

Ambiguity in News Headlines:  
A psycholinguistic Study

الغموض في عناوين الأخبار: دراسة نفسية لغوية

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### Abstract

A news headline is an integral part of the journalistic article. Some journalists, intentionally or unintentionally, employ ambiguity when constructing news headlines. Ambiguity could have positive effects on the readers and motivate them to continue reading the news story. Conversely, it could also lead to misunderstanding and frustration. The current study is an attempt to identify the types of ambiguity, lexical, syntactic or pragmatic, that encourage the readers to go through the content of headline news story. For the purpose of this study, 25 ambiguous headlines were set in a two-fold questionnaire that was applied to 100 readers of Al-Ahram Weekly. The questionnaire investigated the readers' ability to accurately interpret each type of ambiguity. Also, it explored the psycholinguistic effect of each type of ambiguity on the readers' tendency to continue reading. The results revealed that the syntactic ambiguity was the most difficult type of ambiguity to be interpreted by the readers, while the pragmatic ambiguity was the easiest. Moreover, it was noted that the readers were inclined to continue reading the lexically ambiguous headlines more than any other type of ambiguity.

**Key Words:** Ambiguity, News Headlines, Psycholinguistic Effect, Lexical Ambiguity, Syntactic Ambiguity, Pragmatic Ambiguity

### الغموض في عناوين الأخبار: دراسة نفسية لغوية

تهدف الدراسة الحالية إلى تحديد أنواع الغموض في عناوين الأخبار الصحفية التي تحول دون رغبة القراء في مواصلة قراءة الخبر الصحفي، وأيها يشجع القراء على الاستمرار في قراءة الخبر وتعرف تفاصيله، ولذا فقد تم بناء استبانة تضمنت خمس وعشرون عنواناً صحفياً استخدمت في بحث قدرة عينة من القراء على استنباط التفسير الصحيح لنوع الغموض بكل منها، وكذلك تحديد النوع الذي يصرف القارئ عن مواصلة قراءة تفاصيل الخبر المرتبط بكل عنوان. وتوصلت النتائج أن الغموض التركيبي في صياغة عنوان الخبر الصحفي هو أكثر أنواع الغموض التي يصعب على القارئ تفسيرها فتنقل رغبته في مواصلة القراءة، كما اتضح أن العناوين التي توظف الغموض اللفظي هي الأكثر إثارةً لرغبة القراء في مواصلة القراءة، ولا يميل القراء إلى قراءة الخبر الذي يُستخدم الغموض البرجماتي في صياغة عنوانه رغم قدرتهم على تفسير مضمونه.

## **Ambiguity in News Headlines: A psycholinguistic Study**

### **Introduction**

News headlines are telegram-like items that direct and lead the readers towards specific details (Tereszkiewicz, 2012). News headlines not only summarize the body content of the news text, but they also help the readers grasp the inherent meaning of the news text (Bonyadi & Samuel, 2013). News headlines highlight specific details or quote some incidents that are decided by the editor to be in the foreground (Dor, 2003).

A good news headline should arouse the curiosity of the readers and encourage them to continue reading. It could be an answer to a question, a solution to a problem or a key benefit for the reader. So, writers of news headlines should be careful in selecting their words. The headline should be complete by itself. It should not be overly plain or complexly ambiguous (Saxena, 2006, p. 91; Prateepchaikul, 2010).

Writers of news headlines employ ambiguity to serve different purposes. The use of ambiguity creates a humorous effect, attracts the attention of the readers and trigger their curiosity. Moreover, ambiguity could be used to say something without actually saying it (Awaad, 2017). So, the use of ambiguity could have a positive effect on the reader. However, some ambiguous news headlines could be misleading. It may create a sense of perplexity and hinder readers' understanding of the headline. As a result, the reader may give up reading (Al Janaby, & Abed, 2011). So, types of ambiguity that confuse the readers should be identified and avoided if we are to attract the readers and maintain their interest to read the text.

### **The research problem**

A news headline is a fundamental part in the news story. Some journalists employ, consciously and unconsciously, ambiguity when writing the news headlines. Ambiguity has double edges (Eckert, Stacey, Earl, 2003). It could arise the readers' curiosity to read the content of the news story in order to unravel the ambiguity (Awaad, 2017). Conversely, ambiguous headlines could inhibit the readers' motivation to continue reading. The readers may be discouraged to read not only the content of

the news headline but also the newspaper as a whole (Al-Janaby, & Abed, 2011). So, types of ambiguity that encourage the readers to continue reading need to be specified.

Different studies have investigated the use of ambiguity in news headlines. Some studies specified ambiguity types that create a humorous effect in news headlines such as Öşunnúgà (2013), other studies compared between the amount of ambiguity used in the news headlines written by native and non-native writers (e.g., Khamahani and Tahirov, 2013); Bagas, 2014). Other researchers manipulated the time required for processing different types of ambiguity in news headlines such as Salehi and Basiri, (2016). Furthermore, some studies focused on specific types of ambiguity such as Sevida (2015) and Alamoudi (2017) who specified the different forms of syntactic ambiguity used in news headlines, and Ezekulie (2015) who analyzed ambiguous news headlines pragmatically. However, the types of ambiguity that may present a challenge to the readers and discourage them from reading have not been studied yet. Identifying these types is crucial as it may serve as a guide for the writers of news headlines.

### **Purpose of the research**

The purpose of the current research is two-fold. Firstly, it attempts to identify the types of ambiguity in news headlines that are considered a challenge for the readers to uncover its appropriate interpretation. secondly, it seeks to explore the types of ambiguity in news headlines that lead the readers to give up reading.

### **Theoretical background**

#### **1. News Headlines**

A newspaper article or a news story consists of some basic elements such as a headline, main body and visual elements. In online articles, there could be additional links, a space for comments and recommendations (Tereszkiewicz, 2012). So, headlines are an integral part of any journalistic article. A news headline is a simple and concise expression that encapsulates the content of a news article (Bonyadi, & Samuel, 2013).

### **1.1. Functions of News Headlines**

News headlines have multiple functions. First, a news headline can have an informative function as it provides a summary or an abstract to the content of news story (Brône, & Coulson, 2010). Second, news headlines are employed to convince the readers to continue reading the content of the news story. Therefore, a news headline is used to maximize the worthiness of the news story and of the journal as a whole. Third, a news headline is used to reframe the minds of the readers by directing their attention to a specific angle of the news story (Bednarek, & Caple, 2012:100).

### **1.2. Characteristics of News Headlines**

News headlines employ visual and linguistic features that make them eye-catchers to the readers (Brône, & Coulson, 2010). News headlines should be visually attractive by employing the suitable type and size of font, typography and layout (Bednarek, & Caple, 2012:101). News headlines should be accurate, concise, simple, clear and up to date. News headlines should avoid repetition and redundancy. So, ellipsis could be employed rationally to suit the limited space of the news headline and to attract the readers' attention (Prateepchaikul, 2010). Ambiguity could be employed to motivate the readers to continue reading to unravel the ambiguity (Brône, & Coulson, 2010). However, ambiguity may frustrate the readers and make them forsake reading (Al Janaby, & Abed, 2011).

## **2. Ambiguity**

### **2.1. Definition of Ambiguity**

Ambiguity is defined as a word, phrase or sentence that could fit in several ways within the same situation (Empson, 2014, p.5). In other words, ambiguity refers to an expression or utterance that has more than one interpretation (Salih, 2015). For example, "He likes some fruits and vegetables". This sentence is considered ambiguous because it has two possible interpretations. The first is "He likes some fruits and some vegetables". The second interpretation could be "He likes some fruits and all the vegetables".

Linguists usually differentiate between vagueness and ambiguity (Belleri, 2014:50-52, Miecznikowski, 2018:92-95). Vagueness refers to

an expression that gives insufficient information (Smith & Lieberman, 2013). Examples of vagueness include:

- a. Let's go to a restaurant.
- b. Let's watch a short film.
- c. This ring is expensive.

In sentence [a] the noun phrase "a restaurant" is vague if there is more than one restaurant in the city. So, which one does the speaker mean? In sentence [b], the adjective *short* is vague because it is unclear what the borderline for shortness is. *Short* could be interpreted as being less than an hour, an hour and half, or two hours. In sentence [c], the adjective *expensive* is vague because it does not specify the borderline of the amount of money after which one can consider a ring expensive.

Ambiguity could be conscious and unconscious. In conscious or literary ambiguity, the speaker or writer intentionally uses artistic devices like figures of speech to achieve certain purposes. On the other hand, unconscious ambiguity exists unwittingly due to cultural or linguistic differences (Javaheri, 2008).

## **2.2.Types of ambiguity**

Ambiguity is classified into linguistic and extra-linguistic (Yuzhannikova, 2015). The following section illustrates these types.

### **2.2.1. Linguistic Ambiguity**

Linguistic ambiguity is divided into lexical and syntactic ambiguity. Lexical ambiguity refers to a word that could be interpreted in different ways within the same construction (Mahadi & Kenevisi, 2012). Lexical relations that cause ambiguity in human communication include homographs, homophones, polysemy (Ovu, 2011) and indexical references (Carston, 2002:28). Homographs refer to words which have identical orthography but different pronunciation and different meaning. For example, the word "minute" could be interpreted as a noun that refers to a time unit /minit/ or as an adjective that means very small /mainju:t/. Homographs cause ambiguity if the sentence does not provide sufficient clue to the intended meaning (Ovu, 2011). Homophones are words that are identical in their pronunciation but different in writing such as to, too and two or waste and waist (Swanson, 2010). The ambiguity created by

homophones are less likely to occur in writing because writing shows the intended orthographic form (Bucaria, 2004). Polysemy refers to words that have more than one sense (Ovu, 2011). For example, the word "bug" could be interpreted as an insect, a bothering thing or a spying device. The meanings of polysemous words range from closely related meaning such as paper (paper material or magazine) to nearly unrelated such as table (a piece of furniture or a figure) (Beretta, Fiorentino & Poeppel, 2005). Indexical references include words that refer to people, location or time like he, there, and tomorrow (Cruse, 2006:45). Indexical references are those words whose interpretation depends on the interaction between its meaning and the context in which it occurs. The ambiguity of the indexical references arises from the different meanings that could be attributed to each indexical reference, for example, "that's he" could refer to different persons. Its precise meaning could not be detected without the context (Nunberg, 1993).

Ambiguity that arises when the words in a sentence can be grouped in different ways is called syntactic, structural or grammatical ambiguity (Sevida, 2015). There are different factors for syntactic ambiguity. The first one is that some parts of speech could have dual functions like the -ing form which could be used to form the progressive or it could be used as an adjective (Salih, 2015). For example, "They are supporting notes", the word supporting may be a part of the progressive verb or it may be an adjective with the meaning of "these notes are supporting".

The second factor for syntactic ambiguity is the difficulty to cut some sentences into clear Immediate Constituents (ICs) (Salehi and Basiri, 2016). An IC is a system which is devised by linguists to analyze the sentences into successive layers or constituents (Aarts, 2001:64-65). For example, "*The people who watch the film frequently admired it*". It is difficult to identify the ICs for this sentence because it could be cut after or before **frequently**. It could be "*The people who watch the film / frequently admired it*" or "*The people who watch the film frequently / admired it*". So, such sentences are considered ambiguous because they carry more than one possible interpretation (Bagas, 2014).

The third Factor for syntactic ambiguity is related to the use of compound words. Some compound words confuse the hearer or reader because the construction of compounds is not syntactically governed (Buckeridge, & Sutcliffe, 2002). For example, "*Mona is a sweetheart*" and "*Mona has a sweetheart*". In the first sentence, *sweetheart* is a compound word which means the beloved, while *sweetheart* in the second sentence is composed of an adjective +noun and it means a kind heart. So, compound disambiguation is difficult.

Fourthly, some sentences require the use of determiners in order to be clear. A determiner is used as an indicator of (in)definiteness or as a head of a noun phrase (Paul, 2009). The absence of determiners in some news headlines may be a source of ambiguity. For example, the sentence "Marketing demands increase" could be interpreted as "Marketing demands will increase" or "Marketing demands an increase" (Salih, 2015).

The fifth factor for syntactic ambiguity is the phenomenon of Ellipsis. It refers to the omission of some constituents of the sentence or the use of incomplete sentences especially in news headlines. Although ellipsis in news headlines attracts the attention of the readers to go through the content of the news story, it may be distractive. Readers usually browse the headlines before reading the content itself. Therefore, they may not be able to guess the omitted constituents (Al Janaby & Abed, 2011). For example, "Egypt kicks off". This sentence is ambiguous because the complement of the sentence is not clear.

#### **2.2.1.1.Extra-linguistic (Pragmatic) Ambiguity**

Extra-linguistic or pragmatic ambiguity is not only related to the linguistic system but also non-linguistic features like the ambiguity of the speaker/writer's intention when speaking or writing (Carston, 1998). For example, the utterance "it's too hot." could be a statement, a request to open the window, or an apology for a sudden exit. Pragmatic ambiguity arises due to different reasons. It arises when the speaker/writer's intension is not reached perlocutionary or when there is a gap between the locutionary and illocutionary acts (Ezekulie, 2015). In other words, pragmatic ambiguity takes place when the hearer/reader is unable to

uncover the exact intention of the speaker or writer (Macagno, & Bigi, 2018). For example, the news headline "the Police is coming" could be an informative statement, a threatening or an expression of relief. Additionally, Pragmatic ambiguity occurs due to linguistic ambiguity or vagueness that makes it difficult to specify the speaker/writer's intention (Carston, 2002, 296).

### **Research questions**

The current research seeks to answer the following questions:

1. What are the most frequently used types of ambiguity in news headlines?
2. What are the types of ambiguity that the readers are able to accurately interpret in news headlines?
3. What is the psycholinguistic effect of each type of ambiguity on the readers' inclination to continue reading the news story?

### **Methodology**

To answer the research questions, news headlines were collected, in the period from 1/1/2018 to 30/4/2018, from the online version of Al-Ahram Weekly. It is an English-language weekly newspaper produced by Al-Ahram publishing house in Egypt. This newspaper was chosen because it is considered the leading English-language newspaper in Egypt and in the Arab world (Hammond, 2005:105; BUE Library, 2010). The news headlines were analyzed semantically and pragmatically to identify the ambiguous headlines and the type of each ambiguity. The ratio of each type was calculated. 35 news headlines were chosen randomly from the headlines by using SPSS. The randomly chosen headlines were grouped in three groups, lexical, syntactic and pragmatic. The news story of each headline was analyzed to unravel the ambiguity of the headlines. A questionnaire was developed to examine the psycholinguistic influence of each type of ambiguity on the readers. The 35 randomly chosen headlines were set to be the items of the questionnaire. The questionnaire was sent to 10 specialists in the field of linguistics to ensure its validity. Two of them did not send back their feedback. Three of the specialists approved the questionnaire without modifications. Two of the specialists recommended adding the period of time for the chosen headlines in the instructions of the questionnaire. The last three specialists found 35

headlines too boring for the subjects to respond to. They suggested reducing the number of headlines to be 20 or 25. The researcher modified the questionnaire items to be 25 instead of 35. The span of time for the chosen headlines was specified in the instructions to be a guide for the readers.

One hundred readers of Al-Ahram Weekly, who were identified from the Facebook page of Al-Ahram Weekly, were asked to fill in the questionnaire electronically. 60 non-native English readers responded and sent back their completed questionnaires. The questionnaire asked the readers to guess the suitable interpretation of the ambiguous headline. Then, they were asked to decide whether they would like to read the news story of the headline. Afterward, the guessed interpretation of each headline was compared to its exact interpretation as identified from the news story. Readers' interpretation that matched the exact interpretation as detected from the content was coded "one", while the inaccurate responses were coded "zero". Also, when the readers' responses indicated their desire to continue reading, these responses were coded "one", while negative responses were coded "zero". Then, the reliability of the questionnaire was calculated by using SPSS. The questionnaire was found to be reliable (0.8).

### **Data Analysis**

The chosen news headlines were analyzed to identify the type of ambiguity in each headline and to capture the possible interpretations for each headline. Then, the body content of each ambiguous news headline was explored to find out the intended interpretation of the ambiguous headline. The analysis was carried out as follows:

#### **1. Diplomacy in the blood**

This headline has a lexical ambiguity where the preposition *in* has three possible interpretations. The first, there is diplomacy that takes place during the time of bloodshed. The second, there should be blood for diplomacy to take place. The third, there is someone who is diplomatic by nature. Exploring the body content of this news headline supports the third interpretation. This headline is written to mourn the passing of the

Egyptian ambassador to France, Ali Maher, who was a diplomatic person and the son of a diplomatic family. So, diplomacy is in his blood.

## **2. Fanatic heads world order**

This headline is a pragmatically ambiguous because it has more than one possible intention. It could be a statement or a threatening to the readers. The body content reveals that this headline is written after the victory of Donald Trump. The content of the news story reveals that this headline is a statement.

## **3. Nubian being noticed**

This headline has a pragmatic ambiguity as it has more than one interpretation. It could be statement of the fact that Nubian are noticed. Also, it could be a threatening for the Nubian because they are noticed. Moreover, it could be a relief of the Nubian pains because they are noticed and will be catered for. The body content supports the last interpretation.

## **4. A day off shopping**

There is a syntactic ambiguity in this news headline because there is an ellipsis of the preposition (for, from) which leads to two possible interpretations. First, it could be a day off for people to go for shopping. The second possibility could be a day off from shopping, that is, there is no shopping in that day. The body content supports the first interpretation.

## **5. Syria army cuts off main rebel town in Ghouta as death toll tops 1000**

This headline has a lexical ambiguity because the conjunction *as* could be interpreted in different ways. The first one is that Ghouta is cut off because the death toll tops 1000. In this sense the death number is the reason for cutting off Ghouta. The second could be that Ghouta is cut off when the death toll tops 1000. In this sense, the rising number of dead people is not the reason for cutting off Ghouta. The body content supports the first hypothesis.

## **6. Sohag under development**

This headline has a lexical ambiguity because the preposition *under* could be interpreted in different ways. The first one is that Sohag

is being developed at the moment of speaking. The second could be that Sohag's infrastructure is too little to be developed. The body content supports the first hypothesis.

### **7. No deal**

This headline does not give sufficient information, no deal for what or on what? So, there is an ellipsis of some constituents of the sentence. This headline is syntactically ambiguous. The body content explains that there is no dispute in the international community and the Arab world that East Jerusalem is the capital of Palestine.

### **8. Conference barrage on Syria**

This headline is lexically ambiguous because of the existence of the polysemy *barrage*. Barrage has three senses; firing by large guns, a dam that blocks the flow of water, or a criticism directed to someone. So, this headline could mean that the conference on Syria has been stopped or there is exchange of criticism between the partners who are conferencing on Syria. The body content supports the idea of stopping conferences on Syria.

### **9. Protecting Alexandria's heritage**

In this headline, there is a syntactic ellipsis, protecting Alexandria's heritage from what? The content of this headline refers to the efforts exerted by the government to protect Alexandria from the ugly blocks of buildings that deprive people from the charming view of the Mediterranean Sea.

### **10. Challenging Egyptian taboos**

This headline embraces a syntactic ambiguity due to the duality of the parts of speech of the word "challenging". "Challenging" could be an adjective for the Egyptian taboos or there is someone who is challenging the Egyptian taboos. The body content reinforces the second hypothesis that women in Egypt are challenging the traditional convictions of the Egyptian society.

### **11. Going nuclear**

This headline has two types of ambiguity. It has syntactic ambiguity due to the ellipsis: who or what is going to be nuclear? The

second type is pragmatic ambiguity. There could be more than one intention behind this headline. It could be declaring, threatening enemies or making people happy of being powerful. The body content indicates that it is Egypt that will be a nuclear country. The body content reveals that the intention of this headline is to make the Egyptian people happy of being powerful.

### **12. Thumbs up from the IMF**

This headline has a syntactic ambiguity. There is an ellipsis, Thumbs up from the IMF for whom and for what? The body content clarifies that the thumps up are for Egypt due to economic development.

### **13. Abul-Fotouh faces terrorism charges**

There is a lexical ambiguity in this headline due to the use of the verb *face* which has two senses. The first is that he is struggling against terrorism charges, while the second could be that he is denounced as a terrorist. The body content supports the second interpretation.

### **14. Campaigns kick off**

In this news headline, there is an ellipsis which causes a syntactic ambiguity as it is not clear which campaigns kick off. The body content reveals that it is the presidential election campaigns that kick off.

### **15. Sinai 2018: Hands on**

There are two types of ambiguity within this headline. The first type is syntactic ambiguity due to the ellipsis: whose hands are on? The second type is pragmatic. The intention behind this headline could be declarative, threatening or a relief of suffering. The body content reveals that it is the hands of the Egyptian Armed forces which are on Sinai. The exact intention of this headline as indicated throughout the body content is to threaten the enemies.

### **16. Egypt's army takes the lead**

There are two types of ambiguity within this headline. The first type is syntactic ambiguity due to the ellipsis: Egypt's army takes the lead for what? The second type is pragmatic. The intention behind this headline could be declarative or threatening. The body content reveals

that Egyptian Army are leading a bitter war in Sinai. The intention of this headline seems to be declarative more than threatening.

### **17. Chasing them into their lairs**

There is a lexical ambiguity in this headline due to the use of the indexical references *them* and *their*. The reference of the two indexicals is not clear in this headline. The body content reveals that *them* refers to the IS militants in Sinai who are being chased by the Egyptian soldiers.

### **18. Deadlock ad infintum?**

There is a pragmatic ambiguity in this headline because one cannot decide whether the intention behind this headline is questioning or a declaration in the form of a question. The body content reveals that it is not questioning but it declares the failure of talks over the new Ethiopian Renaissance Dam.

### **19. Facebook isn't good for you**

There is a lexical ambiguity in this headline due to the use of the indexical reference *you*. The reference of this indexical is not clear in this headline. The body content indicates that *you* is used to direct the speech to the readers of the journal.

### **20. Summit amid tensions**

This headline embraces two syntactic ellipsis. It is not clear from the headline which summit and which tensions. The body content clarifies that the summit is the Arabic summit that was held during the tensions among the Gulf States.

### **21. Dangerous games?**

There are two types of ambiguity within this headline. The first is syntactic where the ellipsis is used, which makes it unclear what is meant by "dangerous games". Also, the writer used a question mark without using the structure of a question. The second type of ambiguity is pragmatic because the intention behind this headline is not clear whether it is informative or interrogative. The body content indicates that it is informative. This headline refers to Trump's contradictory messages on the Syrian Crisis.

### **22. A Summit named Jerusalem**

There is a syntactic ambiguity due to the duality of the parts of speech of the word *named*. The first possible interpretation of this headline is that the summit is named Jerusalem. The second interpretation could be that the name of Jerusalem is mentioned in the Summit. The body content supports the first hypothesis.

### **23. In the right direction**

There is a syntactic ambiguity where the verb and the subject of this sentence are not mentioned. The body content indicates that it is the Egyptian economy which is in the right direction.

### **24. Erdogan's meddling**

There is a syntactic ambiguity where the complement of this sentence is omitted: Erdogan's meddling for what or in what? The body content indicates Erdogan's unlawful meddling in the Syrian affairs.

### **25. Rates go down**

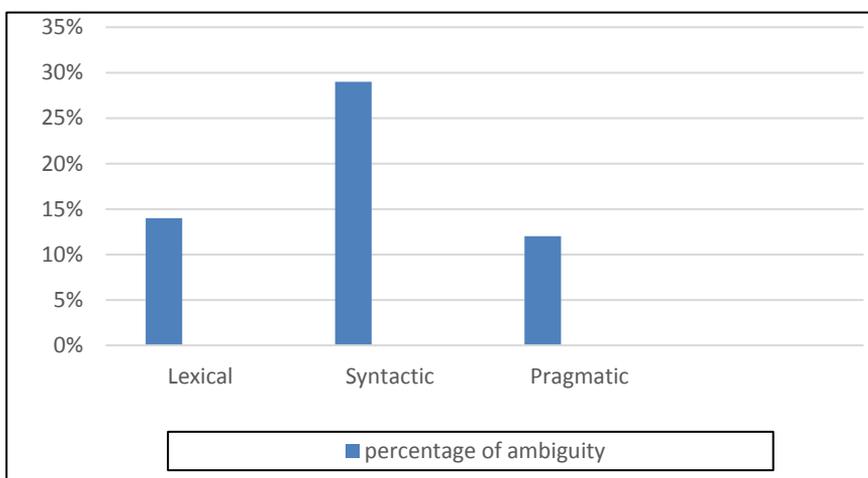
There is a syntactic ambiguity where ellipsis is used. So, what rates that go do down? The body content indicates that it is the interest rates that go down

After analyzing these randomly chosen headlines and relating these headlines to their body content, the responses of the readers of Al-Ahram Weekly on the questionnaire were analyzed.

## **Results and Discussion**

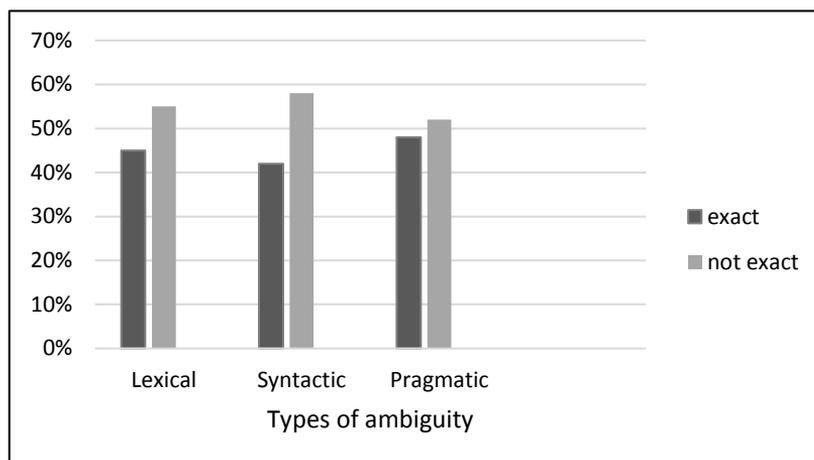
Screening the headlines of Al-Ahram Weekly revealed that 55% of the headlines were classified as ambiguous. Furthermore, it was found that the different types of ambiguity were employed. However, 29% of the headlines were syntactically ambiguous, whereas 14% were lexically ambiguous and 12% were pragmatically ambiguous. So, the syntactic ambiguity was the most frequently used type. The Syntactic ambiguity arose from the use of ellipsis and the duality of parts of speech. But, ellipsis was more excessively used (79% of the syntactically ambiguous headlines) than the duality of parts of speech (21%). This result corresponds with the results of A-Janaby and Abed (2011) who found ellipsis to be a main feature in news headlines. Also, this result is in

accordance with the results of Bagas (2014) who indicated that journalists who are non-native speakers of English produce syntactically ambiguous headlines more than any other type as compared to native speaker journalists. Bagas attributed this result to the difficulty of assembling news into English by the non-native journalists. As for the lexical ambiguity, polysemy and the ambiguity of indexical references were the lexical relations that formed lexical ambiguity. Polysemy was used more frequently (68% of the lexically ambiguous headlines) than the ambiguity of the indexical references (32%). Figure 1 describes the screening of the types of ambiguity used in the news headlines of Al-Ahram Weekly.



**Figure 1 The Percentage of Each Type of Ambiguity in the News Headlines of Al-Ahram Weekly**

The questionnaire data was divided into two sections. The first one illustrated the ability of the readers to unravel each type of ambiguity. The second section revealed the psycholinguistic influence of each type of ambiguity on the readers. The analysis of the data of the first section of the questionnaire is presented in Figure 2.



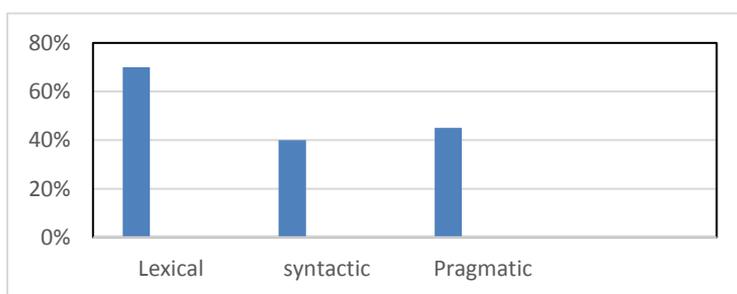
**Figure 2 Percentage of the Readers' Correct Responses**

The questionnaire data demonstrated that 45% of the readers were able to grasp the exact meaning of the lexically ambiguous headlines, while 55% of the readers were unable to grasp the meaning as elicited from the content of the news story. So, the majority of the readers were unable to unravel the lexical ambiguity of news headlines. The ability to resolve lexical ambiguity depends on the interaction between the inferences drawn from the context or the situation and the awareness of the facts of the world (Birnbaum, 1985). So, non-native speakers lack the experience to employ daily communication expressions in their attempt to unravel ambiguous utterances (Ovu, 2011). Psycholinguistically, there are two main models through which lexical ambiguity is resolved. The first one is context-dependent. In this model, the sentence in which the ambiguous lexical item occurs activates the appropriate meaning. The second model is context independent or order-accessed. In this model, the most frequently used senses are accessed before less frequently ones (Altarriba, & Gianico, 2003). Therefore, unravelling lexical ambiguous expressions requires situations where the readers are able to employ their past experiences. However, news headlines are short expressions that are presented in isolation from the explaining situation, for example, "Diplomacy in blood". In the previous example, there is no clear situation that illustrates that *in blood* is a synonym to *by nature*. So, it is very difficult for the readers to apply their experience to understand the exact meaning.

Equally, the questionnaire revealed that 42% of the readers could reach the exact interpretation of the syntactically ambiguous headlines, while 58% were not. This result could be due to the use of ellipsis in most of the headlines. The readers could not guess the omitted constituents. Resolving the ambiguity requires deciding the domain of the ambiguous utterance (Ferrari, Lipari, Gnesi, & Spagnolo, 2016). However, the domain was not specified in the syntactically ambiguous headlines, for example, "No deal". The domain was not clear in the previous example. So, most of the readers could not guess the exact interpretation. This result is in accordance with the results of Khawalda and Al-Saidat (2012) who concluded that non-native English participants were unable to unravel all types of syntactic ambiguity, specially ellipsis.

As for the pragmatic headlines in the questionnaire, it was found that 48% of the readers were able to understand the intention behind the headlines, while 52% were not. This could be attributed to the vagueness of the headlines and the readers' unawareness of their cultural boundaries. Al-Saidi (2015) indicated that pragmatic decisions are related to social and cultural behaviors rather than linguistic features. He argued that when the readers are unaware of the cultural and social boundaries of what is written, it could lead to a pragmatic failure or counter-productive behavior.

The results of the second section of the questionnaire revealed that 70% of the readers were motivated to read the lexically ambiguous headlines, 40% would like to read the syntactically ambiguous headlines and 45% tended to read the pragmatically ambiguous headlines. Figure 3 illustrates the results of the second section of the questionnaire.



**Figure 3 Readers' Tendency to Continue Read the Content of Ambiguous Headlines**

It should be noted that the lexical ambiguity in Al-Ahram Weekly news headlines depended on the use of polysemy. When the readers encounter a polysemous item, multiple senses are stimulated. But, the working memory capacity does not maintain these multiple senses for long. As a result, readers attribute a single meaning to the polysemous word based on their expectations (Vitello, & Rodd, 2014). When the readers succeed in recovering a sense, even if it is not the intended one by the writer, the readers consider the headline successful. Then, they develop a positive inclination to read the content of the news story of the lexically ambiguous headlines in order to support their interpretation (Ifantidou, 2008). So, writers of the news headlines should consider the readers' possible expectations and assumptions (Dor, 2003).

The results of the current research disagree with the results of Òşunnúgà (2013). Òşunnúgà concluded that the use of syntactic ambiguity motivates the reader to read in order to unravel unclear items. The possible explanation for this contradiction is that the syntactically ambiguous headlines of Al-Ahram Weekly depended on the use of ellipsis, whereas the headlines in the research of Òşunnúgà employed other forms of syntactic ambiguity such as the duality of parts of speech and the unclear ICs. However, Weir (2014) indicated that ellipsis could be a challenge for the reader if it is not supported by linguistic antecedent or if it is not related to the readers' experience. This challenge could lead the reader to abandon elliptical analysis. Also, Kolokonte (2008) pointed out that unravelling elliptical constituents requires deep semantic and syntactic analysis to establish the relationship between the sentence and the elided constituent. But the news headlines are too concise to make the readers use their experience to analyze the headline semantically and syntactically. As a result, the readers lose their motivation to continue reading.

Similarly, the shortness of the headlines does not give the readers the opportunity to be familiar with the social and cultural background of the headline or its writer. So, the readers develop a counter-productive behavior as a reaction to their feeling of pragmatic failure, their inability to grasp the exact meaning of what is said or written (Al-Saidi, 2015). So, they are not encouraged to continue reading the content of the news story.

## Conclusion

The current research sought to answer three questions. The first one was: "what are the most frequently used type of ambiguity in news headlines?". The results revealed that pragmatic ambiguity is the least frequently used type of ambiguity in news headlines. Conversely, syntactic ambiguity is the most frequently used one, where ellipsis is recurrently employed. Lexical ambiguity was found to be employed less than syntactic ambiguity in news headlines, where polysemy is the common form of lexical ambiguity.

The second question was: " What are the types of ambiguity that the readers are able to accurately interpret in news headlines?". The results revealed that non-native English readers of Al-Ahram Weekly were able to correctly interpret pragmatically ambiguous headlines more than any other type. Conversely, syntactically ambiguous headlines were the most difficult headlines to interpret. Lexically ambiguous headlines were less difficult to understand than syntactically ambiguous headlines.

The third question was: "What is the psycholinguistic effect of each type of ambiguity on the readers' inclination to continue reading the news story?". The results revealed that the readers tended to continue reading the content of the lexically ambiguous headlines, while they were discouraged from reading the content of syntactically ambiguous headlines.

It is hoped that the results of this research will be considered as guidelines for the writers of journalistic news headlines. The writers should not use syntactic ambiguity excessively because it may distract the readers' attention. The readers find it difficult to find out the appropriate interpretation of the syntactically ambiguous headlines and they lose their motivation to continue reading. Writers of news headlines could employ lexical ambiguity to attract the readers' attention and motivate them to continue reading. Some researchers like Nwala (2017) suggested that using sub-head or deck heads may provide some details that help the readers obtain plausible inferences of the ambiguous headlines and therefore maintain their interest in reading the content of the news headlines.

### **Limitation**

The results of the current research are limited to headlines extracted from an Egyptian English language weekly newspaper. Also, this research is limited to verbal ambiguity in news headlines. Other forms of ambiguity such as visual ambiguity are not addressed. The current research did not explore the effect of readers' academic level on their ability to unravel each type of ambiguity in news headlines.

### **Further Research**

Headlines from other newspapers from other countries and in other languages may support the generalization of the results of the current research. Also, the influence of visual cues including fonts, layout and supporting photos could be investigated in further research. Further research could investigate the effects of non-native English readers' academic level and their competence in using English on their ability to disambiguate English news headlines.

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