THE TRUTH RELATIONS IN THE MAIN CHARACTER’S ENTAILMENT SENTENCES IN MURDER ON THE ORIENT EXPRESS MOVIE

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Abstract: This study analyzed entailment of the main character’s sentences in Murder on The Orient Express movie in the semantics field. The purpose of this study is to explain the truth in the sentence uttered by the main character in the movie and to prove the truth value from the interlocutor’s response in the sentence. This study focused on explaining the truth of Poirot’s sentences and proving the truth value from the interlocutor’s response. This study used a qualitative descriptive method and a propositional logic approach. This study found 16 data of entailment. The data were analyzed using the theory of entailment from Fasold and Saeed, and theory of logic from Goranko and Hurley. The entailment sentences are entered into the truth table which explains the truth value of the sentence accompanied by logical explanations which are divided into deductive and inductive arguments. The truth value of the entailment sentence can be seen through the response of the main character’s interlocutors.

Keywords: Entailment, Semantics, Logic, Deductive argument, Inductive argument


Kata kunci: Entailment, Semantik, Logika, Argument deduktif, Argument inuktif
A. Introduction

According to Jandt, the process of communication involves a speaker, the speech act, an audience, and a purpose\(^1\). The purpose of communicating through conversation is to convey the speaker's ideas or messages that contain meaning. In daily conversation, many sentences have meanings that people, in general, can logically understand.

A speaker who tries to convey the purpose through a sentence is considered the order of words and puts more attention to the meaning. A simple sentence can have many meanings only by the speaker's difference of knowledge to the listener. As knowledge and communication skills increase, people will use more complicated sentences than simple ones.

Mohajan stated that knowledge is considered as a collection of experience, appropriate information and skilled insight, which offers a structure for estimating and integrating new experiences and information\(^2\). If the knowledge is the same as the speaker, they will get what the speaker wants to convey. The listener will interpret it according to the portion of the sentence itself. A sentence has a meaning that can develop followed by someone's ability based on their knowledge.

Besides the knowledge and communication skill factor, spoken sentences must also have full and trustworthy meaning. The meaning in the sentence must have a complete truth and logical concept. The logical concept of each people is different because of the knowledge and the experience they have gained. The logical concepts are needed to reach logical conclusions so that it does not produce erroneous information.

Logical sentences can be explained based on world realities. The sentence's


meaning is associated with logical reasoning that connects the meaning of one sentence with another sentence based on each person's logical concepts.

When a sentence is related to another sentence, it can be proven to be true or not. In other words, the idea conveyed becomes stronger than a standalone sentence. The relation among those sentences is called entailment. Saeed states entailment is a sentence \( A \) entails sentence \( B \) when the truth of the first \( A \) guarantees the truth of the second \( B \), and the falsity of the second \( B \) guarantees the falsity of the first \( A \). The point is the truth of the first sentence will be much stronger with the existence of the second sentence.

Cruse states that entailment is a logical relation between propositions. The relationship of entailment between sentences with the intention is absolute. That means every sentence must always be followed by logic. Then the whole concept of entailment is a sentence that follows each other so that the sentence's truth remains stable.

Hurley explained the aim of logic is to develop a system of methods and principles that is used as criteria for evaluating the arguments of others and as guides in constructing arguments of our own. Logical concepts are necessary to explain entailment to reach logical conclusions and the truth in the sentence. Since the theory of entailment is a proposition guaranteed to be true, then there is a logical explanation of why a proposition is true.

Entailment shows the meaning of two sentences correlated and can be explained from the sentence's logic. The entailment phenomenon can be found in daily conversation and also in the movies. A movie usually represents phenomena in society. One of the movies that have an

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entailment phenomenon is *Murder on The Orient Express*.

*Murder on The Orient Express* is a movie adapted from a famous mystery novel with the same title by Agatha Christie. In brief, this movie tells about Poirot's journey from Jerusalem to Istanbul. Throughout the movie, the main character conducts an investigation into twelve murder suspects of a passenger in a train that happened to be boarded by Poirot.

The study about entailment have been conducted by some researchers. There are some similarities and differences between the previous study and this study. The study that conducted entailment analysis is A Semantics Analysis of Entailment in *The Da Vinci Code* movie by Yesi Rahmawati (2017). The result of the study found one-way entailment, two-way/mutual entailment, negative entailment, and metaphorical entailment. One-way entailment reaches the highest frequency and negative entailment the least one to occur. The most entailment found in the movie is ordered based on the foreground as it is applied 33 times. The author employs contexted clauses and context matching approaches to detect entailment in the movie.

The relation between a sentence to another sentence can found in the truth or the intention to be conveyed by the speaker to the listener. People who do not realize the relation of the sentence or do not even know the entailment will not find out the truth of intent that the speaker wants to convey to the listener. When one proposition is related to the other one or entails each other it has become a truth. The problem in this study deals with how do the sentences of the main character shows the truth relations.

The purpose of this study is to explain the truth relations in the sentence uttered by the main character in the movie from logic approach. There are many conversations in the movie and the relation of meaning in the conversation with different logical concepts. The reason people must understand the relation of meaning that appears in the conversation
is to understand the thoughts and the intentions of the speaker so that a logical conversation is reached which follows from what is affirmed in the sentence.

This study using a propositional logic approach and descriptive method because this study is conducted to get an in-depth description of the truth relations in the sentence which are used by the character in the movie Murder in The Orient Express under the study of semantics.

This study is interested in interpreting the meaning in a sentence that has a truth. People need a logical explanation and have their logical concepts based on their knowledge. Logical concepts are necessary to explain entailment to reach logical conclusions and the truth in the sentence. Since the theory of entailment is a proposition guaranteed to be true, then there is a logical explanation of why a proposition is true. This study analyzed semantic entailments that occur in daily conversation performed by the main character in Murder on The Orient Express movie.

To explain the problem formulation, the entailment sentences found are described using the truth table to explain the truth relations. In the truth table, sentences are explained based on four formulas to read the truth relation. Below is the truth relations of entailment in a composite truth table according to Saeed⁶.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>T</td>
<td>T</td>
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<tr>
<td>F</td>
<td>T or F</td>
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<tr>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>T or F</td>
<td>T</td>
</tr>
</tbody>
</table>

This table shows how the entailing propositions interact with the entailed ones. The arrow is to show the direction of a relation if A then B and if B then A. The truth table of entailment above can be

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read in four different ways: 1) if A is true, then B is true, 2) if A is false, then B is either false or true, 3) if B is false, then A is false, 4) if B is true, then A is either true or false.

The first formula is the truth relation of sentence A which guarantees the truth of sentence B. In the second formula, the truth relations of sentence A which has a false value does not guarantee the truth of sentence B, then sentence B has a true or false probability. In the third formula, sentence B is read first, then the truth relationship from sentence B to sentence A. In the fourth formula, the truth relations of sentence B which has a true value does not guarantee the truth of sentence A, so that A has a chance of being false or true.

**B. Truth Relations In The Main Character’s Entailment Sentences**

Entailment is the relation among the sentences that can be proven to be true or not. Entailment shows the truth relations from two sentences that entail each other, which can be logically explained. The truth table of entailment is used to find the truth relations in Poirot’s entailment sentences. Below are the data and the analysis of entailment in Poirot’s conversation.

**Data 1**

(1A) You sell fakes to gangsters.

(1B) You’re suffering the consequences.

**T → T:**

If (1A) is true, then (1B) is also true. If you sell fakes to gangsters, you will get the consequences. Dealing with gangsters is terrible, even more so to trick them into selling fakes. It is impossible to solve the problem peacefully. Because selling fakes is a criminal act, made even worse by being sold to gangsters, what will happen is that you have to bear the consequences yourself, both legally and from the gangster being cheated.

**F → T or F:**

If sentence (1A) is false, then the entailed (1B) does not necessarily hold any entailing relation to (1A). Even though it does not hold any entailing relations, if the explanation of sentence (1A) is false and (1B) is also false, then it is connected
by logical relations. Because if you do not sell fakes to gangsters, then you will not get in trouble. However, this entailment will become invalid if sentence (1B) is holding a true value. If you do not sell fakes to gangsters, but you get the consequences, it cannot be explained in terms of the sentences’ relationship. However, it can still be explained with logical relations. He would get the consequences not by selling fakes to gangsters but from something else that cost him the consequences. He may get the consequences, but this does not guarantee that you sell fakes to gangsters.

\[
\text{F} \leftarrow \text{F} : \\
\text{If (1B) is false, then (1A) is also false. He did not receive any consequences because he did not sell fakes to gangsters. So it is clear that this sentence entails each other and is logically acceptable. Although (1A) or (1B) is decoded first, it can still have a logical relationship because this sentence directly refers to the subject.}
\]

\[
\text{T or F} \leftarrow \text{T} : \\
\text{If (1B) is true, then (1A) can be either true or false. However, this does not imply the necessary truth value in accordance with (1A). He paid the consequences for selling fake items to gangsters. However, this also does not automatically entail (1A) because it may not be selling fake items to gangsters. He might have caused the gangsters another problem.}
\]

Both sentences that entail each other indicate the truth that Poirot was trying to convey in that sentence. Because if the sentence merely spoke of the fact that the interlocutor had sold fakes to the gangster, then Poirot’s intention was not conveyed, so he added the next sentence in which he did not want to interfere, and the interlocutor would suffer the consequences. Apart from that, it was not a problem requiring legal justice, but a criminal who asked Poirot for help. The sentence’s point is that Poirot implicitly said that it was to be taken as a risk for having dealt with gangsters. Below is another entailment sentence appeared in the movie.

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\text{Data 2}
\]
I am of an age where I know what I like and what I do not like.

What I like, I enjoy enormously.
What I dislike, I cannot abide.

The sentences above entail each other because the first sentence’s truth guarantees the truth of the second sentence. In sentence (2A), if Poirot knows what he wants, in this case, what he likes and dislikes, then he can describe how he feels about his will and desires. The next sentence is an additional explanation to clarify the first statement so that the two sentences entail each other. Since Poirot supports his first sentence by saying an impression of what he likes and an impression of what he dislikes, it is obvious that the sentence which states how he feels about what he likes needs to be mentioned, as well as the impression of what he dislikes so this sentence proves that he can choose the things he likes and dislikes. So, if (2A) is true, then (2B) is also true based on this formula.

If sentence (2A) holds a false value, sentence (2B) can be either true or false. If Poirot is unable to determine or understands what he likes and dislikes, he may still be able to express his feelings by enjoying what he likes and knowing what he does not like. Another possibility is that he cannot express his feelings. He may not know what he likes and dislikes, but the existence of sentence (2B) can have either true or false value regardless of sentence (2A), which holds a false value.

If sentence (2B) is false, then sentence (2A) is also false. If Poirot cannot express his feelings for the things he likes and dislikes, he does not know what he likes and dislikes. This explains the logical relationship that applies between the two sentences. If Poirot cannot determine how he feels about the things he likes and dislikes, he does not know why he likes and dislikes.

If sentence (2B) is true, then (2A) can be either true or false. If Poirot can
express his likes and dislikes, then he understands that. So (2B) is true, and (2A) is true. If sentence (2B) is true and (2A) is false, maybe he can express his likes and dislikes, but there is a possibility that he does not know what he likes and does not like at that age. This statement does not make sense, considering it is impossible for someone to express something while he does not understand it. So in this way, sentence (2B) is true, and (2A) is also true. Even though it sounds the same as the statement if (2A) is true, then (2B) is also true, the understanding will be different.

Using these interrelated sentences, Poirot intended to show that he did not like the business his interlocutor was about to offer. Therefore a statement when he says the impression of what he likes and dislikes will lead to his dislike of small business talks. Below is another entailment sentence that appeared in the movie.

**Data 3**

(3A) I do not know yet.

(3B) It is time we ask.

T \(\rightarrow\) T:

If sentence (3A) is true, then sentence (3B) is also true. If Poirot does not know yet is true, then it is time to ask is logically true. In the first sentence, Poirot said that he did not know yet, then added the sentence as an answer to the next step of ignorance to find out they needed to ask. This sentence appears when Poirot and Bouc are guessing who is the suspect behind the murder case they are investigating. From the first sentence, it is certain that Poirot does not know who the suspect is and lacks evidence and clues to solve the case. And the next sentence proves the truth of the meaning of the first sentence because they do not know yet and have no clue, so the only other way is to ask.

F \(\rightarrow\) T or F:

If sentence (3A) is false, then sentence (3B) can be either true or false. If Poirot does not know is false, then it does not guarantee that there will be an entailing relation with sentence (3B). Although they may or may not ask, this is no guarantee since Poirot does not know
yet. Therefore this sentence does not entail each other if (3A) holds a false value.

\[ F \iff F : \]

If sentence (3B) is false, then sentence (3A) is also false. If the timing of their questions is false, then Poirot would not know it is false. Logically, if they do not ask, then it must mean that they know what they want to know.

\[ T \iff F : \]

If sentence (3B) is true, then sentence (3A) can be either true or false. Sentence (3B) that holds a true value does not automatically entail (3A). If they ask is true, then it entails (3A) because they do not know. However, sentence (3B) does not entail (3A) if they are not ignorant but just want to confirm something. Sentence (3A) would happen to be false and non-entailing (3B).

C. Logical Approach in Explaining Truth Value

The truth values from the truth table of entailment are explained through deductive and inductive arguments to find out the logical reasons why Poirot's entailment sentence is true or false. The function of the deductive argument involves reasoning that produces the correct conclusion from the correct premise so that the deductive argument can explain the truth of the sentence and get the correct conclusion based on the reasons why the sentence is judged to be true or false. The function of the inductive argument involves reasoning that is probable to produce conclusions that may be true from the premises that are assumed to be true. Its function is to find alternative conclusions if the truth value is not absolute or has a true or false value.

Data 1

Deductive Argument:

Premise (1A): You sell fakes to gangsters.

Premise (1B): You’re suffering the consequences.

Conclusion: Therefore, you are suffering the consequences of selling fakes.
From this sentence, it can be seen that when Poirot said his statement and he added a further explanation of his first statement, he wanted the interlocutor to understand what Poirot meant, namely that he did not want to interfere in the matter of his interlocutor and the interlocutor had to accept the risk of his actions. From premise (1A) it can also be seen that something terrible will happen if you do something that will make the gangsters angry. It is obvious that selling fakes is a criminal act, especially selling it to gangsters, which brings legal problems and non-legal ones. From these points, premise (1B) is very helpful in showing how bad it is to sell fake items to gangsters. Even though the buyer is not a gangster, it is still a crime. Therefore the conclusion is you are suffering the consequences of selling fakes.

**Inductive Argument:**

Premise (1A):  You sell fakes to gangsters.

Premise (1B):  You're suffering the consequences

**Conclusion:**  Probably you are suffering the consequences of selling fakes.

If premises (1A) and (1B) are claimed true, then the conclusion cannot be false. First, selling fakes will indeed cause trouble for the seller to bear in this case, Poirot's interlocutor, Ratchett. Problems that arise can vary, such as a gangster will destroy the seller's business, ask for compensation for his fraud, or ask for his money to be returned, or the seller runs away so that the possibility of him bearing the consequences can end well. Then the conclusion is probably he suffering the consequences of selling fakes.

**Data 2**

**Deductive Argument:**

Premise (2A):  I am of an age where I know what I like and what I do not like.

Conclusion: Therefore, he can decide what he wants.

Based on the sentence above, premises (2A) and (2B) are claimed to be true. Poirot's first premise states that he understands what he likes and dislikes due to his age. So from this sentence, the truth is that when you get older, a person can easily find out what things will impact oneself. Because of that factor, he can find out what he likes. He can certainly enjoy it and stay away from something he cannot enjoy. After explaining how his impression was in choosing between what he liked and disliked, Poirot gave an example of what he disliked, namely the pleasantries made by his interlocutor because this statement had been strengthened by a sentence that revealed that what Poirot would do was stay away from what he did not like. Then the conclusion is that he can decide what he wants.

Inductive Argument:

Premise (2A): I am of an age where I know what I like and what I do not like.


Conclusion: Therefore, probably he can decide what he wants.

Even though the two premises above are stated to be true, they still have the opportunity to end up at different conclusions. Because everyone has different criteria regarding what they like and don't like. If only from the sentence, of course, it cannot calculate the percentage of the factors that are the reasons why you like and don't like it. In this case, the sentence conveyed by Poirot meant that he was warning his interlocutors not to make small talk about the things they were going to discuss. Since Poirot's warning did not mean he could decide what he wanted, the conclusion was that
probably he could determine what he wants.

Data 3

Deductive Argument:
Premise (3A): I do not know yet.
Premise (3B): It is time we ask.
Conclusion: Therefore, it necessarily asks if we do not know.

Based on the sentence above, the conclusion follows the premise. If it is assumed that Poirot does not know something and that it is the right time to ask, then Poirot will ask if he does not know. If it is urgent or not urgent, normally, if people do not know something, they will ask. The truth value in premises (3A) and (3B) is true. Premise (3A) was uttered by Poirot, who expressed his thoughts regarding the current condition and then continued by premise (3B) whose existence supports premise (3A) so that it can be ascertained that the two premises above are true. And if the premise is true, it is impossible for the conclusion to be false. That is, it necessarily asks if they do not know.

Inductive Argument:
Premise (3A): I do not know yet.
Premise (3B): It is time we ask.
Conclusion: Therefore, probably we ask if we do not know.

Although the same, the occurrence of special indicator words can change the meaning of the sentence. The conclusion may follow the premises (3A) and (3B), which are claimed to be true. However, the strength of the conclusion is not supported by the premise. When the word "probably" occurs, there is both possibility and doubt of "yes" or "no." From that conclusion, the resulting logic can be different. First, maybe if they didn't know, they would ask. Second, the possibility that they will or will not ask may occur; for example, Poirot sought another solution to his ignorance.

D. Conclusion

In the analysis of entailment occurrence by the main character of Murder on The Orient Express movie, it was found the truth relations in the sentences
using the truth table of entailment. Based on the formulation of the problem, the purpose of this study is to explain the truth relations by the main character in Murder on The Orient Express movie that logically entails. The result of the analysis can be summarized as follows.

1. The truth table of entailment is used to explain each truth relations in the entailment sentence. This study used deductive arguments to prove the truth and falsity of sentences (T → T and F ← F). Meanwhile, to explain other possibilities (F → T or F ← T or F ← F), use inductive arguments.

2. A deductive argument can explain how the truth of the first sentence guarantees the truth of the second sentence and the falsity of the second sentence guarantees the falsity of the first sentence because the premises support the conclusion of a deductive argument, so the conclusion cannot be false since the premises are true. The sentence which has truth or false value can be explained in a deductive argument.

3. An inductive argument can explain if the sentences can be either true or false because it involves probabilistic reason. Since the sentences can be either true or false, then the premises are assumed true. Based on that assumption makes the conclusion probably true. An inductive argument is also the approach to find alternative conclusions based on the different logic concepts. Even though what Poirot said is true, there are other possibilities for the sentences to be false or probably true.

From the points above, the conclusion of this study is that the sentence relations used by Poirot have a truth relations. This truth relation helps the sentence to be conveyed more clearly because two sentences that are connected to each other can convey a stronger idea. Poirot’s statement is supported by a sentence that guarantees the truth of the second
sentence. By using a truth table, Poirot's entailment sentence can be explained why the sentence is true or false. Poirot is not accusing because his statement is accompanied by supporting sentences and the conclusion drawn is a consideration of the entailment sentences used by him. So, Poirot can easily get an answer to the Ratchett murder case because the entailment sentence is explained logically when he investigates the suspects so that the suspects cannot dodge and think logically in responding to Poirot's sentence.

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