Subtitling Science Fiction Movies for Arab Children: Challenges and Strategies

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Abstract

This study investigates the relation between the linguistic and cultural constraints and subtitling strategies used when subtitling for Arab children at two main stages of cognitive development, namely the concrete and the formal operational stages. A descriptive qualitative approach is adopted where the linguistic and cultural constraints are categorized and related to children's cognition development and choice of subtitling strategy. The study concludes that Arab subtitlers tend to use simpler syntactic, semantic and cultural units when translating for children at the concrete operational stage as they use the strategy of reduction (including condensation, decimation, compression and deletion). On the contrary, subtitlers when translating for children at the formal operational stage prefer to use the strategy of transfer (including neutralization, imitation, transcription, and paraphrase).

Keywords: audiovisual translation, subtitling, linguistic challenges, cultural challenges, science fiction movies, children cognitive development

INTRODUCTION

Movies nowadays are among the most common intercultural communication devices and mass entertainment sources for Arab audiences. TV channels produce different kinds of movies, including comedy, drama, science fiction, and action. As one genre, a science fiction movie is defined according to Sobchack (1987) as a connection between the real world and the imaginary world. Rashed (2007) states that science fiction improves the child's innovation and develops his/her critical thinking skills. It also has various advantages for Arab children, such as developing the children's ability to solve problems and enhance the children's scientific culture. Noshwan (1993) adds that science fiction enriches the child with new knowledge, recognition, and problem solving skills; therefore, the child will be able to imagine the situations in the future and consider appropriate improvements. Cronin (2008) states that science fiction genre, when it allows explicitly for language differences and variations, has potential recourse to techniques of translation which are commonly used for audiovisual media.

Concerning Arab children as an audience of science fiction movies in this study, the translator's responsibility lies in selecting one of the available strategies to render the exact message. Lathey (2006), for example, says that children might read translations on the screen correctly, but there is no evidence of their exact understanding of content and context. This study deals with the linguistic and cultural constraints for subtitling science fiction movies from English into Arabic for children. The constraints will be investigated as challenges for subtitlers' choice of strategy considering the audience age and cognition development. It assumes that children age determines the use of strategies when dealing with certain linguistic and cultural challenges since each age group has its own features which enable the target language child to comprehend the subtitles.

This study seeks answers to the following questions:

1. What are the linguistic and cultural constraints for subtitling science fiction movies from English into Arabic?
2. Considering Piaget's classification of children's cognition development, to what extent does that contribute to the translator's choice of subtitling strategy?

The following parts of this paper will try to explain the key words in this study, more particularly, science fiction, audio-visual translation, the linguistic and cultural challenges of translation, subtitling, and phases of child cognition development. It will also address the methodology of this study and explain the challenges according child phases of cognition development.

Science Fiction

Rashid (2010) defines science fiction as the optimal method by which culture literacy and scientific culture are connected. He adds that science fiction is something like imagination that depends on technology and science. Moreover, he assumes that science fiction tries to imagine ideas and concepts through bringing joy to life. Suvin (1972: 375) considers that science fiction is "a literary genre or verbal construct whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main device is an imaginative framework alternative to the author's empirical environment".

Audiovisual Translation

Screen translation is totally different from translation of written texts. In audiovisual translation, the translator logically deals with an interaction between images, words, sounds and animations. Luyken et al. (1991: 11) states that the transfer of audiovisual language "denotes the process by which a film or television program is made comprehensible to a target audience that is unfamiliar with the original's source language."

The Linguistic and Cultural Linguistic Challenges of Subtitling

Dubbing will be beyond the scope of this study which will address itself only to subtitling challenges. In terms of the challenges facing subtitlers when subtitling from English into Arabic, Thawabteh (2011) suggests a classification of subtitling problems into linguistic and cultural.

Rosa (2001: 213) claims that subtitling tends to create a correspondence between the "group of linguistic varieties (dialects and accents) of the source text language and the system of the target text language." Thus, subtitlers need to make a balance between the first language system and the second language system. This paper discusses four main linguistic matters, including; idioms, swear words, long sentences, repetition and redundancy and names.

Considering the cultural richness of languages, each language has distinguished cultural specific habits, traditions, expectations, norms, conventions and behaviors in language. Newmark (1988) maintains that translation constraints which are caused by culture-specific words arise because of the fact that they are intrinsically and uniquely bound to the culture concerned and, therefore, are related to the context of a cultural tradition. Three main cultural constraints are to be examined in this study, including; fauna and flora, puns and allusions.

Subtitling Science Fiction Movies

Subtitling is defined by Díaz Cintas and Remael (2014: 8) as:

> A translation practice that consists of presenting a written text, generally on the lower part of the screen, that endeavors to recount the original dialogue of the speakers as well as the discursive elements that appear in the image (letters, inserts, graffiti, inscriptions, placards and the like) and the information that is contained on the soundtrack (songs, voices off).

In this, science fiction movies subtitling should be an ultimate goal insofar as subtitlers are concerned, and it can be achieved by different subtitling strategies. Gottlieb (1992) proposes a set of ten strategies, which are presented in his article "Subtitling – A New University Discipline." These strategies include: expansion, paraphrase, transfer, imitation, transcription, dislocation, condensation, decimation, deletion and resignation.

1. Expansion: This strategy is used when the original text needs an explanation due to some cultural nuance which is not found in the target language.
2. Paraphrase: This strategy is applied when the original phrase cannot be syntactically rendered in the same way as in the target language.
3. Transfer: It is the strategy of translating the source text completely and accurately. This means that it translates full expressions with an adequate rendering.
4. Imitation: This strategy maintains the same form of the original language, as typical names of places, people and other things.
5. Transcription: It is adopted when the term is unusual even in the source language as third language or nonsense language.
6. Dislocation: This strategy is applied when the original language has a special effect as in short meaningless song in a cartoon film. When the translation of the effect is more important than the content itself, this strategy is adopted.
7. Condensation: This strategy means shortening unnecessary utterances by using the shorter utterance, but without losing the message. However, some pragmatic features of the meaning might be lost here.

8. Decimation: It is an extreme form of condensation where some important items are deleted sometimes because of discourse speed.
9. Deletion: it means an overall omission of a part of the text because it is not important.
10. Resignation: It is applied when there is no translation and the meaning might be lost.

Along the same line, Lomheim (1999) draws on Gottlieb's model of subtitling strategies.. Lomheim adds 4 more strategies to Gottlieb's model of subtitling strategies. He argues that the subtitler can combine one strategy with other strategies at the same time. The other strategies are:

1. Neutralization: this means to render expressions more neutrally in the target language but not in a colorful or idiomatic way as in the source language.
2. Specification: to signify cases in which text has been specified in the target language, assource language hyponyms which are rendered by target language hyponyms.
3. Generalization: this strategy is applied when the target language expression is more general than the source language one. It is considered as the opposite of specification strategy.
4. Compression: to edit down the source language terms in the target language version.

Children Cognitive Development

Piaget marks the differences between the child and the adult by two main phrases: 'invariant functions' and 'variant cognitive structures'. The invariant functions contain two main processes; assimilation and accommodation. These two invariant processes push the organism of knowledge to develop and change by the effect of environment. However, the variant cognitive structures mean that the cognitive structures of children develop as the organism develops and changes (as cited in Turner, 1977: 14). Thus, one can conclude that older children have gained more knowledge than younger ones. Additionally, one can predict different children abilities of comprehension and understanding depending on their ages.

This paper is mainly concerned two stages, namely the concrete operational stage (children 7 to 11 years old), and the formal operational stage (12 years old children and above).

The concrete operational stage (7–11)

The concrete operational stage shows that the child thinking becomes 'less egocentric', 'less fluid'. And 'more reversible'. Therefore, the child, at this stage, is able to take into account many and different aspects and considers several dimensions during his thinking. However, the child's thought, at this stage, is still limited; he is not able to deal with abstract combinatorial systems nor realize the notion of 'experimental manipulation' of a certain variable.

The formal operational stage (12 years – above)

Piaget (1977) calls this stage 'complete induction', which means recurrent reasoning. Piaget claims that the movement from the concrete to the formal operational stage causes a primary change in children's attitude towards problem-solving. Operations within this stage deal with objects. Formal operations enhance the concrete ones and children at this stage become fully aware of the interrelationship of variables as weight, speed, and time which are considered and realized separately by children at concrete operational stage. As the child recognizes the interdependence between the variables, he is able to form their distinct concrete structure and untie them in different way. So, the child at this stage is able to relate objects to each other, draw relations between them, and isolate them again. The child is able to realize possible worlds as he realizes the real world, so he can think hypothetically. As Piaget (1977) argues, the child at this stage can build up hypotheses and their possible results. The child therefore starts to develop abstract thought patterns by using symbols, for example.

LITERATURE REVIEW

Studies on Science Fiction Movies Subtitling

In general, it seems that not much has been written on subtitling science fiction movies, especially, subtitled science fiction movies for Arab children. Still, some like Kurki (2012), in his Master's thesis, explores the subtitling of neologisms in the science fiction television series Stargate SG-1 by examining the categorization of different translation techniques which are used in the translation of the neologisms in order to build up a suitable framework of the classification of various techniques. He finds that eight original English neologisms from a total of 267 have been totally omitted from the Finnish subtitles. He also notices that the translation techniques which generate minimal standardization are calque, borrowing and synonymy. On the other hand, he finds that the techniques which clearly produce standardization are generalization, amplification and omission.

Moreover, Krincvaj (2009) investigates the translation of technical and scientific terms in science fiction. His paper aims at comparing the Czech translations of current and older works with their English originals. Besides, the study presents various technical and scientific terms used in the genre of science fiction, evaluates their translation, and comments on the frequency of usage of different translation methods including substitution, borrowing and direct translation. The study also reveals that translators nowadays use borrowing or direct translation more than substitution due to the fact that science fiction has always gone through things which are too fantastic for the current science to achieve.

Still, these papers and other articles or chapters do not address all the issues related to the subtitling of science fiction movies as the relationship between the used subtitling strategies in science fiction movie and children cognition. They deal with some issues in subtitling; such as subtitling of humor, idiomatic expression, jokes, cartoons and animation.

Spanakaki (2007) discusses the issue of how humor should be subtitled in terms of wordplay or punning, allusions and verbal irony. The study reveals that the selection of a translation strategy for humor is manipulated by more or less absolute rules to mere idiosyncrasies and mutual knowledge as culture and history. Similarly, Ferdowsi (2013) investigates the translation of idiomatic expressions in English language movies subtitled into Persian to find the effects of the applied strategies on comprehending the movies. This study finds that adopting subtitling strategies had some specific effects on movies comprehension as lack of synchronicity, incoherent sentences, non-conveyance of humor of some scenes, violation of collocation patterns, and non-conveyance of the information of the movies.

One more study that investigates subtitling for Arab children is Altahri (2013). This study examines issues, strategies, and problems involved in Arabic subtitling of cultural references in the Harry Potter movies. The study concludes that there are cultural, ideological, and technical dimensions which have a significant impact on movies subtitlers when they translate for Arab children. Thus, the results show that Arabic subtitlers prefer adopting certain strategies more than others when dealing with cultural references. For example, it is found that when translating food references, the strategies of omission, globalization, preservation and localization are used more than other strategies.

METHODOLOGY

In this study, the data is gathered through analyzing the Arabic subtitles of two different science fiction movies: Legend (1985) and Megamind (2010). The reason beyond the choice of these movies is twofold. First, the researchers might find more examples of science fiction and imaginative terminology in the mentioned movies. Secondly, the selected movies might pose the main challenges of translation that will be discussed in this study.

A descriptive qualitative approach will be adopted. This approach determines the nature of the relationships between translator, source and target texts, and tests the used translation strategy in the text. More specifically, this approach will examine the linguistic and cultural challenges facing the translator when translating science fiction movies. In addition, it investigates the relation between each age group cognition development and the subtitling strategies used in each movie, as well as the relation between the linguistic and cultural constraints and the subtitling strategies applied in both movies on one hand and the kind of subtitling strategies applied for subtitling science fiction movies on the other hand.

The Movies

Megamind

According to Netflix, Megamind movie is a science fiction movie published in 2014 and directed to 7 to 11 years old children. The movie tells a fictional story about the super villain Megamind who has been a baby left by his parents to live in an extraordinary magic world.

Legend

According to Netflix, Legend movie is a science fiction movie published in 1985 and directed to 12 years old children and beyond. It tells a myth about a boy called Jack who is a hero; he lives in a mythical forest full of devils, fairies, goblins and mythical creatures.

The procedure

In order to obtain the required information, the procedure consisted of three parts: viewing the movies, using the transcripts, and focusing on the Arabic subtitles of each movie. The procedure of movie viewing itself consisted of three stages: First, the researchers have watched the movies to get an overall idea. Second, the researchers have focused on the Arabic subtitles of each movie, with emphasis on the linguistic and cultural terms/references.

RESULTS

In this part, we shall go over the challenges of subtitling faced by Arab children who belong to the two cognition development stages mentioned before. For the sake of the study, taxonomy of the challenges is suggested in terms of linguistic and cultural dimensions. The linguistic challenges will be categorized into idioms, long sentences, repetition and redundancy, names, and swearwords. The cultural challenges are categorized into allusion, puns, and flora and fauna.

Linguistic Challenges:

Idioms

Legend Movie:

Example:

Well spoken   لا فضّ فوك

Megamind movie:

Example:

Have your mind blown   استعدي للمفاجأة

In Megamind movie, some original idioms are translated by idioms that exist in the target language. For example, Gump is astonished by Jack's answer of the riddle since he assumes that Jack will never answer it. As Gump shouts: "well spoken!" to deeply praise and celebrate Jack's success, the subtitler's task here is to recreate another adjective to replace the original one and render the exact meaning. The subtitler translates it by its Arabic equivalent idiom "لا فضّ فوك" using the strategy of transfer.. The Arabic idiom is figurative; it is a prayer to keep somebody's teeth intact to figuratively communicate the speaker's appreciation of what the hearer says. It is clear that this idiom is translated by using an idiom of similar meaning but dissimilar form. Children at the formal operational stage are able to know or decode this idiom because they have metalinguistic abilities which enable them to reflect upon figurative language following Piaget (1972). On the other side, if it is assumed that this movie is directed to children in the concrete

operational stage, it will be difficult for them to understand the translation of this idiom or its figurative use in Arabic language.

When translating idiomatic expression for children of the concrete operational stage, the subtitler is supposed to use simpler items. For example, in Megamind movie, there is an example showing how the translator does not replace the idiomatic expression with an idiom that exists in the target language. When Titan flies in the sky holding Roxanne, he shouts: "Have your mind blown." The translator replaces it with a simpler expression "استعدي للمفاجأة"" by using the subtitling strategy of neutralization. In Oxford Dictionary, "blow mind" means "To astonish or overwhelm; to 'blows one's mind'." It is clear that the translator uses simpler syntax when using the word "astonish" to suit this stage of children's comprehension. Therefore, children of concrete operational stage might have no difficulty in comprehending the simple expression "استعدّي للمفاجأة" as they concretely observe how Titan shouts and laughs.

Hall (1964: 19) states that "by the age of twelve or thirteen, the normal individual has a fully developed and functioning linguistic system", it is referred as "linguistic adult." Therefore, children watching Legend movie should comprehend all the translated idiomatic expression even by the context itself or the ability to establish relationships between different things, terms, concepts etc. On the other hand, children at the concrete operational stage do not have these abilities to understand idioms but they can only realize visible and concrete things. Therefore, most of the examples show that the translator does not simplify or eliminate idioms when translating for children in the formal operational stage.

Long Sentences

Legend Movie:

Example:

Stay clear of toadstool rings and willow trees and old oaks

إبتعدي عن دوائر فطر الغاريقون وأشجار الصفصاف

وكذلك أشجار البلوط القديمة

Megamind movie:

Example:

Didn't know what you liked, so I just grabbed, you know, all of them.

لم أعرف ماذا تحبين فأحضرت كل شيء

The woman, whom Princess Lilli visits, is warning Princess Lilli to be alert during her wandering; she loudly says: "Stay clear of toadstool rings and willow trees and old oaks." This sentence takes more time and effort to comprehend. Frazier et al. (1983: 187) state that "the more complex 'distant filler' sentences took longer to comprehend." In this example, the subtitler divides the sentence into two sentences and each sentence is presented by only one line. The first sentence which is written on the first line is " إبتعدي عن دوائر فطر الغاريقون وأشجار الصفصاف", and the second which is written on the second is وكذلك

"أشجار البلوط القديمة." Roh et al. (2001) assert that long sentences should be partitioned into smaller pieces and translated with smaller units. So, it seems that dividing a long sentence into smaller parts makes it more intelligible by children at the formal operational stage. Piaget (1977) claims that children at the formal operational stage can relate objects to each other, draw relations among them, and isolate them again. Therefore, children at this stage have the ability to make relations between parts and relate them to each other. Therefore, the child can read the second sentence " وكذلك أشجار البلوط القديمة" and relate it to the first one as well as understand that both of them combine one sentence and communicate related ideas.

Piaget (1977) finds that children at the concrete operational stage cannot realize the notion of combining more than one variable. The concrete operational child here is not able to make a combination between the first and the second sentences. S/he cannot realize that "old oaks" is also a part of the previous mentioned "toadstool rings and willow trees ".It is clear that the subtitler tends to apply the theory of segmentation when dealing with certain long sentences to facilitate reading capacity by the audience since long sentences are challenging for audiences of younger ages. Karamitroglou (1998) explains that Subtitled text should be segmented, so each subtitle should ideally contain one complete sentence. Karamitroglou (1998) continues where the sentence cannot fit in a single-line subtitle and has to continue over a second line. The segmentation on each of the lines should be arranged to coincide with the highest syntactic node possible. This suits Piaget's theory when explaining that younger children need to read less complex sentences. For example, in Megamind movie which is directed to children of the concrete operational stage, the sentence "**Didn't** *know what you liked, so I just grabbed, you know, all of them" was subtitles as "* لم أعرف ماذا تحبين فأحضرت كل شيء". The translation should contain long sentences; the longer the sentence is, the more time it takes to comprehend. Logically, as a child of 7 or 8 years old reading long sentences, s/he might lose interest in watching the movie, or s/he might have no time to see what is happening on the screen. So, the translator of Megamind movie seems to be aware of the concrete operational stage characteristics.

Repetition and Redundancy

Legend Movie:

Damn it! Damn it! Damn it! ! أحجية لعينة !

Megamind movie:

Place! Place! Place! Place! Place! !خذ مكانك! خذ مكانك! خذ مكانك! خذ مكانك

Repetition in both examples seems to communicate different meanings, like exaggeration, seriousness, fear, anger, and happiness. In subtitling, repetitions are, in general, omitted as a common practice but in some cases, they point out important rhetorical functions (Varga, 2012: 368). In the subtitling of Legend movie, the subtitler eliminates all repetitions. For example, Gump, who appears to Jack and asks him to answer the riddle, is completely touched and astonished by Jack's intellectual ability to answer the riddle. He shouts "Damn it! Damn it! Damn it!" which reflects his rage and fury toward Jack. The translator prefers to shorten the phrases to "أحجية لعينة!"

However, in Megamind movie, the translator does not delete the repetitions and keeps them. For example, when Megamind warns Minion to be aware of the new creature that he at this moment is working to create instead of Metro Man. Minion stands near him, so Megamind horribly shouts "Place!" five times. The translator mostly translates the whole redundant phrases, so s/he keeps the repetitions using the subtitling strategy of transfer by "خذ مكانك! خذ مكانك! خذ مكانك! خذ مكانك!." Children at the concrete operational stage observe actions concretely, so they might not need to read the repetitions on the screen to recognize Megamind's fear. Also, Megamind's fear and panic is reflected by his facial expressions. As children at this stage can concretely recognize things or objects, they will absolutely comprehend the function of repetition that shows fear and horror in this example.

Names

Legend Movie:

Honeythorn Gump   هاني ثورن غامب

Lord of Darkness   سيّد الظلام

Megamind movie:

Megamind   ميجامايند

Metro Man   ميترومان

It is clear that both Legend and Megamind movie contains proper names which indicate certain meanings. If we take into account the mentioned characters, three strategies are used when translating names.

One of the used strategies in Legend movie is rendition. This strategy is used only once. Lord of Darkness name has been rendered into "سيد الظلام." Lord of Darkness name seems to be used by other science fiction movies as Harry Potter. In Harry Potter movie, it is mentioned as 'Dark Lord' who wants to kill Harry Potter and he has a lightening scar on his forehead reminding him of that (Griesinger, 2002, 467). Therefore, this character seems to be common in science fiction movies. However, none of the other names is changed. For example, Honeythorn Gump is one of the main characters in the movie; sometimes they shorten his name to be Gump. 'Honeythorn' should indicate something related to his role in the movie since he appears to Jack and helps him to defeat Lord of Darkness. The word 'honey' contradicts the word 'thorn' and this reflects the paradox within Gump's character. He is forceful but very serious and honorable. In The Oxford Dictionary (2017) the word 'Honey' means "Any sweet substance similar to bees' honey." But the word 'Thorn' is identified as "A stiff, sharp-pointed woody projection on the stem or other part of a plant." Therefore, it is found that there is a contradiction between sweet and sharp points. Anyhow, the translator ignores its implication and translates it through using the subtitling strategy of imitation by "هاني ثورن غامب", so the translator doesn't pay attention to the movie's author who deeply and concisely chooses the name. The translator seems to follow Newmark's (1988) belief that when translating names in movies, people's first and family names are not translated into the target language to preserve their nationality.

Regarding Piaget's perspective, children at the formal operational stage will not need to know the meaning of characters name. Children at this stage can realize the character's personality or intention without being called by their characteristics as "شوكة العسل", they can abstractly recognize Gump's personality. However, children at the concrete operational stage might need to know the meaning of the characters in order to make concrete relations between the name and the real personality. However, when translating Megamind movie, the translator does not translate the meaning of any character's name although they all indicate each character's characteristics. For example, "Megamind" means "someone with an abnormally large head like in the film Megamind" in the Urban Dictionary (2017). So, Megamind means large head; this meaning indicates Megamind's features as he has a very large head with a smaller body. As the translator translates for children at the concrete operational stage, it will be better if the name is translated by its meaning using the strategy of Arabicization as "ميجمايند كبير الرأس." On the one hand, this translation will give more fun and humor to the fictional atmosphere of the movie, so children will have fun while watching science fiction movies. On the other hand, the word "ميجمايند" does not indicate any meaning for children at this stage. If they read its meaning, they will make relation between the meaning and the character's characteristics as well as concretely realize the function of the meaning. However, children at the formal operational stage do not need to read the meaning of names to relate them to their characters. They can do that abstractly without being concretely written at the bottom of the screen.

Swear Words

Legend Movie:

Damnation! Codfish & Cockles   لا ، تبّاً

Megamind movie:

You are villain!

And you'll always be a villain   أنت شرير وستكون دائما شرير

The characters' thought in movies should determine their reactions. Translators have to be aware about the functions of swear words and their translation. All the random examples which are elicited from Legend and Megamind movie s show anger and fear. But the translator should take into account children's age when translating swear words. In Legend movie, there is an example which reflects Gump's reaction toward Jack when he manages to answer the riddle, he shouts: "Damnation! Codfish & Cockles." Actually, creating this multi-word swearing phrase indicates Gump's deep anger. The translator might succeed in translating Gump's reaction by shortening them into only two Arabic words "لا، تبّا" since Arabic language interestingly has special means to obscure swear words than English, for example through the huge number of alternatives of a word. The translator doesn't translate this example literally but rather functionally, Children at the formal operational stage are fully aware of characters' emotion and feeling when they say certain phrases. Piaget states that children at this stage are aware of the interrelationship between objects. Similarly, Megamind movie is full struggles between Megamind and Metro Man. This example seems to be the less insulting one in comparison with the rest.

Warden, the man who puts Megamind in the jail at the beginning of the movie, shouts at Megamind: "You are villain! And you'll always be a villain." The translator here should take into consideration both the function of the swear word and children at the concrete operational stage characteristics. The translator translates "Villain" by "شرير." The word "شرير" seems to be less negative than "villain" and suits a child in the concrete operational stage.

All in all, the translation of swear words in Legend movie shows no consistency in choosing certain strategy. Sometime, swear words are translated using the strategy of condensation. In other cases, they are omitted. However, children at the formal operational stage recognize things abstractly and draw relations between them. Children at the concrete operational stage think only concretely and make concrete relations. It will be better for the translator, when translating for children at the concrete operational stage, to not translate the whole expressions but rather use funny or light expressions which do not affect their language since they are in a stage of language acquisition.

Cultural Constraints

Díaz Cintas and Remael (2014: 200) consider cultural bound terms as "extralinguistic" references to items that are tied up with a country's culture, history, or geography. In fact, there might be many cultural references in science fiction movies which are translated from one language into another. However, Piaget (1972) claims that children of the formal operational stage, which starts at age 12, have "metaliguistic abilities." In some studies, which are conducted on children's acquisition of metalinguistic abilities, as Hoppe and Kess (1982), it is found that the 13-year-old children perceive two meanings for almost all of the lexically ambiguous sentences and approximately half of the structurally ambiguous sentences. Metalinguistic awareness is defined as "the ability to reflect upon and manipulate the structural features of spoken language, treating language itself as an object of thought, as opposed to simply using the language system to comprehend and produce sentences" (Tunmer and Herriman, 1984: 12). Therefore, the child who is equipped with metalinguistic abilities is capable of comprehending complex sentences and their ambiguities. As both movies, Legend and Megamind are American and the target language audiences are Arab children, it's clear that source language and target language are related to different cultures. Arab children will logically need clear subtitles which enable them to comprehend the cultural specific expressions because they are not familiar with the culture of the source movie .The following section will try to explain three main cultural concepts that can be challenging according to child age and therefore may require different subtitling strategies. The concepts are allusion, puns, and flora and fauna.

Allusion

Leppihalme (1997) believes that allusion as a cultural barrier cannot function in translation if it is not part of the target language reader's culture. There are many examples in Legend and Megamind movies which show the use of allusion. For example, Legend movie itself is considered as an allusion to another previous movie. Scott, the director of the movie, states that the idea of Legend movie is inspired from "Beauty and

The Beast" movie (1946) which shows a real character in an imaginary world (Parrill, 2011). Children at the formal operational stage need not to know "Beauty and The Beast" movie in order to realize the existence of mythical and magical creatures in an imaginary forest. Also, they do not really need to know "Beauty and The Beast" to know that the beauty is referred to by Princess Lilli or the beast is alluded to by Lord of Darkness. Children at this stage have the ability to make relations between the variables which are presented by the characters and their actions in the movie. However, children at the concrete operational stage might make relation between Beauty and The Beast movie and Legend movie if they really have watched the former and realized that there are similarities and differences between characters, places and events.

In Megamind movie, there is an example which shows that children at the concrete operational stage might not be able to comprehend the use of allusion. In the movie, Megamind appears in the same style of Barack Obama's showing "Yes We Can" image, but Megamind's one shows the text "No You Can't" (Thilk, 2010). Therefore, Megamind's slogan here is an allusion for Obama's one. The poster shows the President of the U.S.A, Obama. This poster is similar to to Megamind's one when he owns Metrocity.

It is found that the translator translates Megamind's slogan by "لا، لا يمكنكم ذلك" which does not reflect any allusion to Obama's slogan in 2008. As this movie is an American one, American children will definitely notice that this slogan is related to Obama if they are in the formal operational stage. At this stage, children are able to draw relations between abstract things by their metalinguistic abilities. However, the translation of this movie is directed to Arab children of the concrete operational stage. This means that children at this stage firstly need to know President Obamam; then they need to have metalinguistic abilities which enable them to realize the interrelations between Obama's slogan and Megamind's slogan. In fact, children at this stage do not have metalinguistic abilities which help them in comprehending the relation between Megamind's slogan and Obama's one. The function of allusion here could implicate that Megamind is going to fail since his slogan contradicts Obama's one. However, the translator applies the subtitling strategy of transfer by which only the literal meaning is conveyed. The subtitling of Megamind's poster does not implicate the function of the allusion since subtitling by using transfer does not implicate the hidden meaning.

Puns

McCarty (2015) finds that puns' comprehension requires the child to process and compare two meanings of one sentence at the same time. So, the parallels between pun's comprehension and cognitive development of the child are especially noteworthy.

Honeythorn Gump is one of the main character names. It indicates two things. On the one hand, it can be considered as an ordinary name and it is transliterated as "هاني ثورن". The translator here uses the subtitling strategy of imitation which involves writing the same letters of the source language in target language. The parts of the name reflect the contradiction within the character's personality. Children at the formal operational stage can recognize the relationships between the character's name and its implication as they can make abstract relations between variables. The comprehension of this pun could not

be a barrier of understanding for children at this stage. On the contrary, children at the concrete operational stage cannot make abstract relations between variables, so they might find it difficult to realize two different meanings of the same word. They will only read a strange name on the bottom of the screen without trying to realize its meaning and relate it to its character's personality.

As Megamind is directed to children at the concrete operational stage and puns require the child to know two meanings of one word, children at this stage might find puns difficult and complicated to comprehend. Children at this stage are not equipped with metalinguistic abilities to get to know the different meanings or functions of the same utterance. For example, when Hell describes females saying "Chicks don't like bouncy houses", the translator translates "Chicks" by "الفتيات"through applying the subtitling strategy of transfer . In the Cambridge Advanced Learner's Dictionary and Thesaurus (2007), this word means "a baby bird, especially a young chicken", yet it is used as source language to mean "a young woman" and considered "offensive by many women." The translator chooses the second translation because the context indicates that Hell is talking about girls not chickens. However, the translator does not convey the other function which is degradation. Children at the concrete operational stage will not be able to recognize that Hell tends to offend girls by this description of them. They only recognize that he is talking about girls. Children of this stage do not have metalinguistic abilities to realize the function of the pun here. But, children at the formal operational stage could manage to realize that Hell is kidding and being offensive.

All in all, the translator uses different subtitling strategies in different examples; s/he uses transfer and imitation strategies for both stages. The translator should avoid the literal meaning and replace it with the intended meaning that suits the context. But, this translation might not suit children at the concrete operational stage as the humorous and sarcastic effect is not presented on the screen. So, if the translator chooses the literal meaning "الكتاكيت", children at this stage can realize that Hell is only being sarcastic. In Legend movie, the translator uses the strategy of transliteration when translating the proper name of 'Honeythorne Gump'. It is transliterated by "هاني ثورن غامب". This translation might suit children at the formal operational stage as they do not need to know the meaning of Gump's name to realize his personality.

Fauna and Flora

In Legend movie, toadstool ring is one of the plants that the woman, who dwells in the magical forest, warns Princess Lilli against; they tell her "beware of toadstool rings and willow trees! stay away from old oaks." Toadstool ring is considered to be a cultural specific kind of plants. Myths tell stories about mortal people entering fairy rings and suffering for it because anyone stepping into an empty fairy ring will die young. The fairies make intruders dance till they are exhausted, dead, or in the throes of madness (Fabricius, 2010). The translator translates it literally for formal operational stage children as "دوائر فطر الغاريقون." Children at this stage are able to recognize that this kind of mushroom is dangerous from the context of its use. They will make relation between the mushroom's name and the way the woman warns against them. They will definitely realize that mushroom is a very dangerous kind of plant. Also, the Willow Tree which is

translated to أشجار الصفصاف. Chevalier (2005) concludes that willow is firstly mentioned in Chamber of Secrets (59–60), it functions as a horrific punishment for Harry and Ron's theft of the bewitched Ford Anglia. In Prisoner of Azkaban, the significance of the Willow itself is a guardian, an authority Figure planted over a secret passage that leads to the magic and witches' village, Hogsmeade. He adds that the Whomping Willow acts as a Figure of punishment. It is clear that the willow tree serves as a special cultural reference in American movies. Harry Potter and its parts for example include the Chamber of Secrets and Prisoner of Azkaban. Therefore, Arab children might not know Harry Potter movies to realize this function of willow trees. However, children at the formal operational stage, watching Legend movie and noticing how the woman is warning Princess Lilli form touching willow trees, can relate her warning with the name of the tree and realize that this kind of tree should have a negative implication.

However, in Megamind movie, 'The Black Mamba' is translated to المامبا السودا. This phrase is mentioned previously as an allusion. Also, it is used as a kind of fauna in Megamind movie since it refers to an African snake. The black mamba is considered by O'Shea (2008) as the most feared snake in Africa, also its name is associated with rapid death throughout life. On the other hand, it is used as the name of Megamind's costume. The translator translates it by its Arabic equivalent as "المامبا السوداء". In fact, Megamind might use this name to call his costume to reflect his power and strength. However, children at the concrete operational stage, who might not know this kind of snake since it relates to African's culture, will not be able to make relation between the name of the costume which Megamind wear during his battles and the costume itself. Therefore, they might not realize that it is called by this name to implicate power and strength. On the contrary, children at the formal operational stage can draw relations between the abstract name and the suit and comprehend that it indicates Megamind's power how.

Subtitling strategies

The study has examined the characteristics of concrete operational and formal operational stages, including; linguistic abilities, metalinguistic abilities, abstract and concrete thinking depending on Piaget's theory of cognition. These elements should have helped the translator when translating for children at two different stages. In some cases, the translator tends to use simpler syntactic, semantic and cultural units when translating for children at the concrete operational stage. S/he uses the strategy of reduction, including; condensation, decimation, compression and deletion when translating certain linguistic and cultural patterns in Megamind movie. On the contrary, the translator of Legend movie, which is directed to formal operational stage, prefers to use the strategy of transfer, including; neutralization, imitation, transcription, paraphrase. However, in some rare cases, it is approved that the translator does not pay attention to children's cognition development as s/he uses the same strategies of transfer and reduction for both concrete and operational stages. The following points should briefly explain the subtitling strategies employed in the two movies according to child cognition development.

1. The translator has avoided the literal translation when translating idiomatic expressions for Arab children at the formal operational stage. S/he prefers to use the

subtitling strategy of neutralization which considered as a sub-type of transfer strategy of subtitling in this study.

2. There have been two strategies of translation which are used when translating idioms in Legend movie for children at the formal operational stage. First, using an idiom of similar meaning yet dissimilar form. Second, replacing the idiom with one which already exists in the target language. However, in most of the cases, the translator tends to use simpler expressions when translating idioms in Megamind movie for children by using the strategy of transfer. In some cases, the translator has not simplified idiomatic expressions.

3. When translating long sentences, the translator uses two different techniques in Megamind and Legend movies. On the one hand, when translating for children at the formal operational stage, the translator has preferred to split long sentences into partitions and used the strategy of transfer. On the other hand, when translating long sentences for children at the concrete operational stage, the translator has used the strategies of condensation and decimation which are considered as and types of reduction in this study.

4. When translating repetitious and redundant expressions for children at the formal operational stage, the translator has preferred to eliminate all the redundant expressions by using subtitling strategies of condensation and decimation because he might believe that children at this stage can realize the function of repetitions from the context. However, the translator has not used only reduction when translating redundant items, s/he has, in some cases, has eliminated them and transfer red them in others. The context has not always helped children of the concrete operational stage to comprehend the function of redundant expressions. Therefore, sometime, the translator needs to transfer the whole redundant items to transfer the exact function of them.

5. The translator uses the subtitling strategy of transcription when translating proper names for children at the concrete operational stage. However, this reflects a miscalculation by the translator since children at this stage need to know the meaning of character's names to realize their personalities and thoughts. Children at this stage do not have the ability to make abstract relations between abstracts as children at the formal operational stage do. However, Formal operational stage children are able to draw relations between actions of the character, so they do not need to know the meaning of each name to realize their characteristics.

6. Swear words have been translated by different strategies for formal and concrete operational children. Condensation is used when translating for formal operational children but the strong negative elements are still reserved. Children at this stage have metalinguistic abilities that enable them to comprehend the function of swearing without reading their full translation on the screen. However, this strategy is used when translating for concrete stage children but the strong expressions have been less negative. Children at this stage are negatively affected by bad expressions since this is the stage where their acquisition abilities are increased. Therefore, the translator has avoided to translate swear words by their exact meanings but preferred the strategy of condensation.

7. The translation of allusion for both concrete and operational children has been done by using the same strategy of transfer. Children at the formal operational stage have metalinguistic abilities which enable them to realize the function of using allusion even though they do not have any idea about the alluded objects. However, children at the concrete operational stage do not have metalinguistic abilities to comprehend the function of allusion.

8. The translator has used the same strategy of transfer when translating puns for both mentioned groups of ages. When the translator has translated puns for formal operational stage children, s/he has used transcription and transfer strategies of subtitling. However, when translating for concrete operational children, s/he has avoided the literal translation but used the strategy of transfer by transferring the intended meaning that suits the context.

CONCLUSION

The current study has investigated the relationship between the cognition development of children and specific linguistic and cultural constraints when translating science fiction movies for Arab children. The linguistic constraints includ idioms, repetition and redundancy, swear words, names, long sentences. The cultural constraints include allusion, puns, and flora and fauna. In examining the linguistic and cultural subtitling constraints, it is concluded that the translator chooses different strategies when translating for different children age stages. Children of the formal operational stage, which lasts from age 12 and beyond, are able to comprehend all linguistic and cultural references in science fiction movies more than children of the concrete operational stage. The study considered Piaget's classification of children's cognition development to identify the level of their contribution to the translator's choice of subtitling strategy. Piaget's stages could help the translator determine the appropriate subtitling strategy. The translator could use simpler syntactic, semantic and cultural units when translating for children at the concrete operational stage. S/he could use the strategy of reduction, including; condensation, decimation, compression and deletion when translating certain linguistic and cultural patterns for children at this stage. For children at the formal operational stage, translators could use the strategy of transfer, including; neutralization, imitation, transcription and paraphrase.

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