

The Landscape of Language in the Era of Visualisation: Shifts in status of language in a multimodal context

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1. Introduction

Today is often referred as an era of visualization; there are a lot of visual images in our everyday life context, but we might not question or are not aware of the issues as to why this is the case and its implication and impact on other spheres of communication. Is visualisation of information merely a matter of convenience? Can the readers of given texts understand what is going on with relative ease if the text is highly visualised as opposed to words-only-texts? Does the visualisation of information tell the reader something about the relationship between the creators of the message and the audience of the information? What about the credibility of the content of the texts? Does the information conveyed in writing hold a certain sense of authority that visual images do not, and if that is the case, what does that reveal about the characteristics of language and visual images as different modes of communication? Are there specific types of content or information that are *not supposed to be* visualised due to the cultural value systems in which the text was originally produced?

To consider the role of different modes of communication, interaction or inter-relation between visual images and language in

particular gives rise to various issues around communication and these perspectives are essential to address the question of what *texts* are and how they are *read* and *understood* in this era of visualisation. When visualisation of information is discussed, its primary focus tends to be on visual elements, but the present paper will argue that the status of language needs to be re-considered and re-assessed in relation to other modes of communication such as visual images.

I will take up school science textbooks to explore the role shifts of language in a multimodal context. I will compare printed pages in a contemporary version (published in 2009) with that in an older version (published in 1977), both of which are authentic textbooks at mid-school (junior-high school age 13-15) level in Japan. By comparing printed pages across different periods, in other words, by taking a diachronic approach to these multimodal texts, I will investigate the following points: within the entire context of a given text, what is represented by written language and what is represented by other semiotic resourcesⁱ such as visual images and framing devices.ⁱⁱ

The primary purpose of this paper is therefore 1) to consider or re-consider the definition of a text and a multimodal text; 2) the issue of which theoretical framework is appropriate for multimodal texts; 3) the application to real 'texts'. As for the first point, I would like to refer to categories proposed by Halliday (1978, 1985): systemic-

functional linguistics, which is originally influenced by perspectives taken by Malinowski's notion of 'context of culture'ⁱⁱⁱ. Also, the issue of multimodality (along with the question, 'what is a multimodal text?') and its implication in the context of 'the age of visualization' will be discussed. Greatly related to the first point, the second point to discuss is what kind of theoretical and analytical frameworks would be valid for the consideration of multimodal texts and whether or not a single theoretical framework to describe what is going on in a multimodal text is sufficient to this end.

In the main stage of this paper, I will analyse some texts from a multimodal perspective. The scope of the texts that I am going to take up for the demonstration of analysis of multimodal texts are somewhat limited; printed pages taken from science textbooks, which are highly multimodal and they are the type of the texts that cannot stand with a single modal system in terms of meaning making mechanism.

2. Visualisation of information and issues around multimodality

2.1 What the visualisation of information entails

When a statement like 'now is the age of visualisation' is pronounced, what does it actually mean and what is it supposed to entail. To begin with, it seems necessary to question this very

proposition of 'age of visualisation.' It can mean that a lot of information is now conveyed through the visual mode of communication in other words; a greater amount of a message is conveyed through visual resources but is it really the case? It seems rather an invalid kind of argument not to take its textual genre^{iv} into consideration before we consider this issue of visualisation. That is, depending on the types of texts, the degree of visualisation should be bound to vary; for example, if you compare legal documents with school textbooks, it is likely that the former tends to maintain its formal style across generations and it is quite unthinkable that verbal authority is to be replaced by visual images, whereas in the latter type of texts, some of the information that used to be conveyed through language, written words in this case, might now be done by visual images. This is one of the reasons why the issue of visualisation of information cannot be considered and treated in a monolithic manner. At the same time, the difference in the degree of visualisation itself indicates how crucial given textual genre of the given text is. It is important to address the question as to the legal documents tend to maintain their stylistic feature while it is not the case with other textual genres such as advertisements and newspaper articles. If changes and shifts in the distribution of language and visual images suggest something crucial about semiosis, no change also means as much as some change.

In this sense, this question gives rise to certain potentials for a study of visualisation across different genres, but that this is not within the scope of the current paper; I would like to focus on textual genres that seem to have gone through certain transformations in terms of the use of semiotic resources to realise overall meaning and explore some shifts and their consequences to the viewer-producer relationship. Besides, although this being outside the scope of the current paper, multimodal texts can be investigated from a cross-cultural perspective; it is of interest to compare how multimodality is made use of in particular texts with the same thematic category across different cultural contexts in which these texts are produced.

2.2 Various approaches to multimodal texts

The paper will attempt to view texts from a multimodal perspective but it is essential to question and re-consider what a multimodal text is. As is stated above, as more and more information is being conveyed through more than one mode of communication (and it is safe to argue that one of the most established semiotic resources has been language), the more hybrid a text will become in the sense that it can consist not only of language but also of other resources, that is to say, more texts have become multimodal than it used to be the case. When a given text consists of visual images and written words, it is hardly the case that the text is a product of a mere juxtaposition of different semiotic resources as if each mode of

communication functioned as a separate entity, rather its overall meaning is a totality of what each mode creates and their combinations. Baldry and Thibault (2006:1) point out that:

The meaning of multimodal texts is the result of the often complex ways in which different resources work in partnership. (...) The term multimodality does not designate a pre-given entity or text-type. Rather, it is a diversity of meaning-making activities that are undergoing rapid change in the contemporary cultural context.

As is pointed out here, multimodality is of fluid and ever-shifting dependency on its socio-cultural context and time that conditions a 'meaning making mechanism', rather than designating static features of juxtaposition that make use of various semiotic resources that are available. It has to be pointed out that the choice of semiotic resources as well as what the text says holds a crucial key to understanding the mechanism and its complexity of multimodality and how multimodal texts function in relation to the socio-cultural context.

2.3 Shifts in the status of language as a primary semiotic resource

Although there is a difference in the degree of the shifting of visualisation among different textual genres, it is commonly understood, owing greatly to the advancement of information

technology (IT) such as prevailing use of Internet, that viewers are exposed to a greater amount and frequency of visual images. The question that should be asked here is whether or not this tendency of the visualisation of information would make any notable impact on the 'status' of language as the primary mode of communication. As I have stated earlier, multimodal texts are not merely an amalgam of texts that consist of more than two different semiotic modes where each mode creates meaning separately. Instead, the meaning making mechanism that each mode is responsible for is greatly influenced by one another. To put it more simply, verbal elements in a multimodal text can no longer function in the same manner as where there are no other semiotic mode at work; semiotic modes that are involved in the making of multimodal texts work together simultaneously to create the overall meaning.

This gives rise to a re-consideration of the role of language and I would like to propose that this (visualisation of information and frequency of multimodality) does not mean that verbal elements stop playing an important role in the meaning making mechanism, rather, it will shed more light on the role of language within a different textual context from within the context of a single mode. The question here is, however, quite paradoxical, 'Is there a single modal text at all?' It is generally taken for granted that some texts are mono modal; for example, the reader 'read' a novel, not 'look at' a novel,

but the readers are actually looking at the printed pages in front of them while they are reading the written words. We might take notice of seemingly 'extra' space between lines and might try to decode^v the message set by the author in some cases. The point that I would like to emphasize here is that reading texts, no matter how they appear to be mono modal, is always an activity that concerns multimodal channels of communication and that verbal elements have to be considered *in relation to* (rather than being separate from) other non-verbal elements such as visual images in printed pages.

2.4 Words and Image: Information linking

It is now time to revisit the notion of word-image interaction within a single text. One of the classic semiotic approaches to the relationship between words and (visual) images is that of Roland Barthes (1977), where Barthes proposed two types of linkage between words (verbal elements) and images (visual images): *anchorage* and *relay*. The *anchorage* refers to the relationship between two different modes where words elaborate^{vi} what visual images are supposed to mean; in other words, it is a system of specification and selection of meaning and 'the words pick out one of the possible meanings of the image (Van Leeuwen 2005)'. The other concept named *relay* is best described as a complementary relationship where the entire meaning is distributed between two semiotic modes.^{vii} The role of verbal information in speech balloon in

relation to illustrations in a cartoon is a good example of *relay*.

Barthes' approach would work as a starting point to examine the role of words-image relationship in the meaning making mechanism but it needs to be further elaborated in order to fit 'the complex ways in which different resources work in partnership'. Therefore, in order to investigate this word-image relationship, it is necessary to come up with either 'a multipurpose toolkit' (Baldry and Thibault, *ibid*) or a separate way of approaching for each respective semiotic mode? I would like now to propose the notion of 'a visual grammar', which is based on Kress and Van Leeuwen (1996, 2006).

2.5 Visual grammar

One of the crucial questions is whether or not each instance of meaning making by a different mode requires a separate analytical framework. It is commonly understood that language is the most solidly established mode of communication in the sense that it has a 'grammar', but can we talk about a 'visual grammar' in the same manner as language? I would like to demonstrate an outline of visual grammar proposed by Kress and Van Leeuwen (1996, 2006), whose primary idea originates in the notion of language as social semiotic (Halliday 1978) and Halliday's systemic functional grammar (1985, 1994). In particular, Kress and Van Leeuwen made use of what Halliday called *metafunctions: ideational, interpersonal and textual*. More relevant point to note lies in that Halliday (*ibid*) proposed that

the concept of 'language as social semiotic', which allows not only language but also every aspect of human communication to be viewed from 'a common ground' of meaning making.

The current research will make use of the social semiotic approach, whose fundamental approach to modes of communication (not exclusively to linguistic elements) initially therefore originates in Halliday's concept on language (1978, 1985). It is, to sum up, to investigate how communication is achieved through language that consist of three different, yet closely inter-related levels (Ideational, Textual, Interpersonal) and these 'metafunctions' in language are always at work to convey certain messages in any kind of text.

3. Reading multimodal texts: a case of science textbooks

First part of textual analysis will focus on one set of printed pages that are taken from science textbooks on biology for junior-high school students (age 13-16). This set of textual analysis takes a diachronic approach to multimodal texts within the same culture (Japan), which concerns itself with the shifts in the textuality across times. Base on the methodological and theoretical frameworks, I will now move on to the actual analysis of multimodal texts.

3.1. Overall tone

First of all, I would like to take up one set printed pages from biology textbooks that cover the way in which plants absorb water and other substances. When these two versions - Figure 1 (the 1977 version) and Figure 2 (the 2009 version) are compared, there are two things that are most striking: size and use of colour. What is notable is that the 1977 version is A5 size, while the 2009 version is A4 size. Size in printed pages matters not only as a physical factor but also as a matter of socio-cultural coding, in other words, the size is not a mere arbitrary factor but a carefully chosen *signifier* that constructs part of the message^{viii}. Size might be overlooked because it is outside the actual information printed on the page but it signifies a crucial aspect of the overall meaning making impact.

Besides, as the second point, whether the page is printed in colour or not also determines the tone of the text. It has to be pointed out that lack of colour might reflect economic circumstances of publications but I would like to pay more attention to its semiotic impact. That is to consider why the 2009 version is printed in full colours while the 1977 versions are black-and-white. The choice between two different styles can give rise to a considerable difference as a representation of the viewer-text relationship. In other words, the 2009 version with full-colour presentations is engaging with the viewer, students in this case, differently from the older version.

It seems to me the difference in size matters partly in the sense that the bigger size (A4) allows more visual images to be printed on the page space than in the smaller sized page in the 1977 version. In this sense, as the use of colour was introduced in the text, the shift in size (enlargement) was somehow meaningful change, which in itself tells us something about who is addressing whom, that is the subjectivity of the producer and the reader of the particular text.

3.2. How visual images and words contribute to meaning making

In the 1977 version, there is a clearer distinction between the language part and the visuals, in other words, this text is divided by a 'framing device' to quote Baldry and Thibault (2006). Also in part, there is an example of the Barthean concept of anchorage where text elaborates and makes what should be read more explicit. At top right in Figure 1 (the 1977 version), the following is verbal information, next to which there is an illustration that shows the movement of water inside the plant cell, 'Water that has been absorbed from the roots moves to inner cells, which then moves from the roots to the stem. Nutrition within the soil is transferred with the water'. The process of water absorption into the cells is visualised with the use of arrows as indicators of directionality, which Kress and Van Leeuwen (1996) call a 'vector'. It is possible to say that what is visualised here is reinforced by written words, or written words being reinforced by its visual counterpart. In terms of the textual composition of Left-Right (Given-

New)^{ix}, written words are positioned on the right and visual on the right hand side. It is notable, particularly when compared with the 2009 version, that the 1977 version has an explicit boundary between information provided by the two different modes. In the 2009 version, on the other hand, there is a sense of continuity between two elements and the written words are being embedded within the frame of visual information, which can be best explained when we look at the column called *Kansatsu* ('observation')^x, which appears in both versions.

Both show the process of an experiment to have a close look at trunk cells and how cells absorb water. Each process is both visualised and verbally explained but it is interesting to note that each version presents them differently. In the 1977 version, the processes are numbered and listed separately from visual images although there is an indication of key words next to the visual object such as 'water' and 'trunk'. In the visual section, there are some arrows that indicate the flow of the tasks.

Also in the 2009 version, there are arrows as process indicator; still, there are some written words that accompany visual images. The required process is explained in more details and each task (such as slicing a piece of plant trunk) is shown with the illustration of hands, that is the representation of 'hands at work'. The 1977 version shows minimal parts of the human body; in fact there is an image of

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human eyes looking into a microscope. These features concerning the representation of the process is first considered in terms of ideational aspect of texts, but perhaps more importantly, it has a more significant meaning in terms of the interpersonal domain of meaning making, which is concerned with how the printed page interacts with those who the text is addressing. Textbooks are self-explanatory with its readership because they are supposed to be addressing students in a certain age group.

3.3. Interaction between the printed pages and 'the readers' and the representation of 'authority'

Authority takes on various forms in multimodal texts. In this section, I would like to focus on the way in which visual and verbal modes contribute to the construction of 'multimodal legitimation' (Van Leeuwen 2008). Van Leeuwen argues that 'Though language plays the central role in legitimation, some forms of legitimation can also be expressed visually or even musically (119)'. As Van Leeuwen points out here, traditionally and conventionally, language is considered to have a more solid connection with a sense of authority as a medium of orders, instructions and other forms of verbal messages, which all have in common that they are realizations of authority. Baldry and Thibault, however, point out yet another aspect of science textbooks, that is comprehensibility:

Typically, school science textbooks negotiate between notions of *expertise* and *authority*, on the one hand, and notions of *apprenticeship* and *accessibility*, on the other. The writer of the science textbook must, therefore, *negotiate* between both *technical-scientific semantic registers* and more familiar *everyday register* of his or her apprentice readership (2006: 93).

The 2009 version has a lot of cartoon-type illustrations with a speech balloons. For example, an owl character warns the prospective reader (users) of the textbook, 'Please be careful not to hurt yourself when you cut the plant trunk'. This can be considered at two different levels: authority figure and readership. This is an instruction that does not exist in the 1977 version and the text seems to have a higher degree of linearity than the 2009 version. In some cases, the textbook gets the owl character to explain about a summary or essence of the experiments demonstrated on the same page. This is an example of multimodal meaning making through verbal and visual modes of communication and it also implies a certain stance towards the reader. This implies that, while maintaining the importance to provide important information to the reader, the text is realising the interpersonal metafunction where the reader is able to comprehend what is being explained by 'talking down' and it can be considered as a condescending aspect of the discourse of authority and legitimation.

Apart from some linguistic devices, it has to be pointed out that use of colour in multimodal texts can also be viewed in terms of some interpersonal aspects. In the previous section, I argued that the presence of colour showed more emphasis on visual elements in the text than in black and white pages. In other words, science textbooks that are full of illustrations and photographs in colour interact quite differently from science textbooks that are printed in black and white. Then what can we say about the use of colour as signifiers of the relationship between the text (the producer of the text behind it) and the reader (users) of the text? Kress and Van Leeuwen (1996, 2006) argue that it is a kind of convention that black and white tables, graphs, and diagrams are used addressing towards science experts such as research scientists and academics in the relevant field. So it is safe to say that black and white has been 'the unmarked choice' in science articles for experts.

To answer this question would require further research. For now I would turn our focus back to the fact that unlike the 2009 version, the biology textbook of the 1977 version is printed in black and white except for some pages in the middle that contain full-colour photographs. It may be safe to argue that the 1977 version is made with an expectation that the reader (users) of the textbook has a basic literacy towards reading texts with graphs, tables and diagrams. The question arises whether this is one type of realisation of authority that is addressed to the students. When we look at the 2009 version,

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it appears to have taken on a more inviting, appealing and even friendly atmosphere. Also, due to the presence of colour pages; the degree of authority of the printed pages becomes of lesser importance. Taking the tendency that a lot of teenagers, who are the target reader of the textbook, and are constantly exposed to the Internet articles, which are the ultimate example of multimodal texts, into consideration, these kinds of printed pages should be approached and comprehended by them as an *extension* of the discourse that they are used to handling in their everyday context.

Visualisation of textbooks cannot therefore be a consequence caused by single factors, that is to say, the contemporary version, when compared with the older version, might signify one outcome or consequence of shifts in the face of authority. In other words, science textbooks have started 'coming off their high horses' and taking on a more casual and reader-friendly tone. It has to be added that the attention of the reader is not taken for granted but must be fought for along with other distractions. With respect to the complexity of the writer-reader relationship and use of colours, Baldry and Thibault illustrate it clearly as follows:

The use of colour may also function to reframe the scientific discourse and to ground it in the interpersonal perspective of the writer-reader relationship. In so doing, it (a) enacts interpersonal negotiation between the writer and the reader and (b) construes ideational negotiation between the scientific

and sensory coding orientations.^{xi} The visual interpersonal *deictic* frame is thus shifted back to the writer/reader domain, whereas the thematic content is that of the scientific domain. The former functions to relocate the latter into its own context and to comment on it from that context, i.e. the writer's perspective. It is a negotiation between different ideational-thematic orders of discourse at the same time that this is implicated in the interpersonal negotiation between writer and reader (2006:99).

To reinforce this 'interpersonal negotiation between writer and reader', I would like to refer to two more points in the given texts: the reading path and coding orientations. As for the reading path, it is safe to say that the 1977 version, compared to the 2009 version, conditions the reader to read the text in a rather fixed manner. In the 1977 version, there are some visual elements that are 'embedded' in the written words rather than visual images as (although connected thematically) *physically* separate entities in the visual space. This creates a linear and single reading path for the reader; the information is to be unfolded as the students read on. In the 2009 version, on the other hand, visual elements do exist as a complete unit owing to the fact that they are most of the time accompanied by verbal explanation and the narrative part of the textbook, the written words, seem to be pushed into the background. Here there is a lesser degree of linearity, which the reader of the text is supposed to follow; the text seems to be inviting the reader (and also for the teacher, too)

to choose where they start and to shift their attention from one part to another.

It is therefore possible to say that the 2009 version allows flexibility in the way the users (both students and teacher) of the text follow it and creates multiple reading paths rather than a single one. This can be viewed in terms of the representation of authority, that is to say, the 1977 leaves less freedom for the users of the textbook to follow its content and tends to stream and control the reading of the users while the 2009 version is less controlling and more room is left for the users of the textbook to work out how the textbook should be made use of.

3.4. Coding orientation of the textbooks: the distance from everyday life context

Still on the issue of the negotiation between text (the producer of the text included) and the reader (in this case it refer to both students and teacher), I would like now to draw attention to the use of photographs in relation to the world-view that each version of textbook appears to be projecting. Take the front cover of textbook for example (Figure 3 and Figure 4).

First of all, there is a striking difference between the two versions. The 1977 version (Figure 3) shows an abstract image and the 2009 version (Figure 4) is a collage of images with illustrations

and photographic images. It should be noted that this creates a completely different world-view of 'science as a school subject' from the 1977 version; in other words, the front cover of the textbook itself embodies the stance of the text towards its readers with different coding orientations. To use Kress and Van Leeuwen's coding orientation categories, it follows that the front cover of the 1977 version makes use of abstract coding orientation, which suggests an academic aspect of its subject matter and the text is engaged with the users of the text in a somewhat technical context. Does this abstract image signify something highly conceptual and formulated (as opposed to 'realistic') that has to do with the nature of the representation of science as a school subject? What this abstract image does to the readers of the textbook seems to me of more interest than what this image for example symbolises. This abstract image interacts with the users of the textbook as if to say 'this is a subject that the students are expected to study and science (biology in this case) is to be treated as a solid academic discipline.

This tone of interaction between the text and the readers is further reinforced by the presence of authors' names, who are science experts, printed below the subject title, which does not exist in the front cover of the 2009 version. Unlike the 1977 version, the 2009 version has a photographic image of frog, an image of a leaf seen through a magnifying glass along with a cartoon owl in a greenish background. There is no indication of the authors as a representation

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of authority in science and the notable thing is that it has a catch-copy like phrase 'Science: Open to the future' and the subject's name is no longer in Japanese in Kanji (Chinese characters) meaning 'Science' as in the 1977 version. Instead, the English word 'Science' is used at the bottom of the page, which shows one aspect of Romanization of Japanese language.

There are quite a few points to be made about this text but I would focus only on its interpersonal aspect. It is possible to argue that this text is highly interactive with the readers. All the images are far from the abstract coding orientation and more towards 'the common sense naturalistic coding orientation'. It is interactive point of view, partly because the image of the magnifying glass positions the prospective reader of the text, as if he or she was looking through the glass and investigating the leaf. To the students, who are the primary targeted reader of the textbook, the cartoon image of owl might be very high in modality in the domain of naturalistic coding orientation considering how much and often they are exposed to these cartoon images in their everyday life context in comic type texts. In this sense, while the 1977 version takes science as one of the academic subjects for granted by presenting the subject as a solid entity to be learned, the 2009 version is representing science as an extension of the students' everyday life context, as something that is connected to their everyday life.

As for the cartoon image of owl, what kind of message these cartoon images signifies is two fold. At one level, as is mentioned above, this is to motivate and invite the students to learn the subject by introducing the type of images that the students are supposed to be familiar with in their non-school environment. There is in fact an index page next to the table of contents that explains the icons and symbols used in the textbook. This is a type of visual layout that most of the students are familiar with even outside their school (study) environment. The bottom of the index page shows several cartoon characters that are supposed to 'guide' the students to find out about science 'with fun'. Other icons are also introduced along with written instructions so that the students can refer to them while they are using the textbook. This is to confirm the users of the textbooks, what signifies what, in other words, verbal information and instruction are visualised, which shows shifts in the modes of communication. Connecting and having some kind of interface with what the students are familiar with in their everyday life context could actually interest and motivate its target readers. At other levels, however, no matter how friendly and interactive these cartoon images appear to be, this is one form of streaming and instructing the students to do something. It is safe to argue that the manner in which the textbook potentially controls the students might have been changed but the control has just taken on a different type of textual 'façade'.

4. Conclusion

The science textbooks, the representation of authority as a textbook towards the students takes on different 'tone' between the two versions about 30 years apart. One of the questions to confirm for both sets of examples is how language and visual images are at work to construct the overall meaning of multimodal texts. There is always a profound meaning 'coded' in the way language and visual images function as medium of communication. That is, how meaning (message) is distributed across two different modes of communication: what language says and what visual images say about the given issues.

The examples of multimodal texts that I have discussed in this paper indicate, first of all, that it is not just language but the visual mode, which is also a crucial key to represent the subjectivity of junior high school students; who the students are and what the students are or perhaps *should* like in relation to teachers and academic authority in science subjects. With respect to the notion of legitimation, it has been found that the multimodal text has different ways of representing authority, that is, of constructing certain text - reader relationship. It is not the case that language alone is responsible for the authority stance of the given text, while visuals are there to

supplement and 'accentuate' what verbal information already provided. However, the way in which language and visual images are distributed, in other words, how these modes interact to each other, is one of the crucial factors that determine the representation of power relations, hence, constructing the political stance of the text as a whole.

- i Michael Halliday (1978) proposed that all types of human communication and not just language could be viewed as semiotic. When one person communicates to others, it is always the case that at least one *mode of communication* is at work. They include verbal (linguistic), visual, gestural and sound (music) and each is called a semiotic mode.
- ii Framing devices are most commonly used in cartoons, which divides one frame from another.
- iii Malinowski, Bronislaw. (1944) *A Scientific Theory of Culture and other Essays*. Chapel Hill: The University of North Carolina Press.
- iv The term 'genre' is generally used to mean 'a type of text'. Texts become 'typical' when they have characteristics that can also be recognized in other, similar texts. The reason for this is that the people who produce the texts follow certain 'rules' – perspectives, traditions, ingrained habits, etc (Kress and Van Leeuwen, 1996: 122-123).
- v See Stuart Hall (1980) 'Encoding / Decoding', in Stuart Hall et al. eds, *Culture, Media, Language*. London: Hutchinson.
- vi This terminology by Barthes is in fact close to what Halliday (1985) called 'elaboration'.
- vii 'relay' is similar to what Halliday names 'extension'.
- viii Martin Conboy's study on British tabloid newspapers (2006) also shows that the size of tabloid papers has played a crucial role that differentiates them from other so-called 'quality papers'. By the same token, the current shifts of broadsheet papers (into its tabloid size) also indicate something significant about the semiotics of newspapers.
- ix The Given-New concept comes from the information structure originally proposed by Halliday (1985), where 'Given' is something already known and taken for granted whereas 'New' information is something new to be found out and often the focus of attention.
- x In the 1977 version, it's titled *Kansatsu-1* (Observation -1) and in the 2009 version, it's *Kansatsu-4* (Observation-4). Note the difference in the use of font.

xi See Kress and Van Leeuwen 1996.

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Figure-1

Figure-2

Figure-3

Figure-4