بجوف قسم اللغة الإنجليزية
Logico–semantic relations of clauses used in Covid–19 editorials in Egyptian newspapers

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Abstract:
This study analyzes the Logico-semantic relations of clauses in six covid-19 editorials in Egyptian media. The theory used for the analysis is the logical meaning system presented by Halliday (1994). The Data consists of six covid-19 related editorials drawn from two Egyptian newspapers: Al-Ahram Weekly and The Egyptian Gazette. The findings show the dominance of Hypotactic relations over Paratactic relations in all of the six editorials. Embedding was found to be more frequently used than clause complexing, which reflects the authors’ attempt to maintain as much simplexes as possible.

Key Words:
العلاقات المنطقية والدلالية المستخدمة في المقالات الافتتاحية عن فيروس كورونا في الصحف المصرية

الملخص:

تعمل هذه الدراسة على تحليل العلاقات المنطقية والدلالية المستخدمة في المقالات الافتتاحية ذات المواضيع المتعلقة بفيروس كورونا في وسائل الإعلام المصرية. النظرية المستخدمة في التحليل هي نظرية المعنى المنطقي الذي قدمه هاليداي. تتكون عينة التحليل من ست مقالات افتتاحية - ذات مواضيع متعلقة بفيروس كورونا المستجد - مأخوذة من صحفين مصريين تنشران باللغة الإنجليزية: الأهرام ويكلي وإيجيبشن جازيت. تظهر النتائج هيمنة العلاقات التبعية على العلاقات التنظيمية في المقالات الافتتاحية ست جميعها. تم العثور على استخدام التضمين بشكل متكرر، مما يعكس محاولة المؤلفين الاحتفاظ بأكبر قدر ممكن من الجمل البسيطة.

الكلمات المفتاحية:

العلاقات المنطقية، الدلالة، مقالات افتتاحية، فيروس كورونا، علم اللغة الوظيفي، علم تحليل النص.
1. Introduction:

Newspapers are the source of news and views for the society. They form a daily part of their regular readers’ lives, and they help form their perception of ongoing events. Each newspaper portrays the same piece of news in their unique way that serves the institutional goals of the newspaper. Editorials are the part of the newspaper where the newspaper’s ideology is explicitly conveyed to the readers. These editorials are packed with opinions communicated through clauses and phrases related through logico-semantic relations and interdependencies.

The editorials included in this research are drawn from two established Egyptian newspapers published in English: *Al-Ahram Weekly* and *The Egyptian Gazette*. *Al-Ahram Weekly* is a government-owned publication, and it comes from an organization that is considered the most widespread Arabic language, *Al-Ahram* (Napoli, Amin and Boylan 1995). A certificate issued in 2000 from the *Al-Ahram* organization's legal accountant stated that the publication's sales were 72,193 copies a week in 1999 (Berenger, 2002). *The Egyptian Gazette*, on the other hand, is an English-language Egyptian daily and comes from *El Tahrir* Printing and Publishing House. It was founded in 1880 and served as the oldest English-language publication in the Middle East. The tabloid newspaper was first published in Alexandria by five Britons but was moved to Cairo in 1938. Later on, it came under the editorial authority of an Egyptian for the first time in 1952. *The Egyptian Gazette* has a weekly edition published under the name *Egyptian Mail*.

The analysis used Halliday’s (1994) system of Logico-semantic relations for the analysis of clauses in these editorials.
2. Theoretical Framework:

Halliday’s Systemic Functional linguistics has been widely used for Discourse Analysis, as it sees language used within contexts. Systemic Functional Linguistics consists of three metafunctions: ideational, interpersonal, and textual. Hasan (2009) argues that these metafunctions “are not hierarchised; they have equal status, and each is manifested in every act of language use: in fact, an important task for grammatics is to describe how the three metafunctions are woven together into the same linguistic unit.”¹

The ideational metafunction relates to human experience and reality, and it is divided into two sub-functions: experiential function and logical function. The experiential function focuses on the grammatical choices which construct the meaning within the clause. On the other hand, the logical function refers to the systems that “set up logical–semantic relationships between one clausal unit and another,”² and this is the system that is used in the current study.

The interpersonal metafunction refers to the choices that are made based on interpersonal relationships; how a speaker/writer prefers to convey his meaning. The interpersonal metafunctions consists of systems like Mood, modality, and polarity.

The textual metafunction is sort of a middle ground between the two previous metafunctions. It manages the flow of discourse, and it divides utterances and clauses into new and given information.

2.1. **Logical meaning:**

This refers to the kind of semantic relation that is present clauses in a clause nexus. There are three types of logical relations between clauses: expansion, embedded expansion, and projection. In an expansion, the secondary cause in a clause nexus expands the meaning of the primary clause. On the other hand, projection refers to the relation where the primary clause projects the meaning in the secondary clause. Expansion is then further subcategorized into elaboration, extension, and enhancement. Embedding refers to the relation of interdependency; where there is a down-ranked clause that expands the meaning of the primary clause.

1- **Expansion:**

Expansion is classified into three categories: ‘elaboration’, ‘extension’, or ‘enhancement’. Halliday and Matthiessen compared this to the process of working on a building: “elaborating its existing structure, extending it by addition or replacement, and enhancing its environment” (Halliday & Matthiessen, 2004, p:225).

a) **Elaboration:**

Elaboration refers to the use of restatement, clarification, or explanation in one of the nexus clauses. Elaboration can be both paratactic and hypotactic, as shown below.

(i) Exposition: in this type, the second clause restates what has been already presented in the first clause in different words.

   e.g., This is not a family meeting; I did not intend it as a family meeting.

(ii) Exemplification: in this case, the secondary clause often provides examples or more specific information about the matter, as can be seen in the example below:

   e.g., we used to have a dog; we used to have a Labrador.

(iii) Clarification: as the name suggests, the secondary clause clarifies what has been presented in the primary clause, often providing an explanation or a comment.

   e.g., they were roommates; that is how they met each other

   Hypotactic elaboration (α= β) refers to using a ‘non-defining relative clause’ in the finite or non-finite form.

b) Extension:

   An extension refers to adding to the meaning of the other clause in a clause nexus. It most frequently occurs with paratactic clauses but is also found in hypotactic clauses.

   Paratactic extension (1+2) takes the form of coordination, and is more often realized through conjunctions. The conjunctions often express extension (e.g., and, or, nor, but), which work as an additive, alternative, adversative, replacive, or subtractive.
e.g., This city is so clean, and it is surprisingly big

Hypotactic extension \((\alpha + \beta)\) also takes the same conjunctions expressing the additive, alternative, adversative, replacive, or subtractive. However, here the secondary clause is not free and is dependent on the primary clause. In the finite form, the conjunctions while and whereas express the additive and adversative relations in sentences like the following sentence:

e.g., the man was reading while his children were playing

In the non-finite form, the secondary clause uses prepositions or prepositional phrases (e.g., besides, apart from, instead of, other than, without) as the conjunction (Halliday, 1994, pp: 230-232)

c) **Enhancement:**

In this clause nexus, the secondary clause enhances the primary clause's meaning by providing information about time, place, manner, condition or cause. The secondary clause can sometimes be considered a circumstance.

Paratactic enhancement \((1 \times 2)\) is a form of coordination where both clauses are independent or free. The clauses can be joined by using conjunctions (e.g., then, so, for, but, yet, still), conjunctive groups (e.g., and then, and there, and thus, and so, and yet), or the combination of and with cohesive conjunctive expressions (e.g., at that time, soon afterward, till then, in that case, in that way) (Halliday, 1994, p: 232).

e.g., I dry my clothes, and then iron them

Hypotactic enhancement \((\alpha + \beta)\) refers to clauses linked with a subordinating conjunction. The primary clause is independent, while the secondary clause is dependent on
the primary clause. It can be in a finite or a non-finite form, as the next examples suggest (drawn from Halliday, 1994, pp 238-239)

Because I was not there, I can’t say what happened

Without having been there, I can’t say what happened

2- **Embedded expansion:**

Embedded expansion is different from tactic expansion in that it implies a shift in rank between the clauses in the clause nexus. A down-ranked clause has an indirect relationship in the clause with the higher rank.

A man [[who is well educated]] is a worthy man

He does not want to do [[what we want him to do]]

[[That you are confident]] will lead you to success

Embedded expansion can also be classified into three main categories: elaboration, extension, and enhancement. Elaboration involves the use of a defining relative clause (e.g., I am the one = [[who won the race]]). Extension usually implies possession by using whose and of which (e.g., this is the boy + [[whose father is a doctor]]). Enhancement refers to the relationship of time, place, manner between an embedded clause and the head noun of the main clause (e.g., do you remember the first time x [[we met]])

3- **Projection:**

Projection refers to a phenomenon or an event being embedded into the clause. If the embedded clause, along with the main clause, forms a clause complex, this is called a ‘metaphenomenon’ (e.g., *I saw that she was walking the dog*). Whereas if the embedded clause is in nominal form
and is part of the main clause, this is called ‘macrophenomenon’ (e.g., *I saw her walking the dog*) and is considered an act rather than a projection (Halliday 1994, p: 449). Projection refers to locution, idea, offers, commands, suggestions, and facts. Both locution and idea are classified as ‘propositions’ and commonly use mental, verbal, and relational processes, whereas offers, commands, and suggestions are regarded as ‘proposals’. A fact comes in the form of a projection but is not a projection clause (Halliday 1994, p: 264).

a) **Locution:**

Locution refers to quoting, and it comes in both paratactic and hypotactic forms. Paratactic locution refers to direct quoting and is generally more commonly used (e.g., *she said: “do you have a dog!”*). A hypotactic locution, on the other hand, reports on the phenomenon or event at hand. Thus, it gives the speaker various choices of processes to comment on the content of what is said or how it was said (e.g., *she asked if I had a dog*) (Halliday 1994, p: 452).

b) **Idea:**

Idea projects ‘meaning’, unlike locution, which projects ‘words’. Paratactic idea expresses a thought or an idea as if it were a speech (e.g., *I believe ‘she is smart’*). It always uses the mental process, using verbs such as think, believe, wonder, and reflect (Halliday 1994, p: 456). Hypotactic idea also projects meaning through the use of mental process, but it differs from paratactic idea in that it doesn’t use quotes (e.g. *I think she is smart*).

c) **Offers, commands, and suggestions:**

These three projections are classified as proposals. Paratactic proposals are similar to paratactic propositions;
they use the same processes used in a proposition and are marked as quotes. They are different from locution and idea in that they express offers commands and suggestions and can also use processes that project these meanings (e.g., offer, suggest, urge, etc.)

E.g., *she warned me: “do not go there!”*

Hypotactic proposals can be either finite or non-finite. Non-finite proposals always come in an imperfective form (e.g., *he told me to stay*). Hypotactic proposals also use the mental process but are expressed by an ‘affective process of reaction’ (e.g., *wish, hope, fear, etc.*)

d) **Facts:**

A fact clause has two forms; it can be a nominalisation, or a qualifier to another fact noun. The first and the second form are very similar; the only difference is seen in either using the ‘fact’ noun or not.

That he was worried made us all worried

The fact that he was worried made us all worried

In the first example, we can see that ‘that he was worried’ is a nominalisation on its own, whereas in the second example, ‘that he was worried’ is a qualifier to the noun ‘the fact’.

Halliday & Matthiessen (2004) further explained that a fact clause could occur in three different situations: be projected impersonally (e.g., *it is the case that*...), have a relational process (e.g., *it is a pity/obvious*...), or have a mental process in the clause complex that does not project the fact clause (e.g., *Mark Antony regretted (the fact) that Caesar was dead*). (2004, p: 476)
Table 5 below offers a summary of the main categories that the research discussed earlier of the logico-semantic relations:

**Table 1: Summary of the main categories of logico-semantic relations**

<table>
<thead>
<tr>
<th>Description</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expansion</strong></td>
<td></td>
</tr>
<tr>
<td>Elaboration</td>
<td>=</td>
</tr>
<tr>
<td>Expansion refers to the use of restatement,</td>
<td></td>
</tr>
<tr>
<td>clarification, or explanation in one of the</td>
<td></td>
</tr>
<tr>
<td>nexus clauses</td>
<td></td>
</tr>
<tr>
<td><strong>Extension</strong></td>
<td>+</td>
</tr>
<tr>
<td>adding to the meaning of the other clause in</td>
<td></td>
</tr>
<tr>
<td>a clause nexus</td>
<td></td>
</tr>
<tr>
<td><strong>Enhancement</strong></td>
<td>x</td>
</tr>
<tr>
<td>the secondary clause enhances the meaning of the</td>
<td></td>
</tr>
<tr>
<td>primary clause by providing information about</td>
<td></td>
</tr>
<tr>
<td>time, place, manner, condition, or cause</td>
<td></td>
</tr>
<tr>
<td><strong>Locution</strong></td>
<td>&quot;</td>
</tr>
<tr>
<td>Locution</td>
<td></td>
</tr>
<tr>
<td>One clause projects another; the projected</td>
<td></td>
</tr>
<tr>
<td>clause is a quote of wordings</td>
<td></td>
</tr>
<tr>
<td><strong>idea</strong></td>
<td>’</td>
</tr>
<tr>
<td>One clause projects another; the projected</td>
<td></td>
</tr>
<tr>
<td>clause represents the meaning</td>
<td></td>
</tr>
</tbody>
</table>

3. **Data collection and methodology:**

3.1. **Data collection:**

The editorials analyzed in this research were published by Al-Ahram Weekly and The Egyptian Gazette’s daily and weekly editions in the time between March and July 2020. The articles tackle the economic and social impact of Covid-19 as well as international relations during that time. The six editorials are divided between the two newspapers; three editorials are chosen from each of the newspapers.

3.2. **Methodology:**
As for the analysis of the data, the research relies on UAM CorpusTool version 3.3 for the detection of clause boundaries. The CorpusTool has an integrated Scheme that offers Transitivity analysis of the texts. The research only aims to use the scheme to divide the text into clauses and clause nexuses.

**Figure 1:** Example of SFL-Transitivity analysis in UAM CorpusTool

Then, each clause nexus is manually analyzed to find the logico-semantic relation that the author used to link the clauses.

4. **Data analysis and discussion:**
The analysis offers a classification of the logical relations in the six editorials included in this research. Editorials 1, 2, and 3 are taken from Al-Ahram Weekly, whereas Editorials 4, 5, and six are taken from The Egyptian Gazette. First, the research will explore the frequency of Paratactic and Hypotactic relations in the texts. Then, expansion and projection will be separately discussed to find the most used type of these relations in the text. Finally, a comparison between the use of expansion and embedded expansion will be conducted to find out the linguistic preference of each of the newspapers.

In all of the editorials, hypotactic relations outweighed paratactic relations. This reflects the authors’ choices to arrange constructs that play unequal role through interdependency.

**Table 2:** Paratactic and hypotactic relations in the texts:

<table>
<thead>
<tr>
<th></th>
<th>Paratactic</th>
<th>Hypotactic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editorial 1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Editorial 2</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Editorial 3</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Editorial 4</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Editorial 5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Editorial 6</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

The lack of paratactic relations signals that the authors did not communicate his ideas as a rapid sequence of thought, but rather relied on secondary clauses to define what has been presented in primary clauses. This is common in newspaper texts and editorials, as there seems to be a
dominant idea and the author supports this idea or claim through the use of hypotactic relations.

As for the logico-semantic relations used, expansion was significantly more occurring than projection. Except for editorial 3, all the editorials relied on expansion rather than projection. Editorial 3 showed an increase in the use of the ‘idea’ and ‘fact’ relations, as shown in Table 3 below:

**Table 3:** Expansion and projection relations in the texts:

<table>
<thead>
<tr>
<th>Expansion</th>
<th>Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Elaboration</td>
<td>extension</td>
</tr>
<tr>
<td>Editorial 1</td>
<td>0</td>
</tr>
<tr>
<td>Editorial 2</td>
<td>0</td>
</tr>
<tr>
<td>Editorial 3</td>
<td>2</td>
</tr>
<tr>
<td>Editorial 4</td>
<td>0</td>
</tr>
<tr>
<td>Editorial 5</td>
<td>0</td>
</tr>
<tr>
<td>Editorial 6</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

As mentioned earlier, the authors relied on a main idea and used the secondary clause to define what has been presented in the primary clause. To do this, the authors opted for the abundant use of the enhancement relation, as can be seen in these examples:

$$\text{x} \beta \text{ As Covid-19 throws the global economy into havoc,} \text{ a international financial institutions have warned of a sharp decline in economic growth rates and a possible recession that could take years to recover from} \text{.}$$
Governments will be reviewing many policies related to travel and border controls, even if the international fight to combat Covid-19 proves quicker than some predict.

Some of the clause complexes showed use of more than one logico-semantic relation, as shown in the next examples:

It, along with other economies harmed by this crisis, will need more technical and technological support at this critical stage, which demands concerted multiparty efforts to ensure that the necessary liquidity is available so that building can continue and both private and public sector companies can grow.

The previous excerpt shows complex logico-semantic relations. It has both hypotactic and paratactic relations that vary between elaboration and enhancement. This shows that the author is not afraid of using more complicated clause complexes. It also follows the trend that there is a main idea defined by a number of secondary clauses.

The three editorials from Al-Ahram Weekly showed more use of elaboration and extension than those of The Egyptian Gazette. Similarly, the three editorials from Al-Ahram Weekly showed more use of idea and fact than those of The Egyptian Gazette, with enhancement and locution showing consistent results throughout the six editorials.

Table 4: Embedded expansion and expansion relations in the texts:
Finally, the six editorials showed balance between embedded expansion and expansion. The choices were in favor of the expansion relation with a very small margin.
References:


