THE RELATIONSHIP BETWEEN CONDENSATION STRATEGY AND EYE MOVEMENTS OF CHILDREN IN READING SUBTITLED ANIMATED MOVIE

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ABSTRACT

Subtitling is written form of verbal messages in filmic media. This has to be shorter than the audio since the audiece does multiple taks at the same time such as, reading the subtitles, watching the image and enjoying the soundtrack. Antonini(2005)(in Munday, 2009:148) identifies three principal operations that the translator must carry out in order to obtain effective subtitles: elimination, rendering and simplification. These operation are the aim of the study. The data that contain these strategies are selected. Then this is discussed under semantics that is known as an utterance. It expresses a complete thought. A complete thought is a proposition. It consists of arguments and a predicate. Arguments denote a group of entities whereas a predicate attributes either to designate a property an entity of an argument or a relation between entities denoted by two or more arguments. A predicate determines the number of the arguments that involving in a sentence. Predicates are commonly described as **one-place, two-place, three-place** etc.As Cruse states that "it is not clear whether there is any theoritical upper limit to the number of the arguments that a predicate may take, but the most one is likely to encounter in linguistic semantic discussions is four, exemplified by *Mary* paid *John £500* for *the car"*. Theory of Gottlob Frege's *Predicate Calculus* is adapted. Besides, the related studies of eye tracking are taken to assess the quality of the translation.

Key words: Condensation Strategy, Eye Movement, The Verb-Argument Bias and Parser

Introduction

Eye movements are now taking an important aids in measuring the perception-action literature particulary for studies examining allocation in natural everyday tasks (Hayhoe & Ballard 2005; Land; 2004). Besides, it is for measuring the responses of written word recognition and sentence reading which are initiated by the classic work of McConkie and Raynes, Frazier and Rayner (1982), and Just and Carpenter (1980) (Traxler and Gernbacheur, 2006: .In addition, the result of Tinker's experiment(1939) shows that reading rate and comprehension do not differ when readers read text in a laboratory situation with their eye movements recorded and when they read in normal situation (i.e. without a fixed head) (Traxler and Gernbacheur, 2006:613).

Relating to the subtitling, young viewers get benefits from this audiovisual mode. This enhance their language development. Some studies about the learning effects that are prominent to children have conducted. Some of them are: Their reading skills are improved (Aaltonen 1995:387;O'Connell 1998:65;ITC ed. 1996:12). Secondly, The act of reading subtitles does not require any concious cognitive effort on the part of an audience already accustomed to this specific language tranfer method (Dellabastita 1990:98; Chalier &Mueller 1998:100). It becomes an automatic process (d'dewalle et al.1991:650;cf. Gunter 1982:8). Thirdly, Reverse subtitling promotes second language learning that is spoken native language with second language subtitles (Blane 1996:123).

Other studies have conducted by Tom Kabara(2015) entitled "What is Gained in Subtitling: How Film Subtitles Can Expand the Source Text" and Jan Louis Kruger, Agnieszka Szarkowska and Izabela Krejtz (2015) conducted "Subtitles on the Moving Image: an Overview of Eye Tracking Studies"

Concerning with reading the text, subtitles help us to remember the words and phrases because of the repetitive activity of processing done by two modes, i.e auditory and visual channels. As

the study of Vanderplank (1988) shows that subtitles are useful to understand words and expressions the students had never seen or heard before (Diaz Cintas, Jorge and Marco F.C., 2008:206). In addition, it helps to clarify ambiguities in meaning since the written and oral words help concretise what is on screen and vice verse (Marleau,1981:274).

In order to understand the message carried by the subtitle, viewers must reconstruct the structural units that reveal the intended meaning that is known as structural processor or parser. The parser prefers to build structures with minimal effort. If the minimal structure becomes incorrect there is processing cost. This is affected by non-linguistic variables such as the visual context, discourse context and real-world knowledge (Fernandez & Cairns, 2011: 224-5). The research sought to answer the following questions (1)What are the syntactical structures of animated movie's subtitles by using condensation strategies? and (2) How do the eye movements recognize the children's reading subtitled animated Movies?

LANGUAGE COMPREHENSION

In the subtitling case, the role of reader equals with the role of hearer since the written mode substitutes the role of spoken mode. Then it treats as the work of the speech perception. There are three features of the speech signal that the speech perception system must deal with: the signal is continuous, it transmits information in parallel, and it is highly variable(Fernandez & Cains, 2011:170-1). Those under information processing.

In psycholinguistics, Information processing routine are triggered automatically based only on the acoustic signal (bottom-up) or aired by contextual information, either in the communication situation or within the sentence being processed (top-down). Bottom up information helps you build a phonological representation. Once you have retrieved the words, you might think what the speaker said. On the other hand, **top-down information** guides your processing was carried by the signal – the words you did catch.

EYE MOVEMENT CONTROL IN READING

During reading the eyes make a series of rapid movements. It is called *saccades* which are separated by periods of time dan the eyes are relatively still in reading known as *fixations*. It is only during the fixations that new visual information is encoded from the text because vision is functionally suppressed during the saccades.

Fixations typically last about 200–250 ms, although individual fixations in reading can be as short as 50–100 ms and as long as 500 ms. Distributions of fixation durations look like normal distributions (with the mean around 200–250 ms) that are skewed to the right. Typically, saccades last roughly 20–40 ms; the duration of the saccade depends almost exclusively on the size of the saccade. Saccades moving from the end of one line to the next which are called *return sweeps*. They typically last longer than the movements that progress along a line, and they also tend to undershoot the intended target. Thus, a return sweep will often be followed by a corrective movement to the left (when reading English). Nevertheless, the first fixation on the line is typically 5–7 letter spaces from the beginning letter on the line; likewise, the last fixation on a line is also typically 5–7 letters from the last letter in the line. Thus, only about 80% of the text typically falls between the extreme fixations. While the two eyes begin moving at about the same time, it turns out that the eyes do not land in exactly the same place in a word (Traxler & Gernsbacher, 2006:614)

STRUCTURAL PROCESSING

In order to comprehend the message carried by sentence, the viewer must reconstruct the structural units that convey the intention. Identifying the syntactical relations between the perceived set of words is the essential stage that must be followed. This reveal the basic meaning the speaker inteded. Reconstructing the structure of a sentence is done by **structural processor**, or **parser**.

The basic operations of the syntax will assist in understanding the operation of the parser:
- it creates basic structures;
- it combines simple sentences into complex ones; and

- it moves elements of sentences from one structural position to another.

The parser needs to identify the basic components of sentences (elements like subjects and predicates, prepositional phrases, relative clauses, and so on). It can only do this if it is able to break down sentences into simple clauses. And it must also be able to identify elements that have been moved and link them up with the gaps they left behind in their original structural positions.

CONDENSATION STRATEGIES

Subtitling is a transfered linguistic form characterized by the fact that only two lines that appears on the screen. According to international standards, the number of characters are between 20 and 40 per line. It means that a amount from forty and, in up to seventy-five percent of the original text/dialogues must be reduced and condensed in order to give viewers the chance to read the titles and watch, and possibly enjoy, what goes on the screen. In the process of condensation, subtitlers will attempt to adapt the original spoken texts without leaving out information that is essential for the viewer's understanding. If that is not possible information loss will occur for the viewer. In most cases, however, experienced subtitlers are capable of producing translations that are of equal value to the original information an condensation will not lead to loss of information.

When the aural text and the dialogue are concerned with information such as personal names, cultural references, acronyms, etc, and because of the technical constraints, such as space and time, the subtitler must reduce the translated text by carrying out three main operations: elimination, rendering and simplification(Antonini,2005:213). As the following chart is the work of subtitler deciding the technique to transfer the dialogues from spoken to written mode.
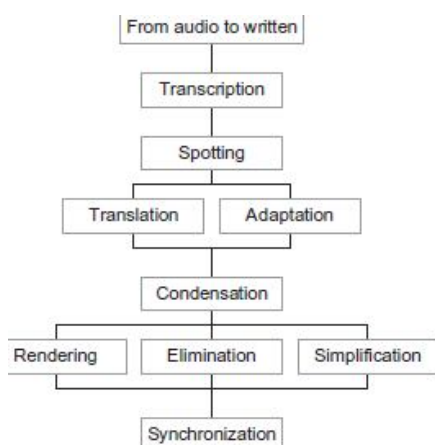

Chart 1: the Work of Subtitler (Antonini,2005:213)

Methodology

This research examined *SpongeBob Square Pants* and its subtitled versions published by Nickelodeon Company. The creator is Stephen Hillenburg since 1999. The data was retrieved from the internet source www.nick.com/shows/tvschedule and http://www. Imdb.com.the selected data based on types of condensation strategies were taken. Then the semantic and syntactical structures of subtitles were analyzed based on the result of experiements concerning with young viewers' eye movements. The data were grouped into three types, namely elimination, rendering and simplificatin. The total characters for each subtitle were counted and displayed in the square brackets.

Results and Discussion

Children are very interested in animated films for over many years and inevitably it becomes their daily pleasure. Generally, children begin watching animated films on television at an early age of six months, and by the age two or three children become enthusiastic viewers. Some says

that the effects of light on TV screen harm children's vision and eyes. However they cannot deny that television is an effective tools to entertain their children particularly the animated movies. Interestingly, eye movements are used as a tool to shift one's attention from image to written text from the dialogues in his/her visual surroundings.

There are two types of eye movements namely *saccades* and *fixation*. The former is the eyes make a series of rapid movements while the latter is the eyes are relatively still for period of times. *Fixations* last about 200-250 ms; meanwhile *saccades* last roughly 20-40 ms. First fixation on the line is typically 5-7 letter spaces from the beginning letter on the line and the last fixation on the line is also 5-7 letters from the last letter in the line.

Extreme fixations occur when we watch foreign films. How do we enjoy them? Audiovisual translation(AVT) takes an important role to lessen this inconvenience. One of AVT modes is subtitle. It is written form of verbal messages in filmic media. This has to be shorter than the audio since the audience does multiple taks at the same time such as, reading the subtitles, watching the image and enjoying the soundtrack. Then, Antonini(2005)(in Munday, 2009:148) called it as a condensation. There will be three principal operations that the translator must carry out in order to obtain effective subtitles that is known as condensation, namely: elimination, rendering and condensation. The first principle consists of cutting out the unnessary parts not in meaning but in form such as hesitations, false starts and wordiness as well as deleting the visual information (e.g. a nod and shake of the head). Secondly is to dealing with (in most cases eliminating) features such as slang, dialect and taboo language, while the third indicates the simplification and fragmentation of the original syntactical structure of the audio texts in order to promote comfortable reading.

In table 1 showed how the elimination strategies were selected. Data 1.1 and 1.2 omitted the visual informations. The interjections tended to be deleted as in data 1.3 to 1.6. They are "um", "ugh", "ow" and "oh frank". Another principle is wordiness. The data 1.7 to 1.8 omitted the synonymous expressions such as 'ya lyin' liar' became 'pembohong'. Then, the rendering strategies in this study showed that reproduce the message into the target language-specific references. The utterances 'Oh, brother" and "Whoa!", "Whoa!" became "Astaga" as in data 2.3 and 2.4. the third strategy is simplification. It usually simplify the syntactical structure into a simple clause, such as "So, you've been runnin' a long con on me, eh?" became "Kau sudah lama menipuku?"as in data 3.1.

Table 1: Elimination Strategies

Code	Source Language	Subtitling
1.1	Wrong channel! *[dials the telephone again] Your* order, sir!	Apa perintahmu, Tuan?[21 Ch]
1.2	*[heads toward The Krusty Krab that is locking down] No, no, no! No, no, no!* [the doors shut] ***NOOOOO!*** [starts to bang on the door] *Squidward! Open up!!*	Squidward, buka![16 Ch]
1.3	Um, Plankton?	Plankton?[10 Ch]
1.4	Ugh! This place smells awful!	Tempat ini begitu bau![22 Ch]
1.5	*Ow*, my neck.	Leherku! [8]
1.6	*[dazed]* Oh Frank...that's so good.	Enak sekali.[12 ch]
1.7	Why should I believe you, ya lyin' liar?!	Mengapa aku harus[17 Ch] mempercayaimu, pembohong?[23 Ch]
1.8	All these years, you've been working for Plankton?!	Selama ini kau bekerja [22 Ch] pada Plankton!{14}

Table 2: Rendering Strategies

code	Source Language	Subtitles
2.1	*[he and Patrick jump on the cotton candy cart]* Wow.	Permen kapas?[13 Ch]
2.2	Now, to update my-- *[Clicks]* Hmm-m-m *[Clicks]* R-r-résumé! *[He rockets in the air back towards his spacecraft]*	Sekarang, untuk memperbaharui...[29] ...Riwayat pekerjaanku![19]
2.3	Oh, brother.	Astaga.[7 Ch]
2.4	*[tries to stand up, but slips on her back due to the oily tanning lotion]* Whoa! Whoa!	Oh, astaga![11 Ch]
2.5	All hands on deck!	Semua orang membantu! [21 Ch]

Table 3: Simplification Strategies

Code	Source language	Subtitles
3.1	So, you've been runnin' a long con on me, eh?	Kau sudah lama menipuku?[24 Ch]
3.2	We need to get *these guys* back in the water!	Kita harus membantu*nya*-kembali ke air.[37 Ch]
3.3	Quick, boy! Bar the door!	Cepatlah, tahan pintunya![25 Ch]
3.4	*Stop!* All right, Mr. Krabs. Let me get in on this. *[growls, then angrily walks toward Plankton]*	Baiklah, Tn. Krabs [17 Ch] Biar aku yang selesaikan ini.[29 Ch]
3.5	Put your back *into it*!	gunakan belakangmu[18 Ch]

Conclusion

In filmic media, condensation strategies are employed in subtitling translations in order to give viewers a change to read texts and to enjoy the movie at the same time. In order to understand the message carried by the subtitle, viewers must reconstruct the structural units that reveal the intended meaning that is known as structural processor or parser. The parser prefers to build structures with minimal effort. If the minimal structure becomes incorrect there is processing cost. This is affected by non-linguistic variables such as the visual context, discourse context and real-world knowledge(Fernandez & Cairns, 2011: 224-5). During reading, the eyes make a series of rapid movements According to studies on eye-lid movements carried out in Belgium and on the basis of the average reading speed (approximately three words per second for a Spanish reader), viewers need about 6 seconds to read a 35-character subtitle. This estimate has led to the establishment of the so-called ''6-second rule'' (Luyken et al. 1991: 44–45; Lorenzo Garcı´a 2001: 12).

References:

Antonini, R.2005. "The Perception of Translated Humor in Italy".

Cruse, Alan.2011. *Meaning in Language: The Introduction to Semantics and Pragmatics*. New York: Oxford University Press Inc.

Fernandez, Eva M & Helen Smith Cairns. 2011. *Fundamentals of Psycholinguistics*. Singapore:Wiley-Blackwell.

Gambier, Yves and Henrik Gottlieb. 2001. *(Multi) Media Translation*. USA: John Benjamins Publishing Co.

Gottlieb, H. 2001 *Subtitling: Visualising filmic dialogue*. In Lorenzo Garcıa, L., and A. M. Pereira Rodrıguez (eds.), Traduccion Subordinada (II). El Subtitulado. Vigo: Servicio de Publicacions de la Universidad de Vigo, 85–110

House, Juliana.2014. *Translation Quality Assessment: Past and Present*.

Hurford, James R et al.2007. *Semantics: A coursebook*.UK: Cambridge University Press.

Munday, Jeremy.2009. *The Routledge Companion to Translation Studies.(eds)*. NY: Taylor & Francis e-Library.

http://www. Imdb.com. The SpongeBob Movie's *Sponge Out of the Water.*

Traxler, Matthew J and Morton Ann Gernsbacher.2006(Eds). *Handbook of Psycholinguistics*. USA: Elsevier Inc.