of a statement to make it more acceptable for the academic community. For example, students could be asked to think about the missing subjects and the modality in the statements shown in Figures 3–6, and how changes to these aspects of the interpersonal function can change the meaning of the sentence.

4. Conclusion and Limitations to the Study

As the analysis above shows, the SFL model enables an in-depth analysis of the rhetorical functions contained in the video text in question. The model can identify textual patterns, classify Theme/Rheme functions, examine the discourse functions of participants and processes, and analyze choices in textual modalization. These are important discourse choices that allow the video text to have meaning. Moreover, the SFL model allows the rhetorical choices made in the video text to be unpacked in way that enables them to be compared and contrasted with the kind of choices that need to be made in order to create a successful academic text. Therefore, this process of using the SFL model to unpack different types of texts is, as we have seen, an excellent resource that can be used in consciousness-raising activities for enhancing the teaching of academic literacy.

Overall, this paper supports the research that suggests a multimodal text can be used in a productive way in the academic classroom. In the age of digital media, video texts are commonplace for students: they can easily watch video texts and create their own video texts for social media. However, texts created by the academic community in English are, for many students, an alien concept. Using videos of the type analyzed in this paper is a manageable and relevant way to introduce students to many of the discourse constraints they are expected to master if they are to become members of the academic discourse community.

However, there are limitations to this study. The first limitation is that the study does not account for the complexity of multimodality. The study is primarily focused on verbal/linguistic content, that is, the words in the text. It does not fully account for video elements such as the flowing nature of video text (Doloughan, 2010), the visual elements (Kress and van Leeuwen, 2006), or the musical elements (van Leeuwen, 1999). All these elements affect the overall communicative function of the video text and more analysis needs to be done to show how they can work together to create the communicative function of persuading the viewers to agree with the creator's point of view.

Another limitation is that the study does not show how students can use the academic constraints introduced in the text to create video texts of their own, and how the creation of such texts will help them improve their academic literacy. This a key feature of Hyland's original paper that inspired this paper, and it is an area of research that need to be explored further in SFL.

Finally, a weakness of using the SFL model in the classroom is that it requires a background knowledge of what can be a complex system of analysis. Teachers without a background in SFL would find it difficult to apply the model to texts in a practical way. This is a great shame, because—as this paper attempts to demonstrate—the SFL model allows for multimodal analyses and textual comparisons which are very useful and relevant to the modern classroom. The SFL community needs to work towards making the model understood by teaching researchers and practitioners working in L2 classroom contexts.

References

- Bakhtin, M. M. (1999) 'The problem of speech genres'. In Jaworski, A. and Coupland, N. (eds), *The discourse reader* 98-108. New York: Routledge.
- Baldry, P., and Thibault, P. (2005) *Multimodal transcription and text analysis*. London: Equinox.
- Doloughan, F. G. (2010) 'Multimodal storytelling: Performance and inscription in the narration of art history'. In R. Page (ed.), *New perspectives on narrative and multimodality* 14–30. New York: Routledge.
- Early, M., Kendrick, M., and Potts, D. (2015) Multimodality: Out from the margins of English language teaching. *TESOL Quarterly*, 49: 447–460.
- Eggins, S. (1994) *An introduction to systemic functional linguistics*. London: Pinter.
- Greenpeace. (2017) The future of food. Retrieved from <https://youtu.be/nLgt4EdIbLo?t=70>.
- Hafner, C. A. (2014) Embedding digital literacies in English language teaching: Students' digital video projects as multimodal ensembles. *TESOL Quarterly*, 48: 655–685.
- Halliday, M. A. K., and Hasan, R. (1976) *Cohesion in English*. New York: Routledge.
- Halliday, M. A. K., and Hasan, R. (1985) *Language, context and text*. Oxford: Oxford University Press.
- Hoey, M. (1994) 'Signaling in discourse: a functional analysis of a common discourse pattern in written and spoken English'. In Coulthard, M. *Advances in written text analysis* 26-45. New York: Routledge.
- Hyland, K. (2002) Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics*, 34: 1091–1112.
- Kress, G., and van Leeuwen, T. (2006) *Reading images*. London: Routledge.
- McDonald, P. (2010) 'Discourse analysis: Bridging the gap between linguistic theory and classroom practice'. In S. Kastens (ed.), *Effective second language writing* 121–131. Virginia: TESOL United Graphics.
- Nunan, D. (1999) *Second language teaching and learning*. Boston: Heinle and Heinle.
- Swales, J. M. (1990) *Genre analysis*. Cambridge: Cambridge University Press.

- Street, B. V. (2004) Academic literacies and the 'New Orders': Implication for research and practice in students writing in higher Education'. *LATISS: Learning and Teaching in the Social Sciences* 1.1: 9–20.
- Tadros, A. (1994) 'Predictive categories in expository text'. In Coulthard, M. *Advances in written text analysis* 69-82. New York: Routledge.
- van Leeuwen, T. (1999) *Speech, music, sound*. London: Macmillan.
- Thompson, G. (2004) *Introducing functional grammar*. London: Hodder and Arnold.

Appendix 1: Textual Patterns in the Video Text

Video Phases	Visual Shots (Summary)	Verbal Text
Phase 1 Problem	<i>Barren landscapes Industrial farming Factory production Packaged food Livestock in terrible conditions</i>	Industrial farming has manufactured a broken food system. Love and recipes transformed into ready-made packages. Beautiful exotic imports zipped to unexotic parts of the world. Chemically bloated crops served with a side of sickness. Daily meat and junk food on-the-go. A plastic, flavour-enhanced unreality produced by nature-slaying monocultures, enabled by corporate capture. This is nature's techno-fix for a system that is failing us, killing beautiful diversity, causing unearthly change.
Phase 2 Solution (General Outline)	<i>Green fields Traditional farming Humans engaged in natural agricultural activities Fresh produce Images of farm animals in relatively pleasant surroundings</i>	But today, that is our past. Today we change the future of food by choosing natural diversity over monocultures, farm-eccentric policy over profit-greedy lunacy, progressive ecological techniques over corporate smoke and mirrors. The beauty is these grand-sounding choices are made with the simplest changes. By rediscovering our real food-roots today, one bite, one meal at time, the past is just that.
Phase 3 Solution (Practical Advice)	<i>Humans engaged in natural agricultural activities Fresh produce Images of farm animals in relatively pleasant surroundings</i>	Change food by staying seasonal. Change by supporting farmer's markets. Pluck fresh, cook fresh, go local, choose ecological. Just knowing where our food is harvested from turns a growing movement into a new reality. And to a system with everybody at its heart. Today, change the future of food.

Classroom Systemic-Functional Multimodal Discourse Analysis (SF-MDA): Looking at gesture in teacher-student in-class consultations

Thomas Amundrud
Nara University of Education

Abstract

This paper outlines the representational and interpersonal manifestations of gesture within a larger study (Amundrud, 2017) examining the linguistic and multimodal characteristics of the individual feedback consultation (IFC) classroom curriculum genre (Christie, 2002), found within two Japanese tertiary EFL courses. In IFCs, teachers and students discuss issues concerning student work and teachers sometimes provide suggestions for improvement. This paper describes two systems of REPRESENTING ACTION and INTERPERSONAL ACTION (Lim, 2011). Actions made representational meanings corresponding to Processes and Participants in language through the two language contextualization principles of intersemiotic concurrence and semiotic metaphor; intersemiotic concurrence describes semiotic equivalence between language and another mode, and semiotic metaphor describes how the semiotic content of language shifts the functional significance of gestural action. Actions for offering and accepting student work in the Opening and Closing stages of the IFC genre made interpersonal meanings through the language contextualization principles of intersemiotic concurrence and intersemiotic polysemy, which is how different modes can create distinct yet contextually connected meanings. This paper surveys the study, describes the main features of these two systems of gesture in the IFC genre, and discusses their implications.

1. Introduction

During class, teachers may speak with individual students about their work, point out problems, and sometimes give advice. Although such teacher-student individual feedback consultations (IFCs) have not received nearly as much attention in discourse studies as other classroom genres such as lectures or student discussions, they nevertheless have been found (Amundrud, 2017) to meet the systemic definition of genre as “recurrent configurations of meanings” that “enact the social practices of a given culture” (Martin and Rose, 2008: 6). As will be shown here, the recurrent configuration and enactment of social practices in individual feedback consultations lies not only in their language, but in the gestures they manifest.

This paper summarizes the gestural aspects of a larger investigation (Amundrud, 2017) into the pedagogy enacted by linguistic and multimodal resources in two Japanese tertiary EFL (English as a Foreign Language) classrooms, while Amundrud

(in press) outlines the systems of space and interpersonal gaze found in the analysis of the same classroom data. This study develops significantly upon Lim (2011) and Hood (2011) in its analysis of classroom gesture and introduces innovations to the descriptions of representing action and interpersonal action, particularly in light of the principles by which language contextualizes gestural action (Liu and O'Halloran, 2009). This paper will first review the literature on systemic-functional multimodal discourse analysis (SF-MDA), and specifically regarding gesture in classrooms. It will then profile the IFC genre, and show through the systemic, metafunctional analysis of the classroom data how gesture co-creates pedagogy.

2. Overview of SF-MDA and the systemic, metafunctional analysis of classroom gesture

This section gives an overview of SF-MDA, explain the core concepts of system and metafunction, and describe findings from prior SF-MDA studies crucial to understanding the metafunctional characteristics of gesture and its contextualization by language. SF-MDA analyzes modes, which are meaning-making, semiotic resources shaped by culture. Modes are based upon, but distinct from, a material substrate (Bateman, 2011; Jewitt, 2014), creating meaning through systems of choice, both individually and in relation to other modes, including language. While much previous work in multimodality focuses on written or imagistic printed and digital texts, SF-MDA research increasingly examines the semiotics of people in naturalistic settings like classrooms. Face-to-face classrooms are worth particular attention since, as Hood (2011: 31) indicates, they are “complex pedagogic sites involving simultaneous engagements with at least the modalities of speech, written texts, visuals, space, and body language, including facial expression and gaze.”

Two concepts in systemic-functional (SF) theory relevant for this study are *system* and *metafunction*. As with language and other modalities (Jewitt, 2014), the systemic study of gesture posits meaning as a set of options that meaners choose from as a text unfolds (Rose and Martin, 2013: 23). Options in gesture and other modes in SF-MDA are represented in system networks, in which choice in “the grammar’s construal of meaning” (Halliday and Matthiessen, 2004: 24) is depicted with greater options of delicacy by logical priority amongst options in the system (Eggins, 2004). This “choice” does not indicate a conscious intent, but merely that when meaners mean, they do so from the options afforded by the modalities available within their context of culture (Martin, 1992). Metafunction shows “what can be done” in a particular mode (Jewitt, 2005: 311) insofar as language, gesture, and other modalities have been found to simultaneously construe aspects of experience (ideational meaning), enact social relations (interpersonal meaning), and present the resulting semiosis in meaningful text (textual meaning) (Teruya, 2007: 17-18). Explicating the gestural manifestation of ideational, interpersonal, and textual signification, both correspondent to and independent of language, has been of particular concern in SF-MDA (Hood, 2011; Lim, 2011; Martinec, 2000).

Although there is extensive literature examining the formal characteristics of gesture (Enfield, 2009; Kendon, 2004; McNeil, 1992), as well as the role of gesture in foreign/second language teaching specifically (Sime, 2006; Sueyoshi and Hardison, 2005), the systemic and metafunctional examination of gesture has been more limited,

with two key classroom studies being Hood (2011) and Lim (2011). Hood (2011) theorized the ideational, interpersonal, and textual characteristics of lecturer gestures and movement in three EAP (English for Academic Purposes) lessons, such as through the use of deictic, pointing gestures to ideationally identify participants, whether human or in the lesson contents, or through the tension or relaxation of movement to manifest interpersonality. Lim (2011) developed upon Hood (2011), as well as Martinec (2000), in his account of the pedagogic meanings made by both classroom space and teacher gesture in first-year composition lectures. While Amundrud (2017) has also advanced Lim's (2011) account of classroom space, Lim's analysis of the metafunctional meanings of classroom gesture, and how these significations are conditioned by their relationship to language, is of particular interest here.

Lim (2011) analyzed lecturer actions according to their function ideationally as PRESENTING ACTION, REPRESENTING ACTION, or INDEXICAL ACTION; interpersonally following their operationalization of the discourse semantic system of APPRAISAL (Martin and White, 2005) in terms of **attitude**, **engagement**, and **graduation**; and textually, according to the size and rhythm of representing actions, their direction, and the specificity of deictic gestures. Among these, of interest pedagogically is REPRESENTING ACTION. Lim (2011) found lecturer actions that functioned akin to **participants**, **processes**, and **circumstances** in language. Moreover, while some representing actions were **language correspondent**, in that they could "replicate semantically an entity expressed concurrently in language" (Lim, 2011: 175), others were **language independent**, in that they signified entirely without co-present language.

A final principle core to this study is language contextualization (Lim, 2004, 2011; Liu and O'Halloran, 2009; Unsworth, 2006). This describes how gestures relate with language to construe either semantically congruent meanings, where the signification created in one modality reflects that created in another, or semantically divergent meanings, where "the meaning of one modality seems to be at odds" with others (Lim, 2004: 239). As divergence was not a significant occurrence in this study, it will not be discussed further here. The three principles of language contextualization found in this study are:

Intersemiotic concurrence: Initially dubbed "ideational concurrence" (Unsworth, 2006), intersemiotic concurrence describes when a semiotic equivalence occurs between language and another mode and is the "visualization of the verbal entity" (Unsworth, 2006).

Semiotic metaphor: Semiotic metaphor (O'Halloran, 1999; Lim, 2011) resemioticizes language in such a way that the the semiotic content of language shifts the semiotic function of gestural elements.

Intersemiotic polysemy: Intersemiotic polysemy describes when separate modes share different yet related meanings (Liu and O'Halloran, 2009).

After describing the scope and data used for the present study in Section 3, Section 4 will describe these three principles in more detail and demonstrate their manifestation in the systems of IDEATIONAL ACTION and INTERPERSONAL ACTION.

3. Overview of the present study and methods

This section will outline the general procedures and findings of this study (Amundrud, 2017). The present paper on classroom gesture is part of a larger project (Amundrud 2012, 2015, 2017) that examined Individual Feedback Consultations (IFCs), a classroom curriculum genre (Christie, 2002) of teacher-student consultations, in terms of their linguistic and multimodal constituency and pedagogy. Audio and video classroom observation data were collected from 11 tertiary, first-year compulsory EFL lessons at a private university in Western Japan - four from a streamed, lower-intermediate oral communication course taught by a male teacher, Duke, and six from a streamed, upper-intermediate academic writing course taught by a female teacher, Miriam. This resulted in forty-nine total consultations – 45 from the oral communication course and four from the academic writing course – analyzed from two lessons per course. All participants are pseudonymous.

This study follows the “Sydney School” of SFL (Martin, 1992, Martin and Rose, 2008), holding that genres, as “patterns of patterns”, shape through redundancy the choices speakers make in the lower strata of register, discourse semantics, lexicogrammar, and phonology. As “recurrent configurations of meanings” that “enact the social practices of a given culture” (Martin and Rose, 2008: 6), genres are: staged, meaning that meanings are made in steps; social, in that they are interactively negotiated with other people to achieve a social purpose; and goal-oriented, since texts move to a point of closure (Eggins and Slade, 1997). Accordingly, despite the distinct provenance and volume of the data collected from the two courses, generic analysis of the IFC genre proceeded since hints of the IFC structure were present during in-class observations due to the regular staging and social function of enabling teacher-student discussion of problems with homework as well as teacher guidance to assist successful assignment completion.

In IFCs, teachers and students discern problems with student work, explore teacher comments on prior work, and sometimes teachers give recommendations for subsequent work and/or a score. In the multilingual classroom ecology (Kramsch, 2002) present, IFCs were analyzed linguistically across metafunctions according to their lexicogrammatical constituency across English, Japanese, and codeswitched data (Halliday and Matthiessen, 2004; Teruya, 2007), and discourse semantically in terms of NEGOTIATION and SPEECH FUNCTION (Berry, 1981; Eggins and Slade, 1997; Martin, 1992) as well as for their manifestation of systems of APPRAISAL (Martin & White, 2005). Multimodally, IFCs were analyzed following the interpersonal meanings made by space (Lim, 2011; Amundrud, in press) and gaze (Amundrud, in press), and those made across metafunctions through gesture as described below. The obligatory (**bolded**) and optional (underlined) stages of the IFC genre are:

Opening (n=49): The social purpose of this stage is to begin the consultation. Students offer work through A1 primary Actor moves and teachers accept through A2 secondary Actor moves, manifested through nonverbal offer and accept actions, with optional verbal manifestation.

Conferring (n=49): The purpose here is to discern and analyze problems in student work, or problems that students have with teacher comments. Teacher moves manifest K1 primary Knower moves that are realized through logicosemantically expanded Relational processes.

Advice (n=20): In this stage, teachers give suggestions to help students complete their assignments successfully, realized in A2 secondary Actor moves, manifested through

either congruent imperative Mood or interpersonal grammatical metaphor (Halliday & Matthiessen, 2004).

Scoring (n=35): Here, a numeric score can be provided for student work through obligatory private writing and, optionally, numeric lexis.

Closing (n=49): This stage ends the consultation through a reversal of the Opening stage. Teachers nonverbally proffer student work with A1 primary Actor moves and students nonverbally accept work through A2 secondary Actor moves, with optional A2f secondary Actor feedback.

The IFC genre deploys a clear patterning of meaning, both linguistically and multimodally, within the context of culture in which it was found to manifest since it was present in the classroom data from two separate courses with different teachers, students, and syllabi. However, insufficient experientiality, which is necessary to support students' continued language development (Byrnes, 2014), was found in its linguistic content. Although beyond the scope of the present paper (see Amundrud, 2017: 391-417), this finding will be echoed in the description of the language contextualization of IDEATIONAL REPRESENTING ACTION below.

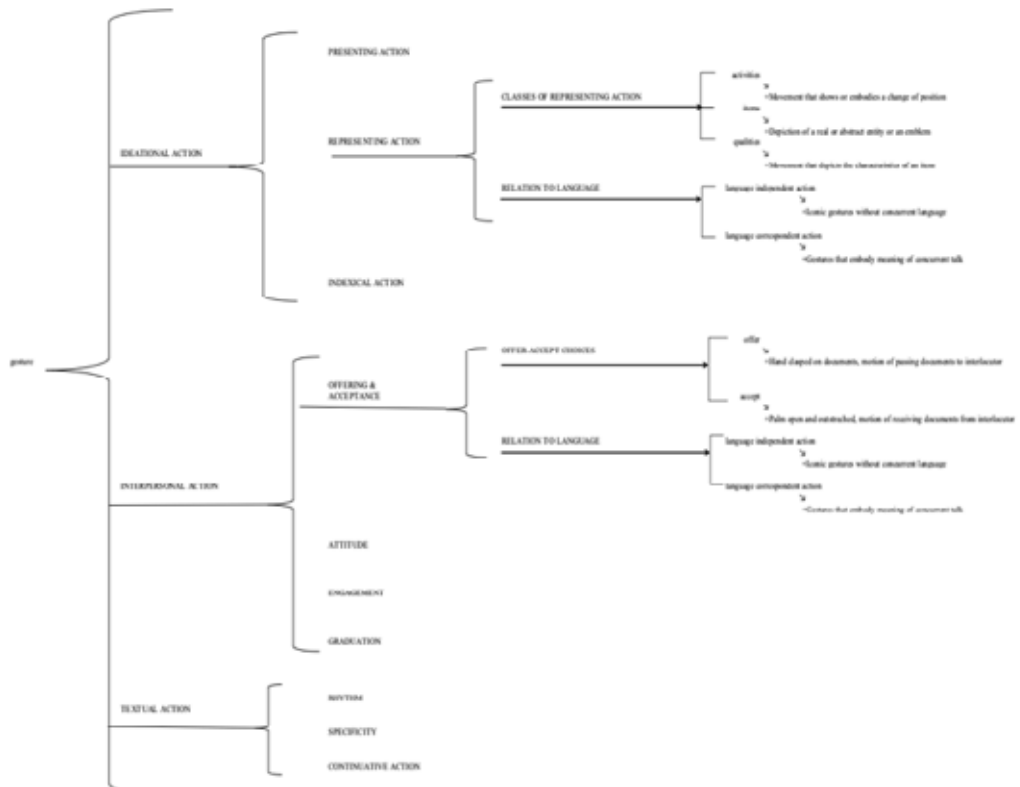


Figure 1: Abbreviated system of gesture in Individual Feedback Consultations

4. Analysis of gesture and language contextualization in Individual Feedback Consultations (IFCs)

4.1 Overview of gesture in Individual Feedback Consultations (IFCs)

This section describes gestures that realize the IDEATIONAL ACTION system of REPRESENTING ACTION and the INTERPERSONAL ACTION system of OFFERING &

ACCEPTANCE, developing upon Lim (2011), which manifest the principles of language contextualization described in Section 2. These two systems are further options of delicacy in the IFC genre within the respective gesture systems of IDEATIONAL ACTION and INTERPERSONAL ACTION (Figure 1). Please see Amundrud (2017: 190-282) for a more detailed treatment of gesture in the IFC genre.

The following summarizes the systems shown at least delicacy in Figure 1:

IDEATIONAL ACTION

PRESENTING ACTION: Presenting actions are practical actions that perform functions analogous to transitivity processes in language (Martinec, 2000).

INDEXICAL ACTION: Indexical actions add an additional ideational layer to simultaneous language (Lim, 2011). They include actions of relation, which are a functional interpretation of deictic gestures (McNeil, 1992), and actions of importance, realized through beat gestures.

INTERPERSONAL ACTION

ATTITUDE: These actions display positive & negative attitude (Martin and White, 2005). Beyond the hand gestures described in Lim (2011), Amundrud (2017) also discerned positive head nods, negative head shakes, and positive head bows that performed secondary Actor (A2) moves in NEGOTIATION (Berry, 1981; Martin, 1992) in the Japanese cultural context from which the data were collected.

ENGAGEMENT: These hand actions open or close discursive space through expansive or contracting gestures (Lim, 2011).

GRADUATION: Actions of graduation use speed of execution to scale intensity such that fast gestures convey urgency or energy, and slow gestures communicate deliberation or emphasis (Hood, 2011; Lim, 2011).

TEXTUAL ACTION

RHYTHM: This system accounts for the wavelength through which representing actions and indexical actions are realized.

SPECIFICITY: Textual actions of specificity indicate the fineness of deictic gesture expressed via hands, digits, or pens or pencils (Lim, 2011).

CONTINUATIVE ACTION: Textual continuative actions are the head nods and, potentially, head shakes that realize affirmative or negative continuative theme (Halliday and Matthiessen, 2004).

Options for gesture in the following transcripts are represented typographically within descriptions in double parentheses following the linguistic content of each move using the novel conventions shown in Table 1.

Table 1: Typographic IFC gesture conventions for transcripts (Amundrud, 2017)

<i>Gesture systems</i>	<i>Typographic representation</i>
Textual Action	<u>underline</u>
Interpersonal Action	<i>bold italics</i>
Indexical Action	<i>italics</i>
Representing Action	bold
Presenting Action	no formatting

4.2 IDEATIONAL REPRESENTING ACTION

As shown in Figure 1, in the IDEATIONAL ACTION system of REPRESENTING ACTION, the choices of **activities**, **items**, and **qualities** make meanings equivalent to linguistic Processes, Participants, and Circumstances. There is a parallel choice between **language correspondent actions**, which may accompany language and make meanings parallel to it, and **language independent actions**, which may bear their semiotic load alone; this is distinct from Lim's (2011) initial conception, which described language correspondent actions and language independent actions as engendering their own systems of representing action. Both language correspondent representing actions and language independent representing actions are conditioned by two principles of language contextualization – intersemiotic concurrence and semiotic metaphor – described in Section 2. REPRESENTING ACTIONS occurred almost exclusively in the Conferring and Advice stages of the IFC genre since those stages contained the bulk of pedagogic instruction. This section will describe how language correspondent and language independent representing actions (n=49) manifested, primarily as gestural **activities** (n=19) and **items** (n=28); since only two instances of **qualities** were found, space precludes their discussion here.

Gestural **activities** create meanings in action akin to Processes in language. Due to the principle of pedagogic redundancy (Christie, 2002), by which experiential content is repeated in order to extend learner's understanding, representing activities were primarily language correspondent since they reiterated linguistic content, as shown in Excerpt 1 and Figure 2.2 (relevant transcript indicated with arrows; Ø indicates ellipsed text).

Excerpt 1: Example of language correspondent semiotic metaphoric activity

Move #	Speaker	Transcript
Ex.		
→ 1 DK1	Miriam	What are the principles, of the EU, human rights? ((<i>Expands left hand outward on "human rights."</i>))
→ 2 DK1	Miriam	What are the common, common principles that, bind the member countries together? ((<i>Waves finger-open palms, facing towards student, on "common principles". Then makes a spherical shape in the air between both hands from "bind".</i>))
3 K1	Miriam	[Ø: The common principles that bind member countries together are] their commitment to human rights, to, a common economic system, right? ((<i>Opens left palm out on "to human rights".</i>))



Figure 2.1



Figure 2.2

Figures 2.1 & 2.2: Preparatory action (Figure 2.1) and stroke (Figure 2.2) of language correspondent semiotic metaphoric activity in Moves 1 and 2, Excerpt 1

Figure 2.1 shows a gesture of interpersonal expansion (Section 4.1), coordinately manifested with Tone 3 intonation (Halliday and Greaves, 2006) on “human rights,” that is simultaneously preparation for the semiotic metaphoric action in Figure 2.2. Figure 2.2 shows a language correspondent semiotic metaphoric action, deployed by Miriam as she consulted with a student about the students’ essay on Turkey’s attempted accession to the EU. Miriam’s gesture in Figure 2.2. accentuates the experiential meaning of the Material process “binds” in Move 2, demonstrating a change of state through the representing of “binding” in the form of spherical shape made between Miriam’s two partially enclosed palms, coterminous with the beat of “binds”. Following O’Halloran’s (1999) definition of semiotic metaphor, by joining her hands together in correspondence with the co-occurring linguistic text, Miriam’s **activity** is metaphorically imbued with the meaning of the concurrently spoken process.

Excerpt 2 demonstrates the use of semiotic metaphor to realize gestural **items**, which manifest visually meanings expressed through Participants in language, and then displays another principle of language contextualization, that of intersemiotic concurrence (Unsworth, 2006). **Items**, exemplified in Excerpt 2, Move 1, and Figure 3, include gestures that depict concrete or abstract entities (Kendon, 2004), and emblems with a normative meaning (Enfield, 2009).

Excerpt 2: Example of language correspondent semiotic metaphoric representing item and intersemiotically concurrent representing activity

<i>Move #</i>	<i>Speaker</i>	<i>Transcript</i>
<i>Ex.</i>		
→ 1 K1/A2	Miriam	So the sentence, the space between the sentences should be double space. ((Makes emblem of "two" on beat of "double".))
2 K2f	Saya	Mm-hm.
3 K1/A2	Miriam	[Ø:They should] not [Ø:be] single. ((<i>Index finger returns to same resting position as end of Move 6.</i>))
4 K1	Miriam	It's easier to read that way.
5 K2f	Saya	Mm-hm.
→6 K1	Miriam	You see, uh:: so when you write it's how () when you type, you should give, provide two spaces between sentences. ((Holds paper and moves fingers in imitation of typing before uttering "when you type" . <i>Points to one place from "you should give"</i> . <u><i>Rhythmically points on beats of "two spaces between"</i></u>))



Figure 3: Emblematic language correspondent item by Miriam (Excerpt 3, Move 1)

In Move 1 (Figure 3), Miriam underlines the need for two spaces between sentences with the emblem for “two” in conjunction with interpersonal grammatical metaphor in her correction of Saya’s orthography through a combined Primary Knower K1 and Secondary Actor A2 move, “should be”. Miriam’s language correspondent use of the emblematic “two” gesture here emphasizes and provides redundancy via semiotic metaphor for the content of her speech.

The final example of REPRESENTING ACTION discussed here is, unlike those in Figures 2.2 and 3, a manifestation of the principle of intersemiotic concurrence rather than semiotic metaphor. While both intersemiotic concurrence and semiotic metaphor create intersemiotically parallel meanings (Amundrud, 2017; Lim, 2011), they do so distinctly. Semiotic metaphor shifts the formal meanings of gestural actions to create parallel representational meaning; intersemiotic concurrence, however, creates meaning directly parallel to language. In Excerpt 2, Move 6, Miriam enacts a language correspondent **activity** (Figures 4.1 & 4.2) by imitating typing and thus produces intersemiotic concurrence by visualizing the Material process of “typing” in action.



Figure 4.1



Figure 4.2

Figures 4.1 & 4.2: Example of intersemiotically concurrent action

While this study shows how participants made correspondent and independent meanings through gesture that are contextualized by language through semiotic metaphor or intersemiotic concurrence, it should be noted that such representational actions accounted for only 49 of the 1299 gestures observed, almost exclusively found in the Conferring and Advising stages. Instead, the majority of gestures found were either presenting actions, summarized above, or **offer** and **accept** actions, described in Section 4.3.

4.3 INTERPERSONAL ACTION OF OFFERING & ACCEPTANCE

As with IDEATIONAL REPRESENTING ACTION, **offer** and **accept** options in the INTERPERSONAL ACTION system of OFFERING & ACCEPTANCE are contextualized by language, and have their own parallel choices for **language independent action** and **language correspondent action**. Language independent **offers** and **accepts**, which occurred without corresponding language, were intersemiotically concurrent since student papers were offered or accepted in a manner intersemiotically analogous to language (Unsworth, 2006). Language correspondent **offers** and **accepts** were intersemiotically concurrent when language created a convergent ideational meaning, such as “There ya go” in Excerpt 3, Move 3 below.

Excerpt 3: Example of language correspondent intersemiotically concurrent offer and accept actions.

<i>Move #</i>	<i>Speaker</i>	<i>Speech Function</i>	<i>Transcript</i>
<i>Ex.</i>			
1 A2/A1	Duke	Open: Command	Okay [Ø: these are] good, hold on a second. ((Writes on papers and <i>returns book to student.</i>))
2 A1/A2	Sachiko	Reply: Accept	((<i>Accepts book.</i>))
→3 A1	Duke	Offer	There ya go! ((Writes and <i>returns another paper to Sachiko.</i>))
→4 A2/A2f	Sachiko	Reply: Accept	((<i>Takes paper and bows.</i>))



Figure 5.1



Figure 5.2

Figures 5.1 & 5.2: Language correspondent actions of offer and accept in Excerpt 3, Move 3 (Fig. 5.1) and example of bowing as A2f, Excerpt 3, Move 4 (Fig. 5.2)

Duke returned a paper to Sachiko in Move 3, Figure 5.1, with the language correspondent action of **offer**, which was reciprocated by an **accept**. Rather than taking the paper with a tacit A2 and returning to her seat or replying with a spoken A2f secondary Actor feedback move, however, Sachiko in Move 4 enacted a A2F secondary Actor feedback move acknowledging Duke’s with a head bow (Figure 5.2). Head bows, as *eshaku* (会釈) (Takeda et al., 2016) are functionalized in this study, are INTERPERSONAL ACTIONS of ATTITUDE that embody acknowledgement by the secondary Actor for actions performed by the primary Actor (Section 4.1).

Offer and **accept** actions with corresponding language are intersemiotically polysemous when the meanings made by language varied in terms of SPEECH FUNCTION and NEGOTIATION with those of INTERPERSONAL ACTION, but were nevertheless related through Register in the classroom context of situation to the overall consultation genre, as demonstrated in Excerpt 4.

Excerpt 4: Example of intersemiotic polysemy in Opening stage

<i>Move #</i>	<i>Speaker</i>	<i>Speech Function</i>	<i>Transcript</i>
<i>Ex.</i>			
1 A2	Duke	Call	Kenichi. ((Writing on paper.))
→ 2	Duke	--	((Right arm is outstretched with palm open as Koichi approaches front.))
3 K2	Duke	Greeting	How are you?
→ 4 A1	Kenichi	Offer	((Hands materials to Duke.))
5 K1	Kenichi	Greeting Response	I'm fine.
→ 6 K1f	Duke	Reply: Acknowledge/Accept	[Ø: That's] good good. ((Holding book.))

The distinct actions of language and gesture in Excerpt 4 demonstrate intersemiotic polysemy as follows. Because, as explained in Section 3, the Opening stage is where teachers call upon students and where students proffer their work, Kenichi proffered his work in Excerpt 4 with gestural action alone. As the Opening stage commences the consultation, the presence of a Greeting and a Greeting Response sequence (Moves 3 and 5) combined with the Offer-Accept sequence (Moves 4 and 6) adds a further layer of interpersonal solidarity through Tenor. At the same time, the teacher's control over the discursive situation is displayed in that he both starts and terminates this exchange. The two sequences of Offering-Accepting and Greeting-Responding are therefore not separate but represent a polysemous yet unified option for the Opening stage of this consultation genre.

5 Implications of gesture in Individual Feedback Consultations (IFCs)

Section 4 summarized two key findings for the study of gesture in the Individual Feedback Consultation (IFC) genre regarding how REPRESENTING ACTION, contextualized through language by the principles of intersemiotic concurrence and semiotic metaphor, manifests **activities** that embody meanings verbalized in language as Processes and **items** that embody meanings verbalized as Participants, and how INTERPERSONAL ACTION of OFFERING & ACCEPTANCE, contextualized through language by the principles of intersemiotic concurrence and intersemiotic polysemy, enact the **offer** and **accept** actions that are central to the Opening and Closing stages of the IFC genre. While this analysis builds on the foundational work of Lim (2011) and others, the analysis of REPRESENTING ACTION in conjunction with language contextualization for an entire corpus of teacher-student consultations, and the functional analysis of INTERPERSONAL ACTION OF OFFERING AND ACCEPTANCE, are

both novel contributions of this study. To close, we will look at what this examination of gesture tells us about the pedagogy present in this genre, which may suggest further systemic research on gesture in pedagogy.

First, this analysis demonstrates the pedagogic importance of gestures that signify parallel to speech. For instance, **items** in the IFC genre are only comprised of gestures contextualized via semiotic metaphor. This is probably because semiotic metaphor enables the representation of abstract entities, or concrete entities not immediately present, while intersemiotic concurrence would simply visualize a linguistic Participant. These **items** are also primarily language correspondent, so their enactment was almost uniformly in conjunction with speech that conditioned their interpretation. Further research should be conducted to elucidate the functional use of teacher and student **activity**, **item**, and **quality** actions in foreign/second language education as well as other subjects.

In addition, the analysis of gesture, along with gaze and spatial position in the IFC genre, demonstrate that this genre, undoubtedly like other embodied genres in the classroom and elsewhere, is inherently multimodal. For example, just as **representing activities** and **items** occurred almost exclusively in the Conferring and Advice stages, **interpersonal actions of offering and acceptance** were found to be obligatory to the Opening and Closing stages of this genre. Since the social purpose of the Opening and Closing stages are to commence and end consultations respectively, there is less need for actions to represent abstract or absent concrete entities than in the Conferring stage, when problems are identified, or in the Advice stage, where suggestions are given. While the choice of offer in SPEECH FUNCTION has long been recognized in SF theory as executable through nonverbal action only (Halliday, 1978; Martin, 1992), this study is the first that analyzes the signification of gestures of offering and acceptance, both correspondent to and independent of language. Accordingly, it is hoped that more embodied genres, both within and beyond the classroom, will be analyzed systemically and multimodally as well as linguistically.

Finally, and most importantly for the analysis of foreign language teaching, the discovery of the presence of representing actions contextualized by language through intersemiotic concurrence and semiotic metaphor, as well as their relative paucity relative to other gestures found in the IFC genre, may indicate the need for language teachers to be trained in the use of gestures in order to provide intersemiotically correspondent content with their words. Although work in SLA has taken a formal approach to gesture in such analysis, the present study marks the first attempt at a functional view examining how teacher gestures complement their talk. At the same time, the finding that there are relatively few representing actions in the IFC genre compared to the more procedural interpersonal actions of offering and acceptance, not to mention the material presenting actions of simply holding papers and the like, suggests that this genre, which emerged from the pedagogy practiced in these two courses, exhibits problems previously identified with Communicative Language Teaching (Byrnes, 2014), in that it provides insufficient experiential support for advancing students' semiogenic resources.

In closing, the present systemic-functional multimodal analysis of gesture in the individual feedback consultation genre shows how teachers and students realize genres in action as well as in words, and how they coordinate gestures with linguistic

meaning. Further work within classrooms, both in foreign/ second language teaching and in other subjects, should help shed more light on how these capacities are created, and how they can be used to greater pedagogic effect.

References

- Amundrud, T. (2012) A first look at classroom curriculum genres in Japanese tertiary EFL. *Proceedings of JASFL*, 6: 11-18.
- Amundrud, T. (2015) Individual feedback consultations in Japanese tertiary EFL: A systemic semiotic exploration. *English Australia Journal*, 30.2: 40-64.
- Amundrud, T. (2017) *Analyzing classroom teacher-student consultations: A systemic-multimodal perspective* (Unpublished dissertation). Macquarie University, Sydney. Retrieved from <http://www.isfla.org/Systemics/Print/Theses/Amundrud-2017.pdf>
- Amundrud, T. (2018) 'Applying multimodal research to the tertiary foreign language classroom: Looking at gaze'. In H. Da Silva-Joyce and S. Feez (eds) *Multimodality across classrooms: Learning about and through different modalities*. London: Routledge.
- Bateman, J. (2011) 'The decomposability of semiotic modes'. In K. L. O'Halloran (ed.), *Multimodal Studies: Exploring issues and domains* 17-38. London: Routledge.
- Berry, M. (1981) Towards layers of exchange structure for directive exchanges. *Network*, 2: 23-32.
- Byrnes, H. (2014) 'Systemic Functional Linguistics in the round: Imagining foreign language education for a global world'. In F. Yan and J. Webster (eds), *Developing Systemic Functional Linguistics: Theory and application* 323-344. Sheffield: Equinox.
- Christie, F. (2002) *Classroom discourse analysis: A functional perspective*. London: Continuum.
- Eggs, S. (2004) *An introduction to systemic functional linguistics* 2nd edition. New York: Continuum.
- Enfield, N. (2009) *The anatomy of meaning: Speech, gesture, and composite utterances*. Cambridge University Press.
- Halliday, M. (1978) *Language as social semiotic: The social interpretation of language and meaning*. London: Edward Arnold.
- Halliday, M., and Greaves, W. (2008) *Intonation in the Grammar of English*. London: Equinox.
- Halliday, M., and Matthiessen, C. (2004). *An introduction to functional grammar* (3rd ed.). London: Hodder Education.
- Hood, S. (2011) 'Body language in face-to-face teaching: A focus on textual and interpersonal meaning'. In S. Dreyfus, S. Hood, and M. Stenglin (eds), *Semiotic margins: Meaning in multimodalities* (pp. 31-52). London: Continuum.
- Jewitt, C. (2005) Classrooms and the design of pedagogic discourse: A multimodal approach. *Culture & Psychology*, 11.3: 309-320.
- Jewitt, C. (2014) 'An introduction to multimodality'. In C. Jewitt (ed.), *Routledge handbook of multimodal analysis* 2nd edition 15-30. London: Routledge.
- Kendon, A. (2004) *Gesture: Visible action as utterance*. Cambridge University Press.

- Kramsch, C. (ed.) (2002) *Language acquisition and language socialization: Ecological perspectives*. London: Continuum.
- Lim, F. (2004) 'Developing an integrative multi-semiotic model'. In K. O'Halloran (ed.), *Multimodal discourse analysis: Systemic functional perspectives* 220-246. London: Continuum.
- Lim, F. (2011) *A systemic functional multimodal discourse analysis approach to pedagogic discourse* (Unpublished dissertation). National University of Singapore.
- Liu, Y., and O'Halloran, K. (2009) Intersemiotic Texture: analyzing cohesive devices between language and images. *Social Semiotics*, 19.4: 367-388.
- Martin, J. (1992) *English text: System and structure*. Amsterdam: John Benjamins.
- Martin, J., and Rose, D. (2008) *Genre relations: Mapping culture*. London: Equinox.
- Martin, J., and White, P. (2005) *The language of evaluation: Appraisal in English*. Hampshire: Palgrave Macmillan.
- Martinec, R. (2000) Types of process in action. *Semiotica*, 130.3-4: 243-268.
- McNeill, D. (1992) *Hand and mind: What gestures reveal about thought*. University of Chicago Press.
- O'Halloran, K. (1999) Interdependence, interaction and metaphor in multisemiotic texts. *Social Semiotics*, 9.3: 317-354.
- Sime, D. (2006) What do learners make of teachers' gestures in the language classroom? *IRAL - International Review of Applied Linguistics in Language Teaching*, 44.2: 211-230.
- Sueyoshi, A., and Hardison, D. (2005) The Role of Gestures and Facial Cues in Second Language Listening Comprehension. *Language Learning*, 55.4: 661-699.
- Takeda, T., Kamagahara, Y., Lu, X., Kida, N., Hara, T., Ogura, Y., and Ota, T. (2016) 'The Perception of the Beneficiary for Japanese Bowing in Different Situations at the Reception'. In V. G. Duffy (ed.), *Digital Human Modeling: Applications in Health, Safety, Ergonomics and Risk Management: 7th International Conference, DHM 2016, Held as Part of HCI International 2016, Toronto, ON, Canada, July 17-22, 2016, Proceedings* 506-517 Cham: Springer International Publishing.
- Teruya, K. (2007) *A systemic functional grammar of Japanese* (Vols. 1-2). London: Continuum.
- Unsworth, L. (2006) Towards a metalanguage for multiliteracies education: Describing the meaning-making resources of language-image interaction. *English Teaching: Practice and Critique*, 5.1: 55-76.

大学初年次向け「理系」教科書（英語）が扱う 「物」

Things in Academic Science Textbooks in English

鷲嶽正道

Masamichi Washitake

愛知学院大学

Aichi Gakuin University

Abstract

This present paper explores lexicogrammatical tendencies in academic science textbooks (Physics, Biology and Chemistry) using the theoretical framework of Systemic Functional Linguistics. The focus of the paper is on **things** (nouns) representing technical terms such as *force*, *cells* and *bonds*.

According to Halliday and Matthiessen (1999), **things** are distinguished along the dimensions of reactance in the grammar (primarily human or non-human). This paper uses this distinction to demonstrate that textbooks in different disciplines tend to use different kinds of **things**. This paper also discusses nominalization (grammatical metaphor); since nominalization plays an important role in scientific English, the difference between metaphorical and non-metaphorical relocations (i.e. between nominalization and either rankshift or transcategorization) should be elucidated. Following the discussion of **things**, it examines how textbooks in different disciplines define their vocabulary, how they build a taxonomy and how they explain their terms.

This paper concludes that **things** to express scientific terms are non-metaphorical. It also concludes that although they are conventionally grouped as ‘science’, the textbooks tend to employ different kinds of **things** to display their terms, which are defined by relational (intensive) process, categorized by relational (possessive) and explained by relational (circumstantial), material and verbal.

1. はじめに

大学のユニバーサル化が進むにつれ、大学での学びの導入に当たる初年次教育の重要度は一層増している。英語教育も例外ではなく、入学時の学生の能力と専門教育で求められる能力との隔たりをいかに縮めるかは喫緊の課題である。加えて、初年次英語教育には学部や学生の特性に合わせた付加価値も求められている。医療系の学部の場合、いわゆる理系基礎科目（物理学・生物学・化学）の習熟が初年次教育の主眼のひとつとなる一方で、英語で書

かれた科学レポートを理解するための基礎的英語力の養成も要求されている。これらの教育効果を上げるには、いわゆる科学分野の使用域(register)を精査し、整理することが不可欠である。

本稿では、選択体系機能言語学(Systemic Functional Linguistics)の理論枠組みを利用して、大学初年次で利用される物理学・生物学・化学の教科書(英語)を分析する。特に、専門的語彙を表示するのに用いられている「物(thing)」

(名詞)に焦点を当てる。本稿では、まず、Halliday and Matthiessen (1999)の分類にしたがって、専門的語彙として典型的に利用される「物」の種類の違いを科目ごとに示す。次いで、各教科書における専門的語彙の導入のしかたの異同について議論する。これらの議論により、導入される専門的語彙の「物」の種類と、その説明のしかたとの関係を明らかにする。

専門的語彙として導入される「物」の種類は、科目によって異なる。また、「物」の種類と説明に使われる過程型には特定の関係がある。単に「理系科目」としてまとめられがちな3科目の語彙文法的な違いを明らかにすることは、学習者支援への一助となりうる。本稿の研究を、大学初年次における英語教育、とりわけ医療系の学生に向けた英語教育の充実の一環として位置づけたい。

なお、本稿における選択体系機能言語学の術語の日本語訳はハリデー(1994, 山口・寛訳, 2001)に準拠し、初出の場合のみ括弧書きで英語の術語を提示している。

2. 「物」の種類

Halliday and Matthiessen (1999)によると、節の参与要素を担う「物」は、大きくmacro thingとsimple thingに分類することができる。このうち、macro thingには出来事を表すフィギュア(figure)が「物」に階層下降(rankshifted)したものや、もともとは他の文法クラスに属していた要素が「物」に文法クラスの移動(transcategorized)をしたもの、すなわち「比喩的な物」が含まれる。

このように、「物」ではない文法クラスの要素が文法的比喩によって「一致した(congruent)」表現ではなく「比喩的な(metaphorical)」表現によって「物」として具現される現象を名詞化と呼ぶ。名詞化表現は、いわゆる科学的テキストを分析する上で不可欠な要素であるが、何をもって名詞化表現とするかには、いくつかの議論が必要である。そこで、本節では、まず、名詞化が起こる条件を紹介しながら、科学分野の教科書で専門的語彙として導入される「物」が「比喩的な」表現ではなく「一致した」表現であることを議論する。

2.1 名詞化表現(文法的比喩)

名詞化が起こるには、以下の3つの条件が必要である。1つめと2つめの条件は、階層下降と文法クラスの移動のいずれか（あるいは両方）である。ただし、これらはもともと「比喩的な」現象ではない。階層下降あるいはクラスが移動した要素は、元の要素との意味的な融合(semantic junction)を引き起こした場合に「比喩的な」表現になる(Halliday and Matthiessen 1999: 259-260)。例えば、developmentは元の要素である過程(process)に「物」の要素が融合しているので「比喩的」な表現であるが、shakerは、元の要素である過程が失われた状態にある「物」なので、「一致した」表現（shakeの派生語）として扱われる(Halliday and Matthiessen, 1999: 243)。

「比喩的な」表現の分析は、多くの場合、「比喩的な」表現を「一致した」表現に解き放つ(unpack)、ことによってなされる。例えば、Excessive consumption of alcohol is a major cause of motor vehicle accidents.という「比喩的な」表現を含んだ節は、If you drink too much alcohol when you drive your car, you are likely have an accidentという、より「一致した」表現に書き換えることができる(Butt et al.: 97-98)。この分析では、excessive consumption of alcoholとmajor cause of motor vehicle accidentsという名詞化表現が、それぞれyou drink too much alcoholとyou are likely have an accidentという節に解き開かれているのがわかる。また、A is a cause of Bという関係過程(relational process)で具現されている因果関係が、ifを用いた節複合に解き開かれていることも確認できる。

しかしながら、「比喩的な」表現は、必ずしも「一致した」表現に解き放つ必要はない。Halliday (1994: 353)は、「比喩的な」表現をありのまま分析することの重要性を次のように説いている。

Thus, however far one may choose to go in unpacking ideational metaphor, it is important also to analyse each instance as it is. A significant feature of our present-day world is that it consists so largely of metaphorically constructed entities, like *access*, *advances*, *allocation*, *impairment* and *appeal*.

また、Halliday and Matthiessen (1999: 261)は、heart failureを例に、専門的な表現において比喩表現が「死んで」しまい、「一致した」表現になることを説明している。

Contrast this now with failure in a technical expression such as *heart failure*; in origin this was no doubt a grammatical metaphor for *the heart fails*, but the metaphorical quality has since been lost, or at least significantly weakened (the metaphor is “dead”), and *heart failure* is now the only congruent form.

専門的な知識の構築の場では、名詞化を含む「比喩的な」表現は、術語群の整理と議論の展開に貢献した(Halliday and Martin,1993; Martin and Veel, 1998)が、その一方で術語は「比喩的な」表現としての地位を失ってしまっている。したがって、科学分野の教科書で導入される専門的語彙も、「比喩的な」macro thingではなく、simple thingとして考えるのが妥当である。

2.2 simple thingの下位分類

本節では、Halliday and Matthiessen (1999: 189-194)に従い、simple thingの下位分類とそれぞれの文法的特性を紹介する。simple thingの最も細密度の低い選択肢は、consciousかnon-consciousである。consciousは意識を持っていると解釈されるもの、すなわち人間である。したがって、当該のthingがconsciousかどうかは、心理過程の感覚者(Senser)になれるかどうか、あるいは三人称単数の代名詞がitではなくshe/heであることで判断できる。non-consciousはさらにmaterialとsemioticに下位分類できる。

materialには次の4つの下位分類がある（後述するsemioticの下位分類とラベルが重複するものもあるので、その場合は、materialの下位分類はmaterial-xxx、semioticの下位分類はsemiotic-yyyと表記する）。

animal

dogやhorseといった動物である。したがって、creatureやanimalといった上位語で照応することができる。また、可算名詞で具現され、物質過程(material process)の行為者(Actor)を担うことができる。

material-object

houseやrockなどの数えられる物であり、照応できる上位語はthingである。典型的には物質過程の対象(Goal)を担う。

substance

waterやairなどの環境の一部で、照応できる上位語にはstuffがある。いわゆる質量名詞として扱われ、典型的には、on the groundのように状況要素(circumstance)（特に位置(Location)）の一部を担う。

material-abstraction

depthやcolorなどの抽象化された物である。特定の上位語はない。質量名詞として扱われる。典型的には心理過程(mental process)の現象(Phenomenon)、属性付与的關係過程(attributive)の体現者(Carrier)、同定的關係過程(identifying)の価(Value)を担う。

一方で、semioticには以下の3つの下位分類がある。

institution

governmentやschoolといった組織で、people, place, set-upなどの上位語で照応できる。可算名詞として扱われ、典型的には発言過程の発言者、物質過程の行為者、心理過程(とりわけthinking, intending)の感覚者を担う。

semiotic-object

documentやregulationといった記号やメッセージに関わるもので、物理的な実体を持つこともある。特定の上位語はない。可算名詞として扱われる。典型的には発言過程(verbal process)の作用域(Range)を担ったり、the book says... のthe bookのように発言過程の発言者(Sayer)を担ったりすることができる。

semiotic-abstraction

informationやtruthといった物理的に存在しない概念的なもので、質量名詞として扱われる。ideaやfactといった上位語で照応できるものもある。典型的には、心理過程や発言過程の作用域、所有的関係過程(possessive)の属性(Attribute)を担う。

これらの分類には重なり合うものもあるので、複数の特性を兼ねたものや、2つの領域の間に位置するものもあり得る。

3. 科学分野の教科書で導入される「物」

本節では、第一に、前節で紹介した分類に基づき、科学分野の教科書で、どのような種類の「物」が専門的語彙として導入されるかを見ていく。次いで、それぞれの種類の「物」が、典型的にどの過程型によって導入されるのかを見る。本稿で分析対象としたテキストは、いずれも英語圏でよく使われる大学初年次向けの教科書（各2冊、詳細は参考文献を参照）で、各科目100個程度の専門的語彙について観察している。

3.1 物理学の教科書

物理学の教科書で専門的語彙として導入される「物」は、確認できた範囲(96語)では、すべてnon-consciousであった(表1)。このうち、materialは64語(66.7%)、semioticは32語(33.3%)であった。materialの内訳を見ると、material-abstractionが57語(59.4%)で最多であった。semioticでは、semiotic-objectが32語(33.3%)ですべてを占めていた。

表1：物理学の教科書で専門的語彙として導入される「物」

conscious	0	0.0%						
non-conscious	96	100%	material	64	66.7%	animal	0	0.0%
						object	4	4.2%
						substance	3	3.1%
			semiotic	32	33.3%	abstraction	57	59.4%
						institution	0	0.0%
						object	32	33.3%
						abstraction	0	0.0%
sum	96	100%						

次に、専門的語彙を導入している節に利用されている過程型を見る(表2)。最も利用されているは関係過程で、66回(86.8%)利用されている。そのうち、内包的(intensive)が最も多く、60回(78.9%)である。次いで利用されているのは、状況的で6回(7.9%)である。所有的は一度も利用されていなかった。

表2：物理学の教科書で専門的語彙を導入するのに利用されている過程型

物質過程	3	3.9%			
行動過程	0	0.0%			
心理過程	1	1.3%			
発言過程	3	3.9%			
関係過程	66	86.8%	内包的	60	78.9%
			状況的	6	7.9%
			所有的	0	0.0%
存在過程	1	1.3%			
不明	2	2.6%			
計	76	100%			

専門的語彙としてとして最も多く利用されている「物」である material-abstraction は内包的関係過程によって最も多く(41回)導入されている。以下に示す例を見るとわかるように、内包的関係過程は、「専門的語彙 is 名詞群」のパターンで、物理現象の定義に使われる(内包的関係過程が同定的である場合には、「名詞群 is (called) 専門的語彙」となることもある)。

The **calorie** (abbreviated cal) is the amount of heat required to raise the temperature of 1 gram of water from 14.5°C to 15.5 °C.

(University Physics, p.580)

The most general definition of **sound** is a longitudinal wave in a medium.

(University Physics, p.529)

(以下、すべての例において太字、イタリックは原文ママ)

なお、専門的語彙の定義に利用されている名詞群には、名詞化表現や他の専門的語彙も含まれるが、これらについては、本稿では議論しない。

状況的關係過程は、物理現象が及ぶ範囲や物理現象が成り立つ条件について説明するのに利用される。以下に示す例では、それぞれnormal forceが及ぶ範囲とacceleration in SHMがどのようにして測定できるのかを説明している。

The **normal force** (Fig. 4.2a) is exerted on an object by any surface with which it is in contact.

(University Physics, p.126)

Acceleration in SHM is determined via Hooke's Law, $F = -kx$, and $F = ma$;...

(College Physics, p.146)

二番目に多く利用している「物」であるsemiotic-objectは、material-abstractionと同じように、内包的關係過程によって導入されている。以下に示すように、semiotic-objectは定理や定数として利用され、material-abstractionの場合と同じように「専門的語彙 is 名詞群」「名詞群 is (called) 専門的語彙」で定義される。

The **Newton** is the SI unit of force.

(College Physics, p.29)

The **gravitational constant** G in Eq. (13.1) is a fundamental physical constant that has the same value for *any* two particles.

(University Physics, p.423)

semiotic-objectは、発言過程によっても導入される。以下の例では、物理法則が発言者となって自らの法則の説明をしている。

The first law states that when the net force on a body is zero, its motion doesn't change. The second law tells us that a body accelerates when the net force is *not* zero.

(University Physics, p.125)

以上、物理学の教科書で専門的語彙として導入される「物」の種類と、導入に利用される過程型について見た。material-abstractionとsemiotic-objectがそれぞれ物理現象と単位・定数として内包的關係過程によって導入され、material-abstractionで表される物理現象が及ぶ範囲は状況的關係過程によって導入されていることが明らかになった。また、semiotic-objectで表される物理法則は発言過程によって導入されていることもわかった。

3.2 生物学の教科書

生物学の教科書で確認した専門的語彙110語は、すべてnon-consciousのmaterialであった。このうち、material-objectは86語(74.8%)、material-abstractは26語(22.6%)であった（表3）。

表3：生物学の教科書で専門的語彙として導入される「物」

conscious	0	0.0%						
non-conscious	115	100%	material	115	100%	animal	0	0.0%
						object	86	74.8%
						substance	3	2.6%
						abstraction	26	22.6%
						institution	0	0.0%
						object	0	0.0%
			abstraction	0	0.0%			
sum	115	100%						

専門的語彙を導入している過程型は、関係過程が95回(84.1%)と最も多く、次いで物質過程が16回(14.2%)であった（表4）。

表4：生物学の教科書で専門的語彙を導入するのに利用されている過程型

物質過程	16	14.2%			
行動過程	0	0.0%			
心理過程	0	0.0%			
発言過程	0	0.0%			
関係過程	95	84.1%	内包的	51	45.1%
			状況的	21	18.6%
			所有的	23	20.4%
存在過程	1	0.9%			
不明	1	0.9%			
計	113	100%			

material-objectは個体や個体の部位を示す専門的語彙として利用されている。これらの語彙は内包的関係過程によって定義されたり、所有的関係過程によって全体部分関係が表されたり、状況的關係過程によって位置関係が示されたりする。次に示すのは、内包的関係過程によって個体の部位が定義されている例である。

Pili are structures made of protein that project from the surfaces of some types of bacterial cells.

(Life, p.84)

A **tissue** is a group of similar cells that perform a particular function.

(Inquiry into Life, p.4)

次の2つの例では、所有的関係過程によって単細胞生物の全体部分関係が示されている。

Prokaryotes have a single chromosome (loop of DNA and associated proteins) located within a region of the cytoplasm called the **nucleoid**.

(Inquiry into Life, p.46)

These bacteria have an **internal membrane** system that contains molecules needed for photosynthesis.

(Life, p.83)

以下に示すのは、状況的關係過程によって細胞の部位の位置関係が示されている例である。

All cells are surrounded by a **plasma membrane** consisting of a phospholipid bilayer embedded with protein molecules.

(Inquiry into Life, p.45)

Enclosing the cell wall in some bacteria is a slimy layer composed mostly of polysaccharides and referred to as a **capsule**.

(Life, p.83)

一方で、個体の行動そのものは、物質過程によって導入される。

Some prokaryotes swim by using appendages called **flagella**, which sometimes look like tiny corkscrews (**Figure 5.5A**).

(Life, p.83)

Soil bacteria called **nitrifiers** oxidize ammonia to nitrate ions (NO_3^-)...

(Life, p.750)

material-objectに次いで多く見られたmaterial-abstractionは、生命現象やエネルギーに関わる専門的語彙である。これらの専門的語彙は内包的関係過程と物質過程によって導入される。以下に示すのは、内包的関係過程によって生命現象やエネルギーが定義されている例である。

Photosynthesis (literally, “synthesis from light”) is an anabolic process by which the energy of sunlight is captured and used to convert carbon dioxide (CO₂) into more complex carbon-containing compounds.

(Life, p.186)

Food is specifically called **chemical energy** because it contains energy in the chemical bonds of organic molecules.

(Inquiry into Life, p.100)

物理学の場合と同じように、専門的語彙の定義は内包的関係過程の「専門的語彙 is 名詞群」「名詞群 is (called) 専門的語彙」によってなされていることがわかる。また、定義に名詞化表現と他の専門的語彙が使われている点も物理学の場合と同じである。

次の例は、**material-abstraction**で表される専門的語彙が物質過程の節で導入されている例である。専門的語彙が参与要素ではなく、状況要素を担っている点が他の過程型を使った専門的語彙の導入と異なる点である。

They [Fungi] secrete digestive enzymes to break down large food molecules in the environment, then absorb the breakdown products through the plasma membranes of their cells in a process known as **absorptive heterotrophy**.

(Life, p.609)

[]は著者による

To use nitrate, a plant must first reduce it to ammonium in a process called **nitrate reduction**, which occurs in two enzyme-catalyzed steps.

(Life, p.751)

以上、生物学の教科書で導入される専門的語彙の「物」の種類と導入に利用される過程型について見た。「物」の種類は、ほとんどが個体や個体の一部を表すのに利用される**material-object**と生命現象を表すのに利用される**material-abstraction**であった。生命現象の定義には、物理現象でも利用されている内包的関係過程に加えて、物質過程も使われていることに特徴が見られた。

3.3 化学の教科書

化学の教科書で確認できた専門的語彙95語は、すべてがnon-consciousであった。うち**material-object**と**material-abstraction**がそれぞれ43語(51.2%)と38語(45.2%)で、全体の98.8%を占めていた(表5)。

表5：化学の教科書で専門的語彙として導入される「物」

conscious	0	0.0%						
non-conscious	84	100%	material	83	98.8%	animal	0	0.0%
						object	43	51.2%
						substance	2	2.4%
						abstraction	38	45.2%
			semiotic	1	1.2%	institution	0	0.0%
						object	1	1.2%
						abstraction	0	0.0%
sum	84	100%						

専門的語彙を導入するのに使われている過程型は、関係過程が72回(87.8%)と最も多く、次いで物質過程が9回(11%)であった（表6）。

表6：化学の教科書で専門的語彙を導入するのに利用されている過程型

物質過程	9	11.0%			
行動過程	0	0.0%			
心理過程	1	1.2%			
発言過程	0	0.0%			
関係過程	72	87.8%	内包的	48	58.5%
			状況的	11	13.4%
			所有的	13	15.9%
存在過程	0	0.0%			
不明	0	0.0%			
計	82	100%			

material-objectは化学物質を表す「物」である。化学物質の定義、特徴、構成要素（全体）は内包的関係過程によって、構成要素（部分）や質量は所有的関係過程によって導入されている。次に示す例は、それぞれ、化学物質が内包的関係過程によって定義されたり、構成要素全体が示されたりしているものである。

A **homogeneous mixture** is a blend of two or more pure substances having a uniform composition at the microscopic level.

(Fundamentals p.6)

Atoms are composed of tiny **subatomic particles** called *protons*, *neutrons*, and *electrons*.

(Fundamentals p.48)

以下に示すのは、化学物質の構成要素と質量が所有的関係過程によって導入されている例である。

Every amino acid contains an amine group (NH_2), a carboxyl group (COOH), and an R group called a **side chain**, all bonded to the same carbon atom.

(Fundamentals, p.599)

A **proton** has a mass of $1.672\,622 \times 10^{-24}$ g and carries a positive (+) electrical charge; ...

(Fundamentals, p.48)

一方で、material-abstractionは化学現象を表す「物」である。化学現象は、物理学と生物学で観察されたのと同じように、内包的関係過程の「専門的語彙 is 名詞群」「名詞群 is (called) 専門的語彙」のパターンで定義される。以下に、例を示す。

Any process that starts or increases the action of an enzyme is an **activation**.

(Fundamentals, p. 654)

The quantity of heat needed to completely vaporize a liquid once it reaches its boiling point is called its **heat of vaporization**.

(Fundamentals, p.258)

このパターンの定義以外に、化学現象は、生物学で見られたように物質過程でも定義される。この場合は、生物学と同じように専門的語彙が参与要素ではなく、状況要素を担っている。以下に、該当する例を示す。

In **uncompetitive inhibition**, the inhibitor does not compete with the substrate for the active site and cannot bind to enzyme alone.

(Fundamentals, p.656)

Two or more amino acids can link together by forming amide bonds, which are known as **peptide bonds** when they occur in proteins.

(Fundamentals, p.599)

化学現象が作用する範囲や条件は、状況的關係過程によって示される。以下に例を提示する。

Feedback control is exerted on an earlier reactant by a later product in a reaction pathway and is made possible by **allosteric control**.

(Fundamentals, p.661)

Activation of such enzymes, known as **zymogens** or *proenzymes*, requires a chemical reaction that splits off part of the molecule.

(Fundamentals, p.660)

以上、化学の教科書で導入される専門的語彙の「物」の種類と利用される過程型について観察した。「物」の種類は、ほぼすべてが化学物質を表す **material-object** と化学現象を表す **material-abstraction** であった。化学物質や化学現象の定義や構成に利用される過程型には、物理学や生物学で確認できたパターンと同じものも見られた。

4. まとめと展望

以上、物理学、生物学、化学のそれぞれの大学初年次向けの教科書に専門的語彙として導入される「物」の種類と、それらの導入に利用される過程型の種類について観察した。分析結果をまとめたものが下の表7になる。

表7：専門的語彙に用いられている「物」と導入に利用される過程型

	material-object	material-abstraction	semiotic-object
関係過程 (内包的)	B: 個体の部位の定義 C: 化学物質の定義・特徴・構成要素全体	P: 物理現象の定義 B: 生命現象の定義 C: 化学現象の定義	P: 単位や定数の定義
関係過程 (所有的)	B: 組織や部位などの全体部分関係 C: 化学物質の構成要素や質量		
関係過程 (状況的)	B: 組織や部位などの位置関係	P: 物理現象の及ぶ範囲・成り立つ条件 C: 化学現象が作用する範囲や条件	
物質過程	B: 個体の行動	B: 生命現象の定義 C: 化学変化の定義(状況要素)	
発言過程			P: 物理法則の概要

P：物理学の教科書 B：生物学の教科書 C：化学の教科書

また、本稿では、科学分野に頻繁に利用される名詞化表現についても議論し、専門的語彙は「一致した」表現として扱うべきであると結論づけた。

本稿の研究目的は、医療系・科学技術系の学生がより円滑に初年次教育をスタートできるようにすること、ひいては学生が独力で専門分野の英語を理

解できるようにすることである。本稿で分析した理系3科目の教科書を、本稿では触れなかった論理構成的メタ機能(logical metafunction)、対人的メタ機能(interpersonal metafunction)、テキスト形成的メタ機能(textual metafunction)の観点から分析し、語彙の習得と従来型の英文読解になりがちな初年次の英語教育に援用することが今後の展望である。

参考文献

- Butt, D., Fahey, R., Feez, S. and Spinks, S. (2012) *Using Functional Grammar: An Explorer's Guide* 3rd edition. South Yarra: Palgrave Macmillan.
- Halliday, M.A.K. (1994) *An Introduction to Functional Grammar* 2nd edition. London: Arnold.
- Halliday, M.A.K. and Martin, J.R. (1993) *Writing Science: Literacy and Discursive Power*. London: Falmer Press.
- Halliday, M.A.K. and Matthiessen, C.M.I.M. (1999) *Construing Experience through Meaning: A Language-based Approach to Cognition*. London: Cassell.
- Halliday, M.A.K. and Hassan, R. (1976) *Cohesion in English*. London: Longman.
- Martin, J.R. and Veel, R. (eds) (1998) *Reading Science: Critical and Functional Perspectives on Discourse of Science*. London and New York: Routledge.
- ハリデー、M.A. K. (1994)『機能文法概説ーハリデー理論への誘いー』山口登・笥壽雄訳 (2001). 東京:くろしお出版.

分析対象の教科書

- Clayden, J., Greeves, N. and Warren, S. (2012) *Organic Chemistry* (2nd ed.). London: Oxford University Press.
- Hecht, E. (2011) *Schaum's Outline of College Physics* 11th edition. New York: McGraw-Hill Education.
- Mader, S.S. and Windelspecht, M. (2014) *Inquiry into Life* 14th edition. New York: McGraw-Hill Education.
- McMurry, J.E., Hoeger, C.A., Peterson, V.E. and Ballantine, D.S. (2014) *Fundamentals of General, Organic, and Biological Chemistry* 7th edition. London: Pearson.
- Sadava, D., Hillis, D.M., Heller, H.C. and Berenbaum, M.R. (2014) *Life: The Science of Biology* (10th ed.) W.H. Freeman & Company.
- Young, H.D. and Freedman, R. A. (2016) *University Physics with Modern Physics* 14th edition. London: Pearson.

絵の中の結束生 : Painter, et al. のシステム拡充 Cohesion in Pictures: Expanding Painter, et al.'s Systems

早川 知江

Chie Hayakawa

名古屋芸術大学

Nagoya University of the Arts

Abstract

This paper is a part of multimodal studies on a typical bimodal text, picturebooks. Painter, et al. (2013) has already presented a comprehensive account of the visual grammar in picturebooks, and this paper tries to expand it focusing on the system of cohesion. Painter, et al. apply the study by Kress and Leeuwen (1996, 2006), who analyzed each picture in isolation, to the analysis of picturebooks where they propose the systems including MANIFESTATION and APPEARANCE to explain the changes and ties between pictures.

Ties between pictures are best analyzed when we consider cohesion, all the patterns which glue a text as a whole. The systems of MANIFESTATION and APPEARANCE are related to the tracking of the same character and, in part, contribute to cohesion. Semantic ties, however, can also be found between different characters. The classic picturebook, *Arrow to the Sun*, for example, repeatedly uses the same pattern of design and combination of colors to infer the bond between the Lord of the Sun and his son. Based on these analyses, I will propose that cohesion in pictures is also created by the choices of colors and shapes and will integrate the findings into the system of COHESION IN PICTUREBOOKS.

1. はじめに

本発表は、multimodal text の代表的なジャンル、絵本の特性を言語理論の観点から明らかにしようとする研究の一環である。絵本の意味を明らかにするには、言語だけでなく、絵に関わる選択システムの記述が不可欠である。その出発点として、既に Painter, et al. (2013) という優れた分析枠組みがあり、これが Systemic Functional Linguistic (以下 SFL) の中で、現在最も包括的な絵本の絵のシステムとなっている。

Painter, et al. は、Kress and Leeuwen (1996, 2006) の研究を絵本に応用した。Kress and Leeuwen が 1 つ 1 つの画像を個別に扱ったのに対し、Painter, et al. の特徴は、そのシステムを、絵と絵の間の関係を捉えられるよう改良したことにある。絵本はストーリー展開に沿って複数の絵が提示されるため、その間の変化やつながりを説明できなければならない。その観点から Painter, et al. は、同じ登場人物が再登場するさいの選択を示した MANIFESTATION や APPEARANCE、背景の変化を扱う INTER-CIRCUMSTANCE、絵に表されたできご

ととできごとの間の関係性を扱う INTER-EVENT システムなどを提案した。

しかし、Painter, et al.の提案するシステムにも、まだ欠けている部分はある。絵と絵のつながりを説明するには、言語でいう結束生(cohesion)に関わるシステムが最も重要である。上述の MANIFESTATION や APPEARANCE は、同じ登場人物を追跡(track)するためのシステムで、cohesion の一部を成す。しかし絵本では、異なる登場人物の間にもさまざまな「つながり」があり、それが絵本全体を一貫したものにすると同時に、物語の解釈に重要な意味を与える。例えば、今回中心的に分析する絵本 *Arrow to the Sun* では、同じ形、同じ色の組み合わせを繰り返し使用することが、「太陽の神」と「その息子」を結びつけ、物語に一貫性を持たせている。

本稿は、数冊の絵本からの実例を用いながら、絵と絵の「つながり」は、色と形の選択（特に同一の色と形の選択）でも具現されると提案する。そしてそれらを絵の結束性システム（またはその一部）としてまとめることで、Painter, et al.のシステムを拡充させ、より有用な絵本の分析枠組みを提示することを目指す。

2. Painter, et al. (2013) 絵と絵のつながり

まず、Painter, et al. (2013)の研究の概要を見るところから始める。その最大の特徴は、絵と絵のつながりが捉えられることである。そもそもこの研究は、Kress and Leeuwen (1996, 2006)の画像の研究を絵本に応用したものである。Kress and Leeuwen は、Systemic Functional Linguistics (以下 SFL)の枠組みに基づき、画像が生み出すさまざまな意味を、システムの体系にまとめている。また、これも SFL に基づき、画像の意味を3つのメタ機能に沿って分類している。もう一つの特徴は、もともと新聞紙面のレイアウトから始まった研究のため、1つ1つの画像を個別に扱っている点である。

これに対し、Painter, et al.の最大の特徴は、Kress and Leeuwen のシステムを、絵と絵の間の関係を分析できるように改良したことである。絵本はそもそも、ストーリー展開に沿って絵が次々に示されるものなので、その間の関係やつながりを語れるようにするのが必須である。そうした関係を捉えたシステムとしては、以下の4つが挙げられる：

- ・ MANIFESTATION、APPEARANCE：同じ登場人物が再登場するさいの選択を表したもの
- ・ INTER-CIRCUMSTANCE：絵と絵の間の背景の変化を表したもの
- ・ INTER-EVENT：絵に表されたできごととできごとの間の論理・意味的关系を表したもの

このうち、MANIFESTATION と APPEARANCE のシステムを、図1に示して詳しく見てみる。

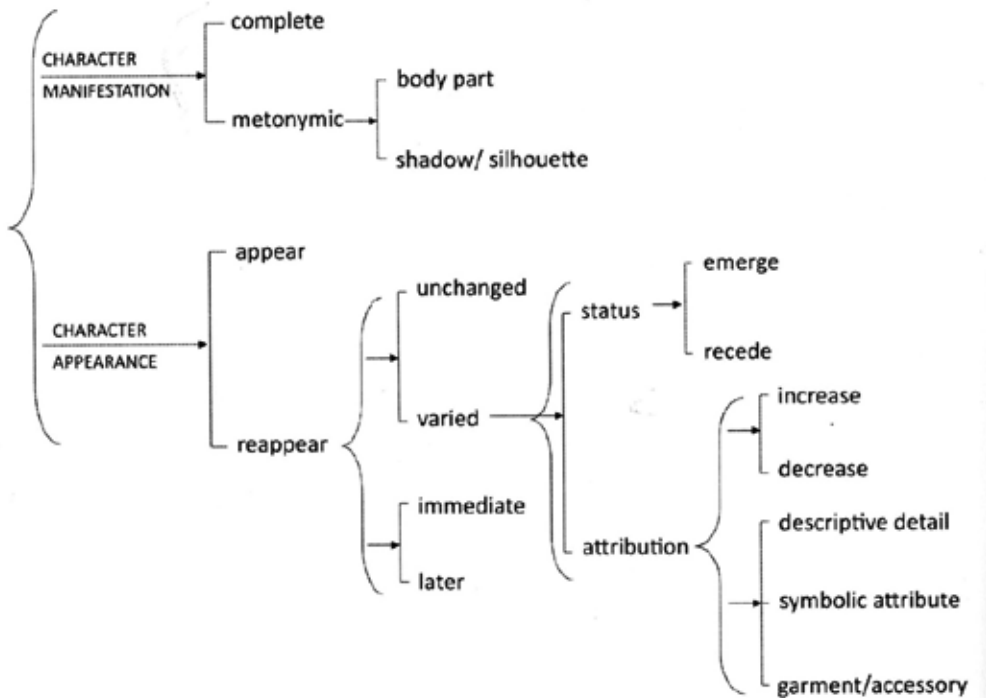


図 1: Painter, et al. (2013: 64) の MANIFESTATION と APPEARANCE のシステム

MANIFESTATION と APPEARANCE のシステムは、どちらも登場人物の表し方に関わるシステムであり、1 つのシステムの同時選択下位システムとしてまとめられている。このシステムは、本稿の提案にも直接関わるものなので、ここで詳しくみておく。

MANIFESTATION は登場人物の描写のしかたに関わる選択であり、登場人物の全身を描く場合 (**complete**) と、登場人物の体の一部だけを描く場合 (**metonymic**) の選択肢がある。その際重要なのは、前の絵に登場したのと同じ人物だとわかるように描くことである。つまり、体の一部だけ描くにしても、全身が描かれた時と同じ服を着せて描くなどの約束事があり、それにより、一つの作品としてのつながりが保たれる。

APPEARANCE は、登場人物が初めて現れる (**appear**) か、再登場 (**reappear**) かの選択肢で、再登場するときはさらに、姿形が変わらずに登場する (**unchanged**) か、変わって登場する (**varied**) かを選べる。そして、変わる場合は何が変わるかの選択が続く。扱い (**status**) が変わる場合、背景的に扱われていた人物が、登場人物として前面に出てくる場合と、逆に登場人物から背景の一部になるなどの選択肢がある。見た目 (**attribution**) が変わる場合、描写が詳しくなったり、象徴的な性質が加えられたり、服や小物が変わったりする。いずれにせよ、**tracking** を可能にするため、同じ人物だということがわからなくなるほどは姿形を変えないというルールがあるので、服が変わったら代わりに特徴的な髪型が維持されるなどの工夫がされる。同時に、登場人物がすぐ

次のページに再登場する(immediate)か、間を置いてから再登場する(later)かの選択肢もある。

こうしたシステムによって、別の絵の中に同じ人物が一貫して登場しているという「つながり」を捉えることができ、絵の集合体としての絵本の一貫性を説明できる。これは、言語でいう結束生と同じ現象といえる。

3. 結束生 cohesion

絵の結束生について語る前に、言語の「結束生」(cohesion)について簡単にふりかえっておく。Halliday and Hasan (1989: 48)は結束性を生み出す cohesive devices を、“the set of linguistic resources that every language has (as part of the textual metafunction) for linking one part of a text to another”と定義している。このように、結束生というのは、テキスト中の要素どうしのあらゆるつながりを指す。そのつながりがあるために、テキストがバラバラの節の集まりではなく、全体としてまとまりのある、一貫したものになる。

結束生を生み出す具体的な手段としては、このようなものが挙げられる：

- ・ 照応：I saw a boy with a red cap. He was...
- ・ 代用：I would like to go there. But if I do,...
- ・ 様々な接続要素：I went there, because...
- ・ 語彙的結束性：Mine is red and yours is blue.

(Halliday and Hasan 1989: 48 ; 例は早川による作例)

照応とは、代名詞に代表されるように、テキスト中の他の場所に出てきたフレーズを指す表現である。代用は、テキスト中の他の場所に書かれた内容の代わりに使われる表現、接続要素は、節と節を論理・意味的につないで意味のつながりをもたせるもの、語彙的結束性は、単語と単語の間の意味的なつながりである（例中の red と blue は反意語の関係で結びついてはいるが、もちろんこの他に、同意語、上位-下位関係など、さまざまな意味的關係がありうる）。

ここまでは言語の結束生の話だが、同じような結束生は、絵本の絵の中にもあるはずである。そうでないと、1枚1枚の絵がバラバラで、作品が全体として意味をなさなくなってしまう。

そのような目でもう一度 Painter, et al. (2013)のシステムを見てみると、既に第2節に見た MANIFESTATION、APPEARANCE は、同じ登場人物を追跡(track)するためのシステムであり、結束性の重要な一部を成すが、すべてではないと言える。なぜなら、絵本では、異なる登場人物・ものの間にもさまざまな「つながり」があり、その実例をたくさん見つけることができる。そうした「つながり」が絵本全体を一貫したものにすると同時に、物語の解釈に重要な意味を与えるのである。こうした、異なる登場人物・ものの間の結束性を捉えるシステムがなければ、絵本の一貫性を説明することができない。

よって第4節では、絵本の実例をいくつか見ること、異なる登場人物間

のつながりとはどのようなものかを確認し、次に第5節で、そうした「つながり」を捉えることのできるシステムを提案したい。

4. 実例

4.1 形によるつながり

まず「形によるつながり」を見る。言語によって意味を具現する手段には、語の選択、語や群の並び順などがあるが、絵は意味を具現するために全く異なる手段を用いる。それは、線・色・形・配置の選択と組み合わせである。このうち、形をうまく工夫することでつながりを生み出している実例として、Gerald McDermott 作の *Arrow to the Sun* を見てみたい。アメリカの先住民族に伝わる民話を描いた作品で、太陽の神(the Lord of the Sun)の息子が、様々な試練を経て神に息子として認められ、地上に太陽の力を持ち帰るという話である。

その冒頭、Long ago the Lord of the Sun sent the spark of life to earth. (昔々、太陽の神は命の輝き(邦訳版では「ほとぼしる いのちの ちから」)を地上にお送りになった) という本文の付いたページの絵を見してみる。太陽の神が地球に向けて矢を放った姿勢で描かれているが、神は弓をもっているものの、矢は描かれず、代わりに、円の中に四つ葉上の模様が配された、日本の家紋に似たマークが、飛ぶ矢の軌跡を描いて地球に近づくように描かれている。このマークが the spark of life を象徴していると考えられる。

次のページでは、本文は it entered the house of a young maiden. (それは若い娘の家へと入った) となり、同じ四つ葉マークが女性の身体に重ねて描かれている。さらに次のページでは、In this way, the Boy came into the world of men. (こうして、男の子が人の世に生まれた) と書かれ、本文だけでは、the Boy が何者なのかは全く分からない。しかし絵を見ると、生まれた男の子の身体には、同じ四つ葉のマークが描かれている。

ここで、四つ葉のマークという形を連続的に使用するという選択によって、異なるものの間につながりが生み出されている様子をまとめる。同じマークが、the spark of life → it (entered the house of a young maiden) → the Boy に、絵の中で順に受け継がれていく。当然、spark of life と the Boy は「同じもの」ではない。しかしその間には確実に「つながり」があることを、絵は表している。そのつながりとは、いわば太陽の神の力の、男の子への継承である。これは絵のみで表現される意味であり、本文だけ読んでいたら読み取れない。

このように、絵は、同じ形(マーク)を使うことで、太陽の神とその息子のあいだの「つながり」を表現している。すなわち、同じ形の使用によって、絵と絵の間に結束生を生んでいる。

4.2 色(の組み合わせ)によるつながり

前節に見たような「つながり」は、形だけでなく、色や色の組み合わせの選択でも表せる。同じ *Arrow to the Sun* で、男の子が、太陽の神に会いに天上世界までやってきたシーンを例に取る。神は、非常に鮮やかなピンク・青・

オレンジ・黄色・緑の組み合わせで彩色されている。この作品の中で、こうした鮮やかな色の組み合わせが用いられるのは、神に対してだけであることに注意したい。他のシーンは、主に黄色・茶色・黒の3色だけに色数が抑えて描かれている（そのことによって、この民族の居住地域である、乾燥した大地が表現されてもいる）。

この色の使われ方が、結束生を生み出すためにうまくはたらいっている場面を見る。男の子が神に試練を与えられる場面である。せっかく会いにきたのに、神は男の子が自分の息子であることを最初は認めず、「この4つの部屋を無事にくぐり抜けたら私の息子と認めよう」と言う。4つの部屋とは、順に、ライオンの部屋、蛇の部屋、ハチの部屋、いなづまの部屋である（絵柄としては、四角い部屋の中に、これらの動物を図案化したパターンが描かれている）。どの部屋に入っても、動物たちは、男の子が神の息子であることを察して、自ら大人しくなる。最後のいなづまの部屋に入ると、男の子は、ピンク・青・オレンジ・黄色・緑の5色のいなづまに打たれる。

その次のページの本文は、*When the boy came from the Kiva of Lightning, he was transformed*（男の子がいなづまの部屋から出てくると、彼は変わっていた）であるが、具体的にどう「変わっ」たかは文では表されない。絵を見ると、男の子の色が変わっている。これまで、黒一色のシルエット状に描かれていた男の子が、ピンク・青・オレンジ・黄色・緑の組み合わせで彩色されている。この5色の組み合わせは、明らかに神と同じである。

その後、男の子は地上に戻るが、その前に、神からこのように言われる：“bring my spirit to the world of men.”（私の力（邦訳では「たいようの ころ」）を人の世に持ち帰るのだ）。地上に戻ると、人々の服にも、ピンク、水色、オレンジ、緑が使われるようになる。

これら一連の場面で、色の選択によって異なるものの間につながりが生み出される様子をまとめる。同じ色の組み合わせが、太陽の神 → その力（いなづまを通して息子に受けつがれたと考えられる）→ 息子 → 地上の人々へと順に広がっていく。これらは当然、「同じもの」ではないため、登場人物をtrackするシステムでは捉えられない。しかしその間には確実に「つながり」があることを絵は表している。そのつながりとは、いわば太陽の神の力が、息子を通して地上に伝播していくというつながりである。

このように、絵は、同じ色の組み合わせ（ピンク・青・オレンジ・緑・黄）を使うことで、異なる登場人物のあいだの「つながり」を表現している。すなわち、同じ形だけでなく、同じ色の組み合わせによっても、絵と絵の間に結束生を生み出すことができる。

4.3 その他の実例

似たような例は、他の絵本にも頻繁に見つけられる。色は「組み合わせ」にしなくても、単色の選択によっても「つながり」を生むことができる。その例として、岸田衿子 文、長野博一 絵の『なにをたべてきたの?』を見る。真っ白な豚が、次々といろいろな食べ物を見つけては食べる物語である。ま

ずリングを見つけて食べると、次のページでは、豚の体に赤いぶち模様が現れる。これはもちろん、赤いリングを食べたから赤くなったという、前の絵とのつながりを表している。同様に、レモンを食べたら黄色い模様が浮かび上がり、最終的には、いろいろ食べているうちにカラフルな豚になってしまふという話である。

物語のオチとしては、最後に豚が石鹼を食べると、体に浮かんだ色とりどりのぶち模様があぶく状になる。このシーンでは、石鹼のあぶくの形とぶち模様のあぶくの形に「つながり」があるのであり、色だけでなく、形も同時に結束性に寄与している作品である。

形によるつながりのもう一例として、島田ゆか作の『バムとケロのおかいもの』を見る。登場人物の多い絵本で、犬のバム、カエルのケロ、アヒルのカイちゃん、小さい犬のヤメピ、小さいウサギ（三本耳）のおじぎちゃんなどが登場する。

この登場人物たちの形が重要になってくる場面がある。みんなで市場にやってきて「ゆかいなとびら」という店に入ると、中にはいろいろな形をした扉がある。好きな扉を選ぶと、その中に入っているものが買える仕組みである。ケロが、犬の顔の形をした扉を選ぶと、中に奇妙な形をした帽子が入っている。カエルの顔の形をした扉を選ぶと、中には、頭につけるおもちゃが入っている。これらの扉の形は、明らかにバムとケロの顔の形である。バムの形をした扉の中には、バムが着られるものが入っており、ケロの形をした扉の中には、ケロにぴったりのおもちゃが入っているという、形遊びになっている。

こうした遊びは、ことばで説明しなくても子どもには了解済みで、現に、次のページでケロは、既にそのおもちゃを頭につけて登場する。同様に、ヤメピ型の扉からはヤメピ用のリュックサックが、カイちゃん型の扉からは、カイちゃんが水かきの上にはめられるローラースケートが出てくる。続くページでは、みんなそれらを身につけていることが見て取れる。

このように、扉は扉であって、登場人物と「同じ」ものではないが、扉の輪郭と登場人物に同じ形を使うことで、その間に「つながり」を持たせて絵と絵を意味的に結びつけている。

5. 画像の結束生：そのメカニズムとシステム

ここまでいくつか実例を用いて、同じ色や形を使うことで、絵と絵の間に「つながり」が生まれることを見た。そもそも、こうした色や形が結束を生み出す原理は何かを見てみたい。

言語の場合、結束性を生み出す装置というのは、それ自体意味が欠けているという特徴がある：

Such devices [reference, substitution, ellipsis など] become cohesive—have a cohesive function and so are constitutive of texture—precisely if and when they can be interpreted through their

relation to some other (explicit) encoding device in the same passage. If the source for their interpretation is located within the text, then a cohesive tie of the type(s) discussed above is established; the establishment of such a tie creates cohesion. (Halliday and Hasan 1989: 75)

簡単な例を挙げると、文中に *he* と書かれていても、それだけでは意味内容が欠けているので、誰だか分からない。テキストの前の部分を思い出すことで中身が決まるが、その思い出す過程でつながりが生まれる。このように、解釈するにはテキストの他の部分を参照しなければならないのが、言語による結束装置が機能する原理である。

絵の場合は事情が異なり、先に見た形や色の工夫によって結束性が生まれている絵を見ても、別にそれ自体、意味に欠けている部分があるとは感じられない。絵の結束性を生み出す原理がどのようなものかについては、さらに研究の余地があり、現時点では、同じ色・同じ形をしたものの間には、なんらかの「つながり」があるはずだという想定が見る人の側にあるのだとしか言いようがない。

このことを逆に考えると、絵本においては、「つながり」がないものには同じ色や形を使わない工夫が必要だとも言える。*Arrow to the Sun* の例でも、神以外の登場人物の色合いを抑えることで、鮮やかな色が使われている登場人物どうしを「特別」なものとして結びつける効果があった。

このように、絵にも言語と同じように結束性があるが、絵の結束生は言語とは異なるメカニズムではたらく。

最後に、ここまで見てきた現象を扱うことができるよう、絵本の絵の結束生のシステムを図2として提案する。

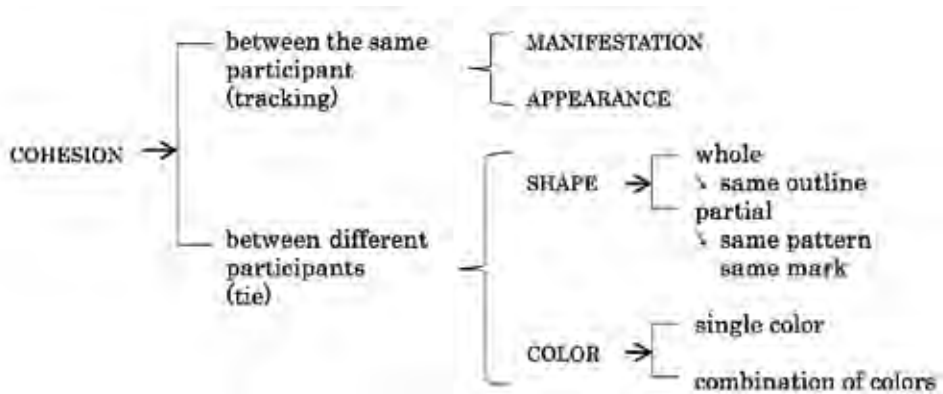


図2: COHESION IN PICTUREBOOKS のシステム

図2に示したように、Painter, et al.が提案した MANIFESTATION と APPEARANCE のシステムは、一貫性を生み出すシステムの一部として、そのまま利用する。ただしそれらは、between the same participant、すなわち同じ登場人物を

tracking するためのシステムとしてまとめた。

それとは別に、**between difference participants**、すなわち異なる登場人物間の「つながり」(tie)を表すシステムも選択できるようにした。その下位選択肢として、形でつながりを生み出す選択肢と、色でつながりを生み出す選択肢は、同時選択とした。なぜなら、形も色も同じにするという選択もできるからである。

形を同じにする場合、**whole** すなわち、『バムとケロ』の例に見たように、もの全体のアウトラインを同じにする選択肢と、**partial** すなわち、*Arrow to the Sun* の例のように、体の一部に同じ形やマークを使う選択肢がある。

色を同じにする場合、**single color** すなわち、単独の色が同じ場合がある。『なにをたべてきたの?』の例のように、リンゴなら赤、と一色を同じにする選択肢である。一方、**combination of color** すなわち、*Arrow to the Sun* の例のように、色の組み合わせを同じにする選択肢もある。

図2はまだ細密度の低い概略的なシステムであり、より細かな選択肢を設定する余地がある。また、今回まとめた形・色以外の選択肢もあるかもしれない。例えば、複数の絵の間で、画面のレイアウト構造を同じにする、あるいは、異なる登場人物が同じポーズや行動をしている、などの選択も結束性を生む可能性がある。今後も例を探していくと、絵と絵の間に結束生を生み出す手段がより明らかになると考える。

分析テキスト (分析順)

Gerald McDermott (1974) *Arrow to the Sun*. New York: Viking Press. ISBN: 0-670-13369-8

岸田衿子 文・長野博一 絵 (1978)『なにをたべてきたの』佼成出版社 ISBN: 9784333003204

島田ゆか 文・絵 (1999)『バムとケロのおかいもの』文溪堂 ISBN: 9784894232105

参考文献

Halliday, M.A.K. and Matthiessen, C.M.I.M. (2004) *An Introduction to Functional Grammar*. 3rd edition. London: Hodder Arnold.

Halliday, M.A.K. and Hasan, R. (1989) *Language, Context, and Text: Aspects of Language in a Social-semiotic Perspective*. 2nd edition. Victoria: Deakin University (Language and Learning Series).

早川 知江 (2007)『『芸術』を語る言語と言語教育——絵本の画像分析を例に——』『名古屋芸術大学研究紀要』第28巻 p 235-250.

*『国文学年次別論文集 平成十九年度版』(学術文献刊行会)に転載収録

Kress, G. and Leeuwen, T.v. (1996) *Reading Images: The Grammar of Visual Design*. London: Routledge.

Kress, G. and Leeuwen, T.v. (1998) 'Front pages: (the critical) analysis of newspaper layout'. In Allan Bell and Peter Garrett (eds) *Approaches to Media*

- Discourse* 186-219. London: Blackwell.
- Kress, G. and Leeuwen, T.v. (2006) *Reading Images: The Grammar of Visual Design*. 2nd edition. London: Routledge.
- Painter, C, Martin, J.R. and Unsworth, L. (2011) 'Organizing Visual Meaning: framing and balance in Picture-Book Images'. In Shoshana Dreyfus, Susan Hood and Maree Stenglin (eds) *Semiotic Margins: Meaning in Multimodalities* 125-143. London/New York: Continuum.
- Painter, C, Martin, J.R. and Unsworth, L. (2013) *Reading Visual Narrative: Image Analysis of Children's Picture Books*. Sheffield/Bristol: Equinox.

テーマ・パークの Regulation における コンテキスト依存度の差異

Differences in Contextual Dependency Observed in Theme Park Regulations

三宅英文
Hidefumi Miyake
安田女子大学
Yasuda Women's University

Abstract

This study aims at clarifying some differences in contextual dependency observed in theme park regulations by applying a modified model of Cloran's chronotope (2010).

Cloran's chronotope consists of Speech Function (proposal or proposition), Event Orientation (temporality), and the physical distance of the Central Entity (Subject) from the speaker. In her 2010 model, Cloran deals with the category of "proposal" as one unit that covers only the here-and-now situation and takes only "interactants" as Subject.

However, when we think of temporality and the mood choice of proposals, it is possible to set up a more detailed framework in the category of "proposal." Commands such as "Do it regularly," "Do it now," "Do it later," or "Do it if something happens" indicate different Event Orientations. In addition, in regard to mood choice, when commands are given in the indicative mood, the Central Entities are either "you," as in "You must do it," or the third person, as in "Smoking is prohibited in this area."

Taking these weaknesses into consideration, this study introduces the idea of "iconicity" advocated by Martin and Matruglio (2013) in order to modify Cloran's framework. As a result, we can then classify theme park regulations within a spectrum of contextual dependency.

1. 研究目的

テーマ・パークは、その地域の観光名所から外すことのできない施設である。そこでは楽しい一日を過ごすことができる代わりに、来客側には守らなければならないルールが存在する。本研究では、カリフォルニアにあるテーマ・パークの regulation 表現に焦点を当て、それぞれのテーマ・パークがどのような表現を用いて来客の行動規制を行っているのかを調査する。もしも、テーマ・パークが同じような言語表現を用いて regulation を行っているのであれば、それは一つの genre として捉えることができるであろう。しかし、テーマ・パーク毎に異なった表現形式が用いられているのであれば、その表現形式の選択は、テーマ・パークの persona の形成に役立てられていると考

えられる。

カリフォルニアのテーマ・パークでは、ルールへの提示は主にパンフレットを通して行われている。そこで本研究では、Disneyland Park と Knott's Berry Farm のパンフレットに掲載されている regulation を取り上げ、その差異をコンテキスト依存度の視点から比較することにした。この二つのテーマ・パークの regulation に、どのような共通性または差異が観察されるのかを明らかにし、それぞれのテーマ・パークの persona がどのように作り出されているのかを考察する。

2. フレームワークの構築

この研究のデータに用いるのは、1998 年から 2005 年の間に、Disneyland Park および Knott's Berry Farm で配布されたパンフレットである。この二つのテーマ・パークは比較的近い場所に位置しており、ライバル関係にある。これらパンフレットの regulation の部分に焦点を当て、分析を行う。

分析のフレームワークとして用いるのは、Cloran (2010) の chronotope を修正したものである。Cloran (2010) のモデルは、母子会話の分析のために考案されたもので、Speech Function、Event Orientation (以下 EO)、Central Entity (以下 CE) の 3 つの要素の組合せによって成り立っている。Speech Function は、その節が goods-and-service の giving または demanding に関わっているのか、information の giving または demanding に関わっているのかによって、proposal と proposition に区分される。Proposal では、本質的に言葉なしでもコミュニケーションの目的を果たすことが可能であるため、言葉の役割は補助的である。コミュニケーションが行われている場に密着していることが多いため、proposition よりもコンテキスト依存度が高いと考えられる。

EO は、proposition として描写される出来事がどの時点で行われるかを示している。過去の出来事は prior に割り当てられ、現在に関わる出来事は、常態であれば concurrent: habitual、その場限りの行動であれば concurrent: non-habitual に区分される。Forecast は、未来に生じる出来事である。これは、現実と非現実によって non-hypothetical と hypothetical に区分されている。現実世界の描写であれば、話者の意思に関わる出来事は forecast: non-hypothetical: volitional に、単なる予想であれば forecast: non-hypothetical: non-volitional に区分される。一方、非現実の描写であれば forecast: hypothetical に区分される。

CE は、原則的にその節の主語である。その主語が、会話の当事者なのか、会話が行われている場面に存在するものなのか、会話の場面以外に存在するものなのか、一般的な事象なのかの 4 段階に区分されるようになっている。

これら 3 つの要素の組合せで、以下のような Rhetorical Unit が確定される。

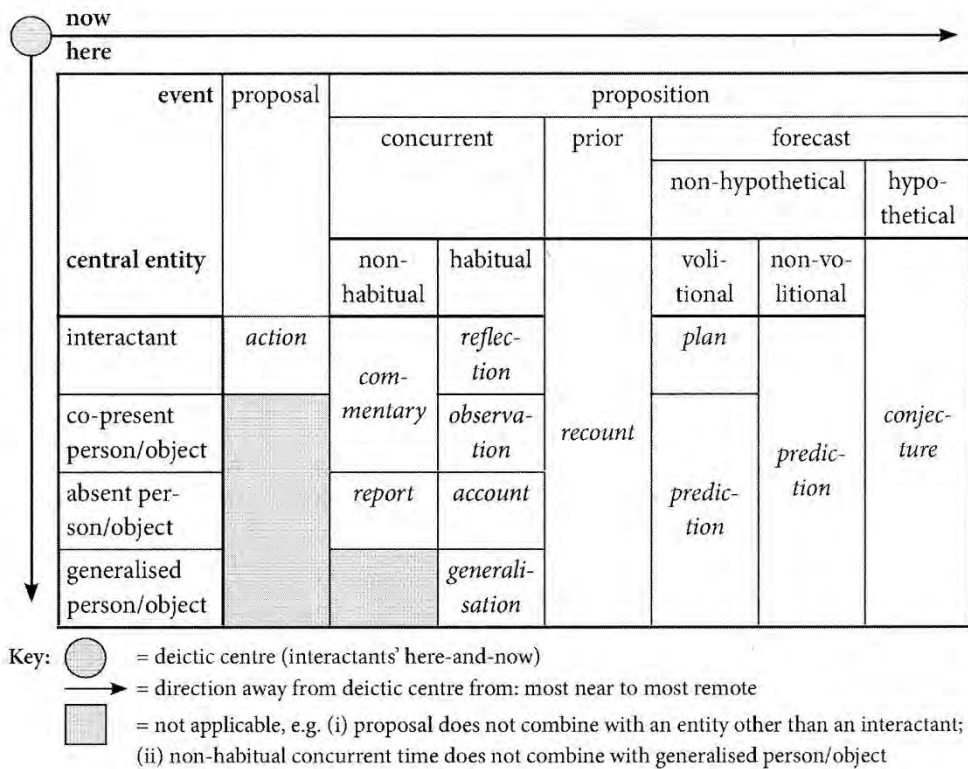


図 1: Cloran (2010) モデル

(Cloran 2010: 52)

Cloran (2010) の chronotope では、proposal に対して EO が設定されていないが、実際には、proposal の行動が行われる時間は多岐に渡る可能性がある。Prior に属する proposal は存在しないが、‘Do it now.’ は concurrent: non-habitual における行為であり、‘Do it regularly.’ は concurrent: habitual における行為である。更に、‘Do it later.’ や ‘Do it if something happens.’ は、forecast に生じる行為である。このことは、proposal の中でも EO を設定したほうが、より delicacy の高い分析を行うことができることを示している。

また、proposal の CE についても再考が必要である。それは、proposal には imperative だけでなく、declarative が用いられることもあるからである。たとえば、Doing x is prohibited. という節の場合、CE は interactant ではなく、三人称である。つまり、proposal の枠組みの中には、interactant 以外の CE を設定する必要があるのである。

以上のような改善点を踏まえ、本研究では Cloran (2010) のモデルを修正し、以下のフレームワークを用いることとする。

Speech Function	Central Entity	Event Orientation				
		Prior	Concurrent		Posterior	
			habitual	non-habitual	presumed	assumed
Proposal	1st or 2nd person	N/A	Do it regularly.	Do it now.	Do it later.	Do it if something happens.
	3rd person	N/A	X must be done regularly.	X must be done now.	X must be done later.	X must be done if something happens.

図 2: Cloran (2010) の Proposal の修正モデル

このモデルでは、時間と hypothetical の概念を区別するために、未来に対する言及は forecast ではなく posterior を用い、ほぼ確実に生じる行為は presumed、いつ生じるか分からないような行為は assumed に分類する。

このモデルとコンテキスト依存度の関係は以下のである。Martin and Matruglio (2013) は、3 つのメタ機能とコンテキスト依存度の関係を以下のよう

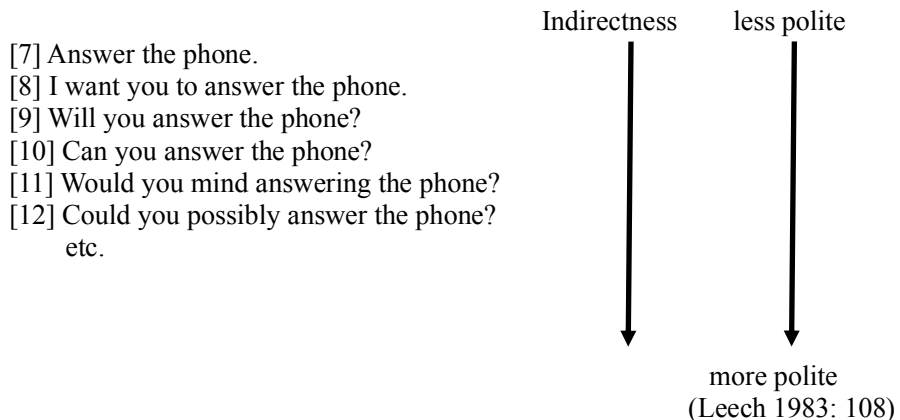
From the perspective of textual meaning, the key variable is implicitness — to what extent does a text depend on exophoric reference, substitution or ellipsis (to its material situation setting to use Hasan's term ...) and in addition scaffold its composition with layers of high level periodicity. From the perspective of interpersonal meaning the key variable is negotiability — to what extent is a proposition or proposal arguable, and if arguable, to what extent does arguability depend on the moment of speaking (in terms of temporality or modality). From the perspective of ideational meaning the key variable is iconicity — to what extent are semantic relations realised as congruent configurations of process, participant and circumstance which unfold in discourse in the sequence in which they occur in the field. Grammatical metaphor, ..., is a powerful resource for composing high level Theme and New, for adjusting negotiability (as 'direct' vs 'indirect' speech acts) and scrambling iconicity (as everyday vs heavily 'nominalised' discourse). (Martin and Matruglio, 2013: 89)

Textual meaning を表す implicitness は、テキスト外照応、代用、省略を多く含むほどコンテキスト依存度が高く、interpersonal meaning を表す negotiability は、内容が発話時に近いほどコンテキスト依存度が高い。また、ideational meaning を表す iconicity は、外界の状況がそのままの形で言語に反映されているほどコンテキスト依存度が高いことになる。

これら 3 つのコンテキスト依存度に関わる要素を先ほどのモデルに当てはめると、implicitness を反映するのは CE である。一人称、二人称は代名詞で表されるため、コンテキストからその人物を特定する必要があり、三人称になると、その内容は言葉で明示されるようになる。同様に、negotiability

における temporality を反映しているのが EO である。しかしながら、iconicity はこのモデルに反映することはできない。そこで、別の枠組みを組み込む必要性が生じる。

Iconicity とコンテキスト依存度の関係を明らかにするには、ポライトネスの研究が有効である。Leech は、ポライトネスに関して、直接的な imperative の[7]よりも間接的な[12]の方がポライトであるとしている。



この直接性は、iconicity の反映と考えられる。最も直接的なのは[7]の imperative を用いた形式である。[8]以降の indicative の場合、[8]は話者と聞き手、聞き手の行動の 3 つの内容を明示している点で、コンテキストを非常に正確に反映している。[9]、[10]では、mood が interrogative に変わるだけでなく、話者に対する言及がなくなる分、iconicity が低下していると言える。[11]、[12]になると、modality 表現が導入され、特に[11]では、聞き手の行うべき行動である answer が、process ではなく mind の complement として示されている。このような場合、更にコンテキスト依存度が下がると考えられる。つまり、indicative を用いる場合、話者、聞き手、聞き手の行動の 3 つの要素に対する言及がある場合、最もコンテキスト依存度が高く、それらの要素のいずれかが欠如したり、grammatical metaphor によって本来とは異なった形式で意味が表されたりする場合には iconicity が低下するのである。

このような iconicity とコンテキスト依存度の関係は、書き言葉にも観察される。Garcés-Conejos and Sánchez-Macarro (1998) は、科学論文における Face Threatening Act 回避の方法の一つとして、話者や聞き手への言及を避けることを挙げている。以下に示す 5 つの方法が具体例であるが、これらはいずれもコンテキスト依存度を下げることによってネガティブ・ポライトネスを遵守しようとするものである。

- (1) Use of the passive voice
- (2) Impersonal verbs
- (3) Replacement of the pronoun I and you by indefinites
- (4) State the FTA as a general rule

(5) Nominalization

(Garcés-Conejos and Sánchez-Macarro 1998: 182-186)

このような観点を先ほどのフレームワークに組み込むと、以下に示す図 3 のモデルを得ることができる。テーマ・パークの regulation は、園内における規制であるため、EO は全て concurrent である。Concurrent における proposal の中で、最もコンテキスト依存度の高い表現は imperative である。これは、No running のような minor clause の形式で言い表されることもある。興味深いことに、このような minor clause の形式は、最もコンテキスト依存度の低い恒常的なルールを列挙する場合にも用いられる。そのため、minor clause のコンテキスト依存度を分析する際には、それらの節がどのような談話の中で用いられているかを考慮する必要がある。

Proposal は、imperative と minor clause を両極とし、その中間は indicative が cline を形成している。その中で、コンテキストを最も正確に反映している第 1 枠は、I want you not to do x. または I request you not to do x. のように、一人称を senser や sayers、二人称を doer とする形式である。この枠では、話者の authority は、want や request など、 α 節の process に反映されるようになっている。I'd be grateful if you would not do x. のような形式は、話者、聞き手、聞き手の行動というコンテキストを反映する 3 つの要素が揃っているものの、一人称が二人称の行動を規制しているという側面が正確に反映されていないため、同じ第 1 枠にありながら、話者の authority を下げた形となっている。

第 2 枠は、二人称主語に must/mustn't などの modal verbal operator を伴う形である。この枠は、話者に対する言及が欠如していると言う点で、第 1 枠よりもコンテキスト依存度が下がっている。話者の持つ authority は、主に modal verbal operator を通して表現され、最も authority を下げた例としては、Would you mind refraining from doing x? 等が挙げられる。Interrogative を用いて聞き手に選択権を与え、更に規制対象となっている行動を refrain from の complement とすることで、話題の焦点から遠ざけ、聞き手の負担を減らしているのである。

これら 2 つの枠の表現は、コンテキストに存在する you に対する直接的な発言であることから、non-habitual に位置づけられる。言い換えると、indicative では、第 1 枠と第 2 枠が直接的な regulation となっているのである。

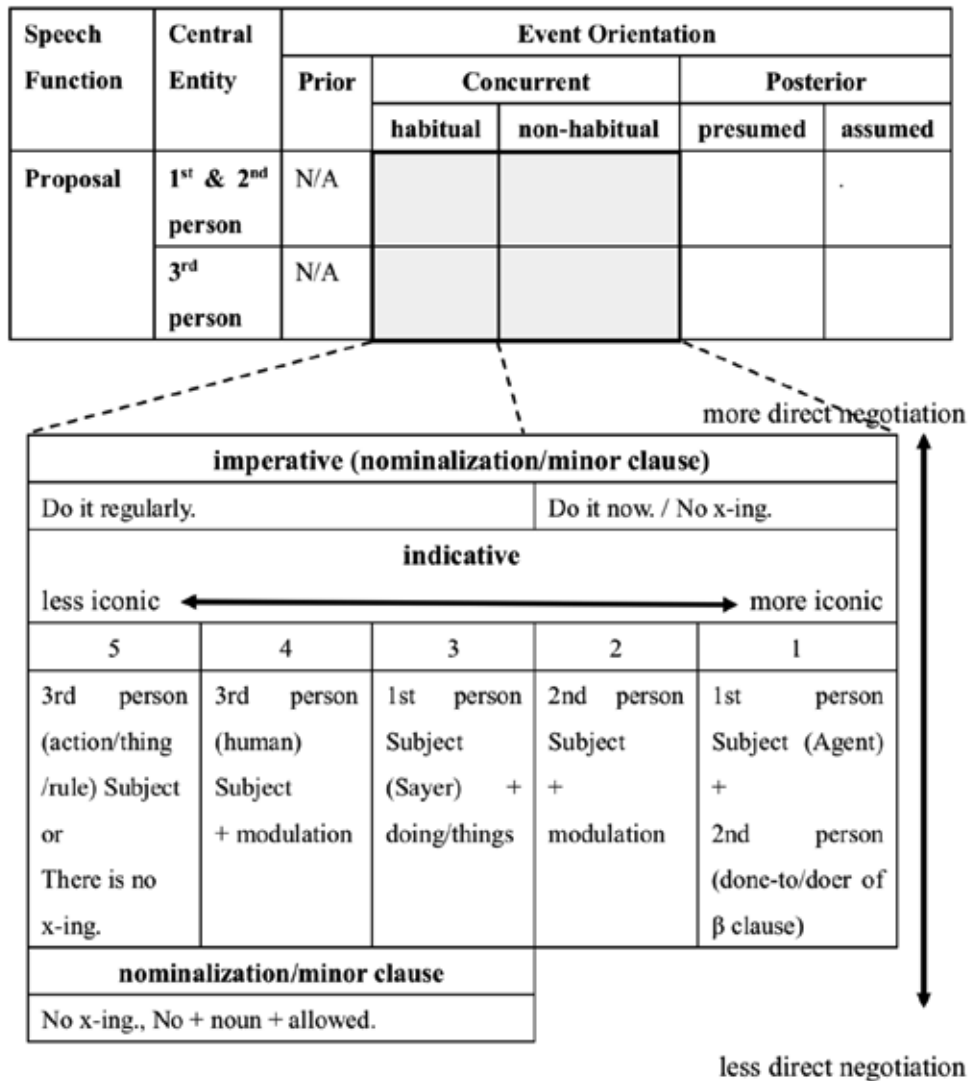


図 3: Regulation 表現のコンテキスト依存度

第 3 枠以降は、二人称に対する言及が無くなることから、聞き手に対する直接的な行動の規制というよりは、ルールの提示という側面が強くなる。つまり、habitual の EO に属する表現となるのである。第 3 枠では、一人称を主語として、規制される行動が名詞化される。例としては、We don't permit doing x. や We don't allow x. などの形式がある。

第 4 枠は、三人称で表される人間を主語とした modality を持つ表現である。この枠では、話者に対する言及も、聞き手に対する言及も行われない。One mustn't do x. や Visitors are not supposed to do x. のように、一般的な人が主語となり、該当者全てに当てはまるルールの提示となっている。

第5 枠は、モノやコト、規則が主語となる場合である。Doing x is not permitted here.、Rule x prohibits doing x.、There is no x-ing. などの形式では、話者、聞き手への言及はなく、聞き手の行動も名詞化されている。そのため、iconicity において最もコンテキスト依存度が低い表現となる。

このような節レベルにおけるコンテキスト依存度と authority の選択に加え、談話レベルにおいても authority のコントロールが可能である。Idema (1997) は、directive の言語行為を、nuclear である command と satellite を構成する orientation、legitimation (purpose, condition, cause)、conciliation、thanks に分解し、“the way in which the Command has been realized (direct or indirect; congruently or metaphorically)”、“the presence of legitimation or enabling elements supporting the Command”、“where the Command occurs in relation to additional legitimizing and/or enabling elements at the level of text” (1997: 77) の3つの要素が shouldness と institutional positioning に影響を与えていると考えている。

具体的に directive の softening に用いられる要素としては、lexico-grammar 層では please などの mitigation の使用、tag-question の使用、for your safety などの legitimation の導入、interrogative の使用、possibly や I’d be grateful if ... のような modality 表現の使用、I’m sorry to trouble you や I hope you don’t mind my asking, but ... などの前置き表現が挙げられる。また、discourse-semantic 層では、節を用いた legitimation の挿入、help us do ... のような power の移譲表現の挿入、joke の導入などがある。本研究では、これらの表現の有無にも注意を払いながら、2つのテーマ・パークの regulation を考察する。

3. 分析

3.1. Disneyland Park における Regulation

Disneyland Park におけるは、以下に示す 18 の節で構成されている。

- (1) Make the most of your visit.
- (2) Here are 4 good ways to safer days!
 1. (3) No stampeding (Don’t run)
 2. (4) Keep your arms, hooves, tusks and tails inside ride vehicles (and your hands, feet and legs)
 3. (5) On rides, stay seated with your tail down ((6) you get this one right?)
 4. (7) Keep your paws behind the yellow line ((8) Don’t cross the yellow safety lines at attractions)

Special Considerations

Safety

- (9) Please abide by all safety warnings and notices.
- (10-1) For your safety while on attractions, remain seated with hands, arms, feet and legs inside the vehicle, (10-2) supervise children.

Physical Considerations on designated attractions

Warning!

(11) For safety you should be in good health and free from high blood pressure, heart, back or neck problems, motion sickness, or other conditions that could be aggravated by this adventure. (12) Expectant mothers should not ride.

Courtesy

(13) We work hard to offer a comfortable, safe and enjoyable experience for all of our Guests. (14) Please assist us by showing common courtesy to fellow Park Guests. (15) Please be respectful of others. (16) Do not use profanity or engage in unsafe, illegal or offensive behavior. (17) Proper attire, including shoes and shirts, must be worn at all times.

Smoking

(18) For the comfort of all our Guests, smoking is allowed in designated areas only.

この regulation の中で、(1)節から(8)節は、子どもに向けたメッセージである。*Lion King* のキャラクターである Pumbaa と Timon がアドバイスを送る設定となっているのだが、ほぼ全てにおいて imperative が用いられている。Please のような mitigation は用いられていないが、⁽³⁾ stampeding、⁽⁴⁾ hooves, tusks and tails、⁽⁵⁾ your tail、⁽⁷⁾ paws など、動物をネタにした joke が盛り込まれており、親しみを込めた明示的な command となっている。

一方、Special Considerations 以降は大人に向けた regulation となっており、ここでは、(9)節や(14)節、(15)節の please の使用に加え、⁽¹⁰⁻¹⁾ For your safety や ⁽¹¹⁾ For safety と言った legitimization の挿入、(13)節の背景の説明、(14)節の assist us といった partnership の構築が、来客との間の友好関係の確立に用いられている。また、(18)節のように、禁止するのではなく、条件を付けながらも許可する形で規制を加える concession も、これに一役買っていると言えるだろう。ところどころに、コンテキスト依存度の低いルール提示型の indicative 表現が用いられているが、これらの表現は、(12)節や(17)節のように、各ユニットの最後に用いられることが多く、テキスト全体のトーンとしては直接的な negotiation となっている。Imperative を通した直接的な regulation の中に、来客との間の power 差を無くす表現を埋め込み、丁寧さをもって来客の行動を規制しているのである。

3.2. Knott's Berry Farm における Regulation

Knott's Berry Farm のパンフレットには、多量の regulation が記載されている。紙面の関係で全 70 節を掲載することはできないため、典型的な例のみを示すことにする。

Knott's Berry Farm の regulation は、ルール提示型と直接的 negotiation 型の双方を用いて行われている。下記の例は、直接的な negotiation 型で示されている部分である。

The Code of the West

⁽³¹⁾ We work very hard at Knott's Berry Farm to provide a safe and exciting

entertainment experience. ⁽³²⁾ However, without your cooperation we cannot be successful. ⁽³³⁾ Please comply with all posted or distributed rules and guidelines. ⁽³⁴⁾ Use common sense. ⁽³⁵⁾ Respect the person and property of others. ⁽³⁶⁾ Please do not bring food or drink into the Park. ⁽³⁷⁾ Do not engage in activities which are beyond your ability or physical capacity. ⁽³⁸⁾ Be personally responsible that you are in good health and free from heart, back, or neck problems, motion sickness, or other conditions, which could be aggravated by the Parks' attractions.

⁽³⁹⁾ The Management of Knott's Berry Farm would like to ensure that the ultimate safety and enjoyment of all our guests is achieved every day. ⁽⁴⁰⁾ In order to do this, we are asking for your cooperation by refraining from the following list of unacceptable behaviors.

⁽⁴¹⁾ Unacceptable behavior includes, but is not limited to, any criminal conduct, disorderly and/or indecent conduct, any act that would endanger the safety of yourself or others, loud, profane or abusive language, loud music, running, roller skating, skateboarding, bicycling, throwing objects, spitting, jumping/cutting into queue lines, possession of or use of alcoholic beverages (other than in designated areas), illegal substances of any kind, smoking in queue lines or buildings, unauthorized distribution of literature, or postings of signs, inadequate or inappropriate attire, wearing of costumes, littering, interfering with the passage of others, use of pointing/laser devices, creating a nuisance or disrupting guests, employees or any venues, possession of weapons of any type or items determined to be a weapon by Knott's Berry Farm Management or its agents.

Knott's Berry Farmにおいても、Disneyland Park 同様、来客との間の power 差を無くす表現が用いられている。上記の例では、(31)節および(39)節の背景・目標の説明、(32)節の partnership の確立、そして、(33)節および(36)節の please の使用が、その役割を果たしている。

しかし、一方で、Knott's Berry Farm は、強力な authority 持つ立場からの規制も行っている。以下に示す 2 カ所では、ルール提示型の形式を用いてペナルティを記載しており、来客との間の power 差を明示する形をとっている。どちらかという、このようなルール提示型が Knott's Berry Farm の主たるトーンで、これが Disneyland Park の regulation との大きな差異となっている。

⁽⁴²⁾ Pursuant to California Penal code section 490.6, persons who refuse to follow posted or distributed Park Rules or who engage in inappropriate behavior will be detained, arrested, or removed from Knott's Berry Farm. ⁽⁴³⁾ In addition to this "Code of the West", we would like to clarify some of the more commonly asked Code questions:

○ Line Jumping Is NOT A Sporting Event

⁽⁵⁶⁾ To permit guests to enjoy rides as quickly as possible, line jumping is not allowed. ⁽⁵⁷⁾ Line jumping is defined as: cutting in front of other guests already waiting in line; leaving a line, then trying to re-enter the line at the same point; or saving a place for someone. ⁽⁵⁸⁾

1) This includes using rest rooms and purchasing food and drink, (58-2) so please make all stops before entering the line. (59) Line jumping, regardless of the reason, will lead to dismissal from the park. (60) This rule is strictly enforced, with no refunds.

4. まとめ

本研究では、テーマ・パークのパンフレットに掲載されている regulation の差異を分析するために、Cloran (2010) の chronotope を修正し、proposal の枠組みをより細かに設定し直した。そして、分析の結果、テーマ・パークは、自らの persona の形成のために、regulation を行う際、コンテキストに依存した直接 negotiation 型とコンテキストに依存しないルール提示型を使い分けているということが判明した。

“The Happiest Place on Earth”をスローガンとする Disneyland Park では、直接 negotiation 型の regulation が行われている。これは、Disney キャラクターの日常生活への浸透が大きな役割を果たしていると考えられる。人々は、さまざまなキャラクターを通じて日常生活の中で既に Disneyland と旧知の仲になっている。そのため、imperative を用いた regulation が行われても、親しい仲間からの依頼として受け取られるようになっているのである。同時に、regulation 内でも園と来客の間の power 差を無くすための工夫がなされており、legitimation、mitigation、joke、partnership の確立、concession を通して、solidarity を高めながら直接的に来客に語り掛ける形となっているのである。

一方で、Knott's Berry Farm は、アメリカの歴史、特に西部開拓をモチーフにしたテーマ・パークである。このパンフレットの regulation には、imperative を中心とする直接 negotiation 型とコンテキスト依存度の低い indicative を用いたルール提示型が混在しているが、全体的にはルール提示型中心である。Disneyland Park と同様、legitimation、mitigation、partnership の確立を通して、園の持つ power を抑える一方で、二度に渡ってルール違反に対する penalty を明示し、来客に対する厳しい態度も見せている。このルール提示型による regulation と authority の明確な表示が、同種の施設であっても、「西部の掟」といった厳しさを前面に打ち出した persona の創造に一役買っているのである。

contextual dependency	less contextually dependent ← → more contextually dependent					
	Indicative					imperative
	less iconic ← → more iconic					
authority	3 rd person (action/thing/ rule) subject	3 rd person (human) Subject + modulation	1 st person Subject + doing/things	2 nd person Subject + modulation	1 st person Agent + 2 nd person Doer	Do it.
	Salient ↑ ↓ Veiled	↑ penalty <div>KBF</div> ↓ legitimization, partnership, mitigation, concession.				<div>DP, KBF</div>

DP = Disneyland Park, KBF = Knott's Berry Farm

図 4: Disneyland Park および Knott's Berry Farm の Regulation

この研究では、カリフォルニアの 2 つのテーマ・パークを取り上げたが、社会的な目的が異なる施設や言語文化の異なる日本では今回の研究結果とは違った regulation の方法が用いられているかもしれない。今後は、施設や文化の差異にも注目して、研究を進めてゆきたい。

References

- Blundell, J., Higgins, J., and Middlemiss, N. (1982) *Function in English*. Oxford: Oxford University Press.
- Chik, S. (2014) 'Organising Customer Actions in Commercial Context: A Comparative Analysis in Japanese, English, and Chinese'. *Proceedings of JASFL*, 8: 37-50.
- Cloran, C. (1995) 'Defining and Relating Text Segments: Subject and Theme in Discourse'. In R. Hasan and P.H. Fries (eds), *On Subject and Theme* 361-403. Amsterdam: John Benjamins.
- Cloran, C. (1999) 'Contexts for Learning'. In F. Christie (ed.), *Pedagogy and the Shaping of Consciousness* 31-65. London: Continuum.
- Cloran, C. (2000) 'Socio-Semantic Variation: Different Wordings, Different Meanings'. In L. Unsworth (ed), *Researching Language in Schools and Communities* 152-183. London: Continuum.
- Cloran, C. (2010) 'Rhetorical Unit Analysis and Bakhtin's Chronotype'. *Functions of Language* 17.1: 29-70.
- Garcés-Conjos, P. and Sánchez-Macarro, A. (1998) 'Scientific Discourse as Interaction'. In A. Sánchez-Macarro and R. Carter (eds), *Linguistic Choice across Genres* 173-190. Amsterdam: John Benjamins.
- Hasan, R. (1995) 'The Conception of Context in Text'. In P.H. Fries and M. Gregory (eds), *Discourse in Society* 138-283. Norwood: Ablex.

- Hasan, R. (1996) 'Semantic Networks: a tool for the analysis of meaning'. In C. Cloran, D. Butt, and G. Williams (eds), *Ways of Saying: Ways of Meaning Selected Papers of Ruqaiya Hasan* 104-131. London: Cassell.
- Idema, R. (1997) 'The Language of Administration: Organizing Human Activity in Formal Situations'. In F. Christie and J.R. Martin (eds) *Genre and Institutions* 73-100. London: Continuum.
- Leech, G. (1983) *Principles of Pragmatics*. Essex: Longman.
- Martin, J.R. and Matruglio, E. (2013) 'Revisiting Mode: Context In/dependency in Ancient History Classroom Discourse'. In 黄国文 (ed.), *Studies in Functional Linguistics and Discourse Analysis* (V). 72-95. 北京: 高等教育出版社.
- 三宅英文 (2017) 「Rhetorical Unit 分析のフレームワークの再構築」『言語機能研究』 9: 21-35
- 佐野大樹、小磯花絵 (2011) 「現代日本語書き言葉における修辞ユニット分析の適用性の検証—「書き言葉らしさ・話し言葉らしさ」と脱文脈化言語・文脈化言語の関係—」, 『機能言語学研究』 6: 59-81.
- 田中弥生 (2012) 「修辞ユニット分析による Q & A サイト アットコスメ美容事典と Yahoo!知恵袋の比較」, *Proceedings of JASFL*, 6: 45-58.

**創立 25 周年記念
日本機能言語学会第 25 回秋期大会プログラム**

会期：2017 年 10 月 7 日（土）～ 10 月 8 日（日）

会場：同志社大学（今出川キャンパス）良心館 [http://www.doshisha.ac.jp/](http://www.doshisha.ac.jp/http://www.doshisha.ac.jp/information/campus/access/imadegawa.html)
<http://www.doshisha.ac.jp/information/campus/access/imadegawa.html>（アクセス）

10 月 7 日（土）

12:00 – 12:40 受付 1 階 ルーセント・プラザ

12:40 – 12:55 開会の辞 日本機能言語学会会長 龍城 正明 RY107 教室

13:00 – 13:40 研究発表 1

第 1 室: RY103 教室 司会 伊藤紀子（同志社大学）

西条正樹（立命館大学嘱託講師・同志社大学博士後期課程） [発表言語: 日本語]

「プロサッカーコーチングテキストの対人的・テキスト形成的メタ機能分析

—特定目的の英語（ESP）教育への応用を目指して—」

第 2 室: RY104 教室 司会 鷲嶽正道（愛知学院大学）

寺川かおり（獨協大学） [発表言語: 英語]

‘Functional Language Analysis in Teaching Reading’

第 3 室: RY107 教室 司会 David Dykes（四日市大学）

Crystal Lam（The Hong Kong Polytechnic University） [発表言語: 英語]

‘Comparative Study of natural disasters’ news reports from the National Geographic US and Japan websites: a Systemic Functional analysis’

13:45 – 14:25 研究発表 2

第 1 室: RY103 教室 司会 伊藤紀子（同志社大学）

豊田純一（大阪市立大学） [発表言語: 英語]

‘Iconicity and transfer of energy in Indo-European languages’

第 2 室: RY104 教室 司会 福田一雄（新潟大学名誉教授）

稲子あゆみ（神戸市外国語大学非常勤講師） [発表言語: 英語]

‘POLITENESS, NEGOTIATION and negotiability: A context dependency perspective on Japanese texts with politeness shift and beyond’

第 3 室: RY107 教室 佐々木真（愛知学院大学）

Christian Matthiessen（香港理工大学）、照屋一博（香港理工大学） [発表言語: 英語]

‘Systems of interpersonal assessment: the complementarity of modalization and evidentiality’

14:25 – 14:40 休憩 RY106 教室

14:40 – 15:20

研究発表 3

第 1 室: RY103 教室 司会 パン・バージニア (立命館大学)

Peter McDonald (桜美林大学) [発表言語:英語]

‘A SFL Model for Developing Digital Literacies in the Academic Classroom’

第 2 室: RY104 教室 司会 鷲嶽正道 (愛知学院大学)

Thomas Amundrud (奈良教育大学) [発表言語:英語]

‘Classroom SF-MDA: Looking at the meanings of space, gaze, and gesture’

15:25– 16:05

研究発表 4

第 1 室: RY103 教室 司会 飯村龍一 (玉川大学)

David Dykes (四日市大学) [発表言語:英語]

‘Advice by Talk-through and Rethink

Sharing What it is Like to Drown – and What it is Like to Float’

第 2 室: RY104 教室 司会 三宅英文 (安田女子大学)

Jack Pun (オックスフォード大学) [発表言語:英語]

‘Teaching science through English as a medium of instruction in Hong Kong: challenges and strategies’

16:05 – 16:20

休憩

RY106 教室

16:20 – 17:20 日本機能言語学会創立 25 周年記念特別講演 RY107 教室 [発表言語:日本語]

司会 パン・バージニア (立命館大学)

龍城 正明 (同志社大学教授)

「理論から記述へ

The Kyoto Grammar による日本語否定辞「ない」の分析— 一定性との関連で—」

17:30 – 18:00

総会

RY107 教室

19:00 – 21:00

懇親会 (会費: 6,000 円)

東華菜館

〒600-8012 京都市下京区四条大橋西詰 (電話 075-221-1147)

10月8日(日)

9:30 – 10:00

受付 1階 ルーセント・プラザ

10:00 – 10:40

研究発表 1

第1室: RY103 教室 司会 佐藤勝之 (武庫川女子大学)

鷲嶽正道 (愛知学院大学) [発表言語: 日本語]

「大学初年次向け「理系」教科書(英語)が扱う「物」」

第2室: RY104 教室 司会 照屋一博 (香港理工大学)

Ming-chia Lin (National Academy for Educational Research) [発表言語: 英語]

‘A linguistic analysis on remedial-based and mixed-ability instruction: How do teachers provide scaffolding in reading skills for EFL Grade 7 students?’

10:45 – 11:25

研究発表 2

第1室: RY103 教室 司会 佐藤勝之 (武庫川女子大学)

早川知江 (名古屋芸術大学) [発表言語: 英語]

「絵の中の結束性: Painter, *et al.*のシステム拡充」

第2室: RY104 教室 司会 照屋一博 (香港理工大学)

Sonia Chik (The Hong Kong Polytechnic University) [発表言語: 英語]

‘Constructing and shaping social reality across languages and cultures: a linguistic perspective’

11:25 – 11:40

休憩

RY106 教室

11:40 – 12:40 Featured Talk RY107 教室 司会 龍城 正明 (同志社大学)

Christian Matthiessen (香港理工大学教授) [発表言語: 英語]

12:40 – 13:50

昼食

13:50 – 14:30

研究発表 3

第1室: RY103 教室 司会 福田一雄 (新潟大学名誉教授)

三宅英文 (安田女子大学) [発表言語: 日本語]

「テーマ・パークの regulation におけるコンテキスト依存度の差異」

第2室: RY104 教室 司会 パン・バージニア (立命館大学)

Marvin Lam (The Hong Kong Polytechnic University) [発表言語: 英語]

‘Applicable Discourse Analysis in action: describing clients’ journeys in psychotherapy’

14:30 – 14:45

休憩

RY106 教室

14:45 – 15:55 特別講演 RY107 教室 [発表言語: 英語]

司会 龍城正明 (同志社大学)

山梨 正明 (京都大学名誉教授、関西外国語大学教授)

「認知言語学の研究プログラム – 機能言語学との関連性 –」

15:55 – 16:05 閉会の辞 RY107 教室 日本機能言語学会副会長 パン・バージニア (立命館大学)

The Program of JASFL 2017 The 25 th Anniversary Autumn Conference

Date: October 7th (Saturday) – October 8th (Sunday), 2017

Venue: Ryoshinkan Building, Doshisha University (Imadegawa Campus), Kyoto

<http://www.doshisha.ac.jp/>

<http://www.doshisha.ac.jp/information/campus/access/imadegawa.html> (access)

Oct. 7th (Saturday)

12:00 – 12:40 Registration (1F Lucent Plaza)

12:40 – 12:55 Opening Remarks (Room RY107)

President of JASFL Masa-aki Tatsuki (Doshisha University)

13:00 – 13:40 Paper Session 1

Room 1: RY103 Chair: Noriko Ito (Doshisha University)

Masaki Nishijo (The part-time lecturer at Ritsumeika University, PhD candidate at Doshisha University) [To be presented in Japanese]

‘Analysis of professional football coaches’ instructional language using systemic functional perspective: Toward language instruction for overseas football coaching’

Room 2: RY104 Chair: Masamichi Washitake (Aichi Gakuin University)

Kori Terakawa (Dokkyo University) [To be presented in English]

‘Functional Language Analysis in Teaching Reading’

Room 3: RY107 Chair: David Dykes (Yokkaichi University)

Crystal Lam (The Hong Kong Polytechnic University) [To be presented in English]

‘Comparative Study of natural disasters’ news reports from the National Geographic US and Japan

websites: a Systemic Functional analysis’

13:45 – 14:25 Paper Session 2

Room 1: RY103 Chair: Noriko Ito (Doshisha University)

Junichi Toyota (Osaka City University) [To be presented in English]

‘Iconicity and transfer of energy in Indo-European languages’

Room 2: RY104 Chair: Kazuo Fukuda (Emeritus Professor of Niigata University)

Ayumi Inako (The part-time lecturer at Kobe City University of Foreign Studies)

[To be presented in

English]

‘POLITENESS, NEGOTIATION and negotiability: A context dependency perspective on Japanese

texts with politeness shift and beyond’

Room 3: RY107 Chair: Makoto Sasaki (Aichi Gakuin University)
Christian Matthiessen (The Hong Kong Polytechnic University) and **Kazuhiro Teruya (The Hong Kong Polytechnic University)** [To be presented in English]
‘Systems of interpersonal assessment: the complementarity of modalization and evidentiality’

14:25 – 14:40 Coffee Break (Room RY106)

14:40 – 15:10 Paper Session 3

Room 1: RY103 Chair: Virginia Peng (Ritsumeikan University)
Peter McDonald (J.F. Oberlin University, Tokyo) [To be presented in English]
‘A SFL Model for Developing Digital Literacies in the Academic Classroom’

Room 2: RY104 Chair: Masamichi Washitake (Aichi Gakuin University)
Thomas Amundrud (Nara University of Education) [To be presented in English]
‘Classroom SF-MDA: Looking at the meanings of space, gaze, and gesture’

15:15 – 16:05 Paper Session 4

Room 1: RY103 Chair: Ryuichi Iimura (Tamagawa University)
David Dykes (Yokkaichi Univeristy) [To be presented in English]
‘Advice by Talk-through and Rethink
Sharing What it is Like to Drown – and What it is Like to Float’

Room 2: RY107 Chair: Hidefumi Miyake (Yasuda Women’s University)
Jack Pun (University of Oxford) [To be presented in English]
‘Teaching science through English as a medium of instruction in Hong Kong: challenges and strategies’

16:05 – 16:20 Coffee Break (Room RY106)

16:20 – 17:20 JASFL 25th Anniversary Special Lecture [To be presented in Japanese]
Room: RY107 Chair: Virginia Peng (Ritsumeikan University)

Professor Masa-aki Tatsuki (Doshisha University)
‘From Theory to Description
An analysis of Japanese negator *nai* with special reference to the defection of Finiteness. the Kyoto Grammar Approach’

17:30 – 18:00 AGM (Room RY107) Chair: Ryuichi Iimura (Tamagawa University)

19:00 – 21:00 Conference Dinner (Participation Fee : 6,000JPY (all-inclusive))

Tohkasaikan
Kyoto-Shijo Ohashi West End, Kyoto, 600-8012 (Tel 075-221-1147)

Oct. 8th (Sunday)

9:30 – 10:00 Registration (1F Lucent Plaza)

10:00 – 10:40 Paper Session 1

Room 1: RY103 Chair: Katsuyuki Sato (Mukoawa Women's University)
Masamichi Washitake (Aichi Gakuin University) [To be presented in Japanese]
'Things in Academic Science Textbooks in English'

Room 2: RY104 Chair: Kazuhiro Teruya (The Hong Kong Polytechnic University)
Ming-chia Lin (National Academy for Educational Research) [To be presented in English]
'A linguistic analysis on remedial-based and mixed-ability instruction: How do teachers provide scaffolding in reading skills for EFL Grade 7 students?'

10:45 – 11:25 Paper Session 2

Room 1: RY103 Chair: Katsuyuki Sato (Mukoawa Women's University)
Chie Hayakawa (Nagoya University of the Arts) [To be presented in Japanese]
'Cohesion in Pictures: Expanding Painter, *et al.*'s Systems'

Room 2: RY104 Chair: Kazuhiro Teruya (The Hong Kong Polytechnic University)
Sonia Chik (The Hong Kong Polytechnic University) [To be presented in English]
'Constructing and shaping social reality across languages and cultures: a linguistic perspective'

11:25 – 11:40 Coffee Break (Room RY106)

11:40 – 12:40 Featured Talk (Room RY107)

Chair: Masa-aki Tatsuki (Doshisha University)
Professor Christian Matthiessen (The Hong Kong Polytechnic University) [To be presented in English]

12:40 – 13:50 Lunch

13:50 – 14:30 Paper Session 3

Room 1: RY103 Chair: Kazuo Fukuda (Emeritus Professor of Niigata University)
Hidefumi Miyake (Yasuda Women's University) [To be presented in Japanese]
'Differences in Contetual Dependency Observed in Theme Park Regulations'

Room 2: RY104 Chair: Virginia Peng (Ritsumeikan University)
Marvin Lam (The Hong Kong Polytechnic University) [To be presented in English]
'Applicable Discourse Analysis in action: describing clients' journeys in psychotherapy'

14:30 – 14:45 Coffee Break (Room RY106)

14:45 – 15:55 Special Lecture [To be presented in Japanese]
Room: RY107 Chair: Masa-aki Tatsuki (Doshisha University)

Professor Masaaki Yamanashi
(Emeritus Professor of Kyoto University, Kansai Gaidai University)
'Research Program of Cognitive Linguistics
– In Relation to Functional Linguistics –'

15:55 – 16:05 Closing Remarks (Room RY107)
Vice President of JASFL Virginia Peng (Ritsumeikan University)

『機能言語学研究』および*Proceedings of JASFL* 作成と投稿のための規約

作成と投稿のための規約

1. 使用言語

日本語または英語

2. 原稿の種類

(1) 研究論文 (2) 書評・紹介 (3) 研究ノート

3. 独創性

投稿原稿は以下の条件を満たす場合にのみ出版の対象として考慮する。

- (1) 著者のオリジナルな著作であること。
- (2) 他の出版物に同時に応募しないこと。
- (3) 他の学会で既に発表した内容のもの（同一の内容のもの、同一のタイトルのもの、発表言語だけを変えたもの等）、重複発表と見なされるものは受け付けない。また重複発表と見なされたものは発表後であっても採択の許諾を取り消すこととする。
- (4) 著作権は各著者に属する。ただし再版の権利は日本機能言語学会に属する。

4. 投稿資格

投稿は会員にかぎる。ただし共著の場合は筆頭著者が会員であればよい。

5. 審査方法

審査の際はすべての原稿は無記名とし、3名の審査員が審査する。

6. 書式と構成

6.1 書式設定とファイル形式

用紙をB5とし、余白は上下左右各25ミリをとる。使用するワープロソフトは問わないが、ファイルはMicrosoft Word互換のファイル(docまたはdocxファイル)として保存、投稿する。

6.2 フォント設定と行間

日本語で書く場合のフォントはMS 明朝（11ポイント）、英語で書く場合はTimes New Roman（11ポイント）の文字サイズを用いることとし、シングルスペースの行間とする。

6.3 語数

.内とする。

Proceedings of JASFL: B5 14 ページ以内とする。

6.4 要旨

執筆する言語にかかわらず、論文要旨を必ず英語で100字～200語にまとめ、冒頭に記載する。

6.5 タイトル

日本語で執筆する場合には英語のタイトルを必ず記載する。タイトルの表記法は下記を参考にする。

例： 日本におけるSFL理論の英語教育への応用
On Application of SFL to English Education in Japan

6.6 セクション構成と段落

日本語で執筆する場合、セクションおよび段落の最初は字下げをする。ただし、英語で執筆する場合、セクションの最初は字下げ（インデント）せず、2段落目からインデントする。セクションのタイトルは左寄せとする。またセクションの番号は「1」から始めることとする（「0」は使用しない）。

7. 参照方法

参照したすべての文献（著書、モノグラフ、論文他）は本文中の適切な場所で明示すること。その方法は以下を参照すること。

7.1 直接引用

原文をそのまま引用する場合は必ず「」内に入れる。引用文が4行を超えるときは本文の中に挿入せず、全文をインデントして本文から一行空けて切り離す。

7.2 著者への参照方法

- a. 著者名が本文中に記されている場合は、その直後に出版年とページのみを（ ）に入れて示す。例「Halliday (1994 : 17) が述べているように...」
- b. 特定の個所ではなく、より一般的に参照する場合は、著者名の直後に出版年のみを（ ）に入れて示す。例「Hasan (1993) は次のように述べている。すなわち...」
- c. 著者名が本文中に記述されない場合は、著者名も（ ）に入れ、（著者、コンマ、年）の順で記載する。例 (Martin, 1992)。」
- d. 著者が2名の場合は二人の姓を入れる。例 (Birrell and Cole, 1987)
- e. 著者が3名以上の場合は筆頭著者名のみを出し、ほかは「他」として全著者名は出さない。(Smith et al., 1986)
- f. 同じ著者の同じ年の出版物を2冊以上参考文献として使う場合は、それぞれの著作の出版年に‘a’, ‘b’ 等の文字を付記して区別する。例 (Martin, 1985a)
- g. 同一個所に複数の参考文献を付ける場合には、すべての文献を1つの（ ）内に入れ、各文献をセミコロンで区切る。例 (Maguire, 1984; Rowe, 1987; Thompson, 1988)

7.3 略語

同一文献に2回目以降言及する場合にも最初の場合と同様にして、‘*ibid.*’, ‘*op.cit.*’, ‘*loc.cit.*’等の略語は用いない。

8. 参考文献

参考文献は本文で引用・参照したもの、および原稿の準備段階で使用した文献すべてをリストに載せること。著者の姓のアルファベット順、同一著者ならば出版年の順に並べる。

8.1 書籍

1つの文献の記述は、著者名、()に入れて出版年、著作名、出版地、出版社、必要ならばページの順序に出す。記載方法は下記の例に倣うこと。

a. 単著の例：

寺村秀夫(1984)『日本語のシンタクスと意味』第2巻 東京：くろしお出版

Halliday, M. A. K. (1994) *An Introduction to Functional Grammar 2nd edition*. London: Arnold.

b. 共著の例：

益岡隆志、田窪行則(1992)『基礎日本語文法』東京：くろしお出版

Martin, J. R. and Rose, D. (2004) *Working with discourse: meaning beyond the clause*. London: Continuum.

c. 単一編集者図書の例：

龍城正明（編）(2006)『ことばは生きている』東京：くろしお出版

Christie, F. (ed.) (1999) *Pedagogy and the Shaping of Consciousness: Linguistic and Social Process*. London: Cassell.

d. 複数編集者図書の例：

仁田義雄、益岡隆志（編）(1989)『日本語のモダリティ』東京：くろしお出版

Hasan, R. and Williams, G. (eds) (1996) *Literacy in Society*. London: Longman.

8.2 雑誌の論文

論文名は「 」内に入れ、雑誌名は『 』内に入れ、巻、号、ページを記載する。英語の場合は雑誌名をイタリックにし、巻、号、ページを記載する。ただし英語の場合、タイトルはそのまま表記する。また編集図書の一セクションを形成している場合は‘ ’で囲むこととする。

例：

安井稔(2007)「文法的メタファー事始め」、『機能言語学研究』4: 1-20

龍城正明 (2008)「「は」と「が」そのメタ機能からの再考」, *Proceedings of JASFL*, 4: 115-149

Halliday, M.A.K. (1966) Notes on transitivity and theme in English, Part1, *Journal of Linguistics*, 3.1: 37-81.

Matthiessen, C.M.I.M. (2004) 'Descriptive motifs and generalizations'. In A. Caffarel, J.R. Martin and C.M.I.M. Matthiessen (eds), *Language Typology: a Functional Perspective* 537-674. Amsterdam & Philadelphia: John Benjamins Publishing Company.

9. 註

註はできるだけ避ける。どうしても必要な場合は簡潔にし、本文の最後、参考文献の前に置く。

10. 図、表、地図、グラフ

これらはすべて本文中該当箇所に挿入する。コンピューターでスキャンしたり、写真撮影したりする際不鮮明にならないよう、文字、数字、線等は太く、はっきりと書いておくこと。

11. 校正

著者は編集者から送付された編集済みファイルの校正（初稿のみ）をする。

12. 原稿提出

原稿電子ファイルで、添付ファイルとして提出すること。フォーマットはMS-Word互換ファイル (.doc, .docx)とする

13. 原稿送付先

jasfleditor@gmail.com

Notes for contributors to *Japanese Journal of Systemic Functional Linguistics and Proceedings of JASFL*

1. Language

Manuscripts may be submitted in English or Japanese.

2. Types of Manuscripts

(1) Standard Articles (2) Review Articles and Book Review (3) Research Notes

3. Originality

Manuscripts are considered for publication only on the understanding that they are not simultaneously under consideration elsewhere, and that they are the original work of the author(s). Any previous form of publication and current consideration in other languages are not accepted. If the manuscript has been deemed as the same content published before in other books and journals, the validity of selection is eliminated and the article is excluded from the journal. Copyright is retained by the individual authors, but JASFL is authorized to reprint.

4. Qualification

JASFL members are exclusively eligible to contribute to publications; however, regarding an article by multiple authors, the main author at least is requested to be a JASFL member.

5. Assessment procedures

Articles are subject to the usual process of anonymous review. Articles are read by three reviewers.

6. Formats

6.1 Document format

All pages can be created with any word processor under a condition that the file is saved as Microsoft WORD format (.doc, .docx) on B5-sized paper, with margins of 25 mm or 1 inch on every side.

6.2 Fonts and Spacing

Manuscripts are typed in Times New Roman (11 point) with single spacing.

6.3 The word limit

Japanese Journal of Systemic Functional Linguistics:

Manuscripts are not allowed to go beyond 7,000 words.

Proceedings of JASFL:

Manuscripts are not allowed to go beyond 14 pages in the B5 format.

6.4 Abstract

An English abstract of 100-200 words is included in the beginning of the text.

6.5 Title

English title is required when a manuscript is written in Japanese.

6.6 Indentation and Section Number

Indentation is required from the second paragraph of a section. The first section number starts with “1”, NOT “0”.

7. Format for References in the Text

All references to or quotations from books, monographs, articles, and other sources should be identified clearly at an appropriate point in the main text, as follows:

7.1 Direct quotation

All direct quotations should be enclosed in single quotations. If they extend more than four lines, they should be separated from the body and properly indented.

7.2 Reference to an author and more than one authors

- a. When the author's name is in the text, only the year of publication and the page should be enclosed within the parentheses, e.g. ‘As Halliday (1994: 17) has observed ...’
- b. When the reference is in a more general sense, the year of publication alone can be given, e.g. ‘Hasan (1993) argues that ...’
- c. When the author's name is not in the text, both the author's name and year of publication should be within the parentheses and separated by a comma, e.g. (Matthiessen, 1992)
- d. When the reference has dual authorship, the two names should be given, e.g. (Birrell and Cole, 1987)
- e. When the reference has three or more authors, the first author's name should be given and the rest should be written as ‘et al.’, e.g. (Smith et al., 1986)
- f. If there is more than one reference to the same author and year, they should be distinguished by use of the letters ‘a’, ‘b’, etc. next to the year of publication, e.g. (Martin, 1985a).
- g. If there is a series of references, all of them should be enclosed within a single pair of parentheses, separated by semicolons, e.g. (Maguire, 1984; Rowe, 1987; Thompson, 1988).

7.3 Abbreviation

If the same source is referred to or quoted from subsequently, the citations should be written as the first citation. Other forms such as ‘*ibid.*’, ‘*op.cit.*’, or ‘*loc.cit.*’ should not be used.

8. Reference List

The Reference List should include all entries cited in the text, or any other items used to prepare the manuscript, and be arranged alphabetically by the author's surname with the year of publication. This list should be given in a separate, headed, reference section. Please follow the examples given:

8.1 Books

a. A single-authored book

Halliday, M. A. K. (1994) *An Introduction to Functional Grammar 2nd edition*. London: Arnold.

b. A multiple-authored book

Martin, J. R. and Rose, D. (2004) *Working with discourse: meaning beyond the clause*. London: Continuum.

c. A single-edited book

Christie, F. (ed.) (1999) *Pedagogy and the Shaping of Consciousness: Linguistic and Social Process*. London: Cassell.

d. A multiple-edited book

Hasan, R. and Williams, G. (eds) (1996) *Literacy in Society*. London: Longman.

8.2 Articles in journals and edited books

Halliday, M. A. K. (1966) Notes on transitivity and theme in English, Part1, *Journal of Linguistics*, 3.1: 37-81.

Matthiessen, C.M.I.M. (2004) 'Descriptive motifs and generalizations'. In A. Caffarel, J.R. Martin and C.M.I.M. Matthiessen (eds), *Language Typology: a Functional Perspective* 537-674. Amsterdam & Philadelphia: John Benjamins Publishing Company.

9. Notes

Notes should be avoided. If they are necessary, they must be brief and should appear at the end of the text and before the Reference.

10. Figures, tables, maps, and diagrams

These items must be inserted in an appropriate position within the article, and should carry short descriptive titles. They must be precisely and boldly drawn to ensure scanning or photographic reproduction.

11. Proofs

Authors will be sent proofs for checking and correction.

12. Submission of a manuscript

A manuscript for submission must be saved as a MS-Word compatible file, and be submitted as an attachment file.

13. Correspondence

Manuscripts are to be sent to: jasfleditor@gmail.com

PROCEEDINGS OF JASFL

Proceedings of JASFL (第 12 卷)

発行	2018 年 10 月 1 日
編集・発行	日本機能言語学会
代表者	バージニア・パン
編集者	綾野誠紀
印刷所	株式会社 あるむ 〒460-0012 名古屋市中区千代田 3-1-12 Tel. 052-332-0861 (代)
発行所	日本機能言語学会事務局 〒460-0008 名古屋市中区栄 2-13-1 名古屋パークプレイス 3F (旧 白川第 2 ビル) TEL : 052-201-7533 FAX : 052-221-7023 (株) 株式会社マイ・ビジネスサービス内

PROCEEDINGS OF JASFL

Vol. 12 October 2018

Articles

Functional Language Analysis in Teaching English Reading..... 1
Kaori TERAOKA

**Comparative Study of natural disasters' news reports from
the National Geographic US and Japan websites:
A Systemic Functional analysis**..... 11
Crystal LAM

**A SFL Model for Developing Digital Literacies in
the Academic Classroom**..... 21
Peter McDONALD

**Classroom Systemic-Functional Multimodal Discourse Analysis (SF-MDA):
Looking at gesture in teacher-student in-class consultations**..... 33
Thomas AMUNDRUD

Things in Academic Science Textbooks in English..... 47
Masamichi WASHITAKE

Cohesion in Pictures: Expanding Painter, et al.'s Systems..... 61
Chie HAYAKAWA

**Differences in Contextual Dependency Observed
in Theme Park Regulations**..... 71
Hidefumi MIYAKE

The Program of JASFL 2017..... 85