

A Linguistic Study of the UN Environment Program

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Abstract

UNESCO sponsors the Declaration on Ethical Principles in Relation to Climate Change.(UNESCO, 2018). They involve ethical issues. Such morals entail the concept of obligation. This concept is a critical term in the syntactic paradigm. English speakers use important structures and terms to express obligation or necessity. This paper aims to identify how a Facebook page entitled UN Environment Program conceptualizes the concept of obligation or necessity in three posts that diminish and guide human behavior regarding harming the environment. These three posts that aim to spread awareness about climate change are under scrutiny. The study attempts to identify the kinds of terms and syntactic structures which these posts utilize to talk about moral issues and ethical principles relevant to climate change. The framework which analyzes the posts is the approach of Leech and Svartvik (1994). It utilizes some tools to show obligation or necessity. They include requests, advice, suggestions, warning, etc. This study uses three levels of analysis: syntactic, semantic ,and pragmatic ,and follows Van Valin's (2001) "An Introduction to Syntax"; Leech and Svartvik's (1994) "A Communicative Grammar of Englishand"; and Searle's (1969) "Speech Acts: An Essay in the Philosophy of Language".

Keywords: climate change, constituent analysis, obligation and necessity, semantic roles, and speech acts



Literature Review

Broto(2013) points out that climate change mitigation is a collective moral responsibility. Cuomo (2011) discusses how individuals might take responsibility for addressing climate change when corporations and governments refuse to do that. Michaelson (2011, p.1) discusses the ethical tension over whether countries have different responsibilities for climate change mitigation. Grudmann and Krishnamurthy(2010, p.125) present data from a corpus to show how the climate change issue has been framed differently in different nations. Russell (2022) explores some ways English speakers use to talk about moral issues and the main grammatical areas that are closely related to discussions about ethical issues, such as the idea of necessity or obligation. The current study is concerned with the linguistic analysis of the official Facebook page posts of the UN Environmental Program.

Moral Issues and Environmental Awareness

The United Nations Environment Program was established in 1972 to coordinate responses to environmental issues within the United Nations system. The aim of its official Facebook page is to develop environmental awareness. Sullivan(2022) identifies environmental awareness as "the understanding of natural environment protection and the activities that can cause harm to the environment". The program is based on the idea that humans have a moral obligation to protect the environment. According to Russell (2022), discussions about ethical issues involve the idea of necessity ,i.e., an action must be or must not be done. English speakers use many lexical items and many grammatical structures to discuss ethical issues. Discussions about morality involve, for example, positive adjectives such as right, correct, appropriate ,or justified ,as well as negative adjectives such



as wrong, incorrect, terrible, or unjustified. The data choice depends on their reflection on the ethical principles concerning climate change.

Influencing People

Language is a means of communication to express emotions and attitudes, and the speaker "often uses it to influence the attitudes and behavior of the hearer" (Leech and Svartvik, 1994, p.152). Among the ways that the English speaker can use language to influence people and get them to do something are a direct command, the construction be to + infinitive, the verb forms expressing obligation and prohibition, commands with grammatical subjects, weakened commands, requests, advice, suggestions, warnings, promises, and threats (ibid p. 165_172).

Data Collection, Description and Analysis.

The choice of the data depends on their reflection on the ethical principles concerning climate change. This study adopts a communicative approach. It supplies essential information about the grammatical forms and structures of three posts on the UN Environment Program's official Facebook page that aims to develop environmental awareness and responsibility among people. The sematic and syntactic levels of the analysis are done within the framework of the communicative approach in that it relates grammatical structuress to meaning. The semantic analysis is partially concerned with the concept of semantic roles. The analysis highlights the purpose of the vital lexical items that occur in these posts in terms of how they semantically show that people are morally responsible for environmental protection and climate change mitigation. The grammatical structures of some posts are not typically associated with the constructions highlighted by Leech and Svartvik



(1994) as a means of influencing people and getting them to do or not to do something. What carries the meaning in these situations is the apt choice of the lexical items. The lexemes are felicitous and well chosen when they serve the purpose of the posts, namely getting people to participate in climate change mitigation on a moral basis.

Eclectic Model

Van Valin (2001) discusses four theories of generative grammar Relational Grammar, the Government Binding, version of Principles and Parameters Theory, Role and Reference Grammar, and Lexical Functional Grammar (henceforth, LFG). Different combinations of the basic concepts and analytic tools employed in syntactic analysis are available in these four theories of Generative Grammar. The analysis of language can use them as a model. The basis for the description of clause structure in these theories is either constituent structure or relational structure, i.e., each theory assigns one or two structural representations to each sentence, e.g., LFG assigns a structural representation for its constituent structure (c-structure) and a structural representation for its relational structure (f-structure).In Lexical Functional Grammar, different types of linguistic information are represented. It's a useful tool for analysis (Borjars, 2020).

Van Valin (2001, p 4-5) distinguishes between these two aspects in the syntactic structure of sentences. Relational structure and constituent structure. Relational structure (f-structure) is a kind of syntax that describes the functions of sentence elements which are referred to as grammatical relations like subject, direct object, Indirect object, modifier-modified, possessor- possessed ,etc. Constituent structure concerns the organization of the units (called constituents) constituting sentences. These constituents include noun phrases (NPs), verb phrases (VPs), and



prepositional phrases (PP). Van Valin (ibid, p. 5) clarifies a significant point when he states that these two aspects are interrelated, e.g., a VP can be described in two ways: as a constituent that is composed of a verb and an NP or in terms of the function or grammatical relation between the elements that the unit consists of in that it involves the verb and its direct object.

The lexicon is essential in LFG, GB, and RRG.Lexical terms can be analyzed in some theories in terms of lists of thematic relations. Syntactic or grammatical relations should be distinguished from the semantic roles which are also called thematic relations or theta roles that the arguments bear to the predicate (Van Valin, 2001, p. 22). Argument, modifier, and predicate are syntactic functions. Grammatical relations are between the predicate and noun phrases.

For example, in the teacher read an interesting book, the predicate = read; the teacher is a noun phrase functioning as subject, and it is an argument; an interesting book is a noun phrase functioning as a direct object, and it is an argument; the ,an ,and interesting are modifiers. Another sentence with a copula be: Kim is tall has an argument (Kim) and a predicate that consists of both is and tall (ibid, p.8). Verbs are predicates; nouns are arguments; adjectives are modifiers. The copula be and subject complement constitute the predicate when the subject complement is a noun or an adjective (ibid, p. 9). Participants (arguments) in the state of affairs depicted by the predicate can be two, three, or only one. For example, give is a verb functioning as a predicate with three noun phrases functioning as arguments in that giving involves a giver, a recipient, and something given. The meaning of the verb determines the semantic roles of the arguments or participants in the action.

Relations between a predicate and its arguments can be of two main types: a grammatical relation like subject and direct object (the noun phrase before the predicate verb is subject and the one after it is object) and semantic roles like agent and patient.



Grammatical relations are independent of semantic roles. In English," the subject of a sentence can be the agent (active voice) or the patient (passive voice) "(Van Valin, 2001, p.23). The semantic relations holding between predicate (verb) and its arguments are of two types: the familiar semantic roles (like agent, patient, and experiencers) and semantic macro roles (they are only two: actor and undergoer).

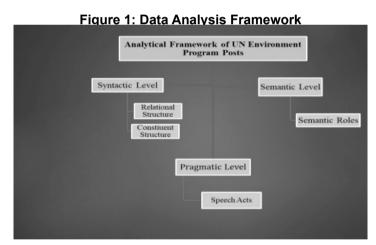
The model employed in the analysis of the data under discussion in this paper is an eclectic one. Its development depends on some analytic tools and basic notions used in the four theories of generative grammar discussed in Van Valin's (2001) "An Introduction to Syntax" and on a communicative approach presented by Leech and Svartvik. It supplies essential information about the grammatical forms and structures of three post extracts or posts on the UN Environment Program official Facebook page that aims to develop environmental awareness and responsibility among people. The sematic level and syntactic level of the analysis are done within the framework of the communicative approach in that it relates grammatical structures to meaning.

The meaning of the vital lexical items that occur in these posts is also explored in terms of how they semantically show that people are morally responsible for environmental protection and climate change mitigation. The grammatical structures of some posts are not typically associated with the constructions highlighted by Leech and Svartvik (1994) as a means of influencing people and getting them to do or not to do something. In these situations what carries the meaning is the apt choice of the lexical items. The lexemes are felicitous and well chosen when they serve the purpose of the posts, namely getting people to participate in climate change mitigation on a moral basis.

In short, an eclectic model of analysis developed by the researcher depending on several approaches to language analysis: selected analytic tools of four theories of generative grammar (RRG,LFG,BG,RG), Leech and Svartvik's communicative approach in addition to the speech act framework based on Searle's (1976)



classification of speech acts into representatives(or assertivs), directives, commissives, and expressives and declarations. The meaning of an utterance can be partly analyzed by identifying the speech act(s) the speaker intends to perform (Searle,1976). The basic unit of analysis is clause. Two types of clauses should be distinct; finite and non-finite. According to Leech and Svartvik (1994, p.193). The first word of the verb phrase in finite clauses is finite and "alters its form for past tense", and "a complete sentence has at least one independent finite clauses". For example, *Bill has /had gone to the office*. The verb element in non-finite clauses is a non-finite verb phrase that consists of an -ing participle, an -ed participle, or an infinitive. Non-finite clauses can be with or without a subject. For example, Entering the house is an -ing participle non-finite clause in *Entering the house*, *she tripped over the welcome mat*. The framework is illustrated in this figure.



Post one: Curbing Plastic Waste is a Shared Responsibility.

The grammatical structure of post1 single sentence is: subject + be + subject complement. A noun phrase occupies the subject complement slot. Its meaning enhances the post's aim that people are morally responsible for protecting the environment by curbing plastic waste. According to Oxford Learner's Dictionary, one



definition of the term responsibility is a moral duty to do something. The one-sentence post with the noun phrase a shared responsibility has the meaning of obligation. It aims to get people to curb plastic waste. Jacobs (1995, p. 227) suggests an obligation is imposed because the speaker has a reason. The reason for obliging people to curb plastic waste is that limiting plastic waste is a collective shared responsibility. In other words, curbing plastic waste is a collectively moral duty that has to be shared and done by all members of society. Although the construction subject + be + subject complement is not typically used in discussions about moral issues, the occurrence of the noun phrase a shared responsibility is felicitous, well-chosen for achieving the post purpose, i.e., highlighting the moral basis on which it calls for curbing plastic waste.

Curbing plastic waste is an -ing participle clause that functions as the subject of the one-sentence post. The subject of the predicate *curb* is omitted but can be guessed and implied from the context: it can be the plural pronoun we or *humans* in general. The noun phrase plastic waste is the object of the verb *curb* which is the predicate of the ing clause subject. The omitted noun phrase supposed to be the subject and plastic waste are arguments of the predicate. The participants involved in curbing are two: the omitted word *people* and the explicit noun phrase plastic waste. These participants hold the semantic roles of the actor (people) and the undergoer (waste), respectively.

The copula be (is), and the noun phrase a shared responsibility constitute the predicate of the whole sentence curbing plastic waste is a shared responsibility. A contextual clue that helps interpret the omitted doer is that a shared responsibility is an object that requires a human subject. They are morally obliged to curb plastic waste. The situation is that plastic waste causes trouble to humans worldwide, and the appropriate action expected from them to take within their environment is to curb it. If the post says curbing plastic waste is a shared responsibility, you have to do something to stop the damage being done to the environment by humans simply because it is a shared responsibility.



An assertive speech act helps the speaker expresses a point of view confidently. Among the synonyms of the word assertive are emphatic and decisive. The non-finite clause *reducing* plastic waste is assertive. The finite clause *reducing plastic waste is a shared responsibility* is an indirect directive. It tries to make people perform the action of reducing plastic waste by describing it as a shared responsibility.

The syntactic, semantic, and pragmatic aspects of post one analysis are available in Table 1: Post One. Semantic roles usually describe participants in the event. According to theta theory, verbs assign theta or semantic roles to the noun phrases that are obligatory in the verb phrase. Thus, in the illustrating tables, no semantic roles are assigned to non-finite clauses that occupy subject or object slots.

Table1: Post One

Clauses				Speech act
Non-finite clause:	people /you	Reduce	plastic waste	Assertive
Reducing plastic				
waste				
Constituents	Implied NP	Verb	NP	
GR	Subject	Verb	Object	
SR	Actor		Undergoer	
Finite clause	Reducing	is a shared	a shared	Directive Obligation:
Reducing plastic	plastic waste	responsibility	responsibility	you are collectively
waste is a shared				responsible for
responsibility				reducing plastic
				waste.
GR	Subject	Predicate	Subject	
			complement	

Abbreviations:

SR= semantic role

GR= grammatical relation

NP= noun phrase



VP = verb phrase

PP = prepositional phrase

Post Two Analysis

Burning fossil fuels like oil, coal ,and natural gas causes air pollution. Keep fossil fuels in the ground for a healthy planet and healthy humans. Burning fossil fuels like oil, coal ,and natural gas is a non-finite clause whose implied subject can be people. The verb burn assigns the semantic role of the actor to the implied subject and the undergoer to the object noun phrase fossil fuels like oil, coal and natural gas. The non-finite clause functions as the subject of the finite clause burning fossil fuels like oil, coal and natural gas causes air pollution. It can be interpreted as people who burns fossil fuels cause air pollution. The verb causes assigns the role of stimulus to the implied people or humans who burns fossil fuels like oil, coal, and natural gas and the role of theme to the object noun phrase air pollution. The second sentence is a command. The verb keep assigns the theta role of actor to the implied subject you or people and undergoer to fossil fuels.

The post's two sentences constitute an extract that introduces a video post. It consists of two sentences. The first sentence is a reason for giving a command in the second. *Burning fossil fuels like oil, coal and natural gas* is a non-finite clause whose verb is an -ing participle and has no subject. The command sentence starts with an imperative verb, i.e., the base form of the verb, and has no expressed subject; when the subject is missing, there is an implied subject you (Leech and Svartvik, 1994, p. 253).

The second sentence of the post extract is a command. The implied subject is you or people to which the verb keep assigns the actor role. The role of undergoer is assigned to the object noun phrase *fossil fuel*. The noun phrase a healthy planet and healthy humans function as the beneficiary. According to Parker and Riley



(2010, p. 140), the beneficiary is "the entity that benefits from the action." The locative is the noun phrase the ground because it specifies the place where the action or event denoted by the verb is carried out.

The meaning of an utterance can be partly analyzed by identifying the speech act(s) the speaker intends to perform (Searle, 1976). A distinction between a speech act and a speech act set has to be clear. Murphy and Neu (1996) suggest that a speech act set combines individual speech acts produced together to constitute a complete speech act. For example the speech act set of complaining ends with a candidate solution. The two sentences of Post Two sentences can count as a speech act of complaining where the first sentence presents a reason for not being satisfied and the second is a candidate solution. Jacob (1995) suggests that the speaker imposes a directive because for a reason. Here, the first sentence is a reason for the direct command in the second sentence. The solution is an imperative with an implied subject. An important point is clarified by Leech and Svarvik (1994, p. 165) when they state that direct commands used to get someone to do something are not impolite if they are for his own good i.e., the speaker tells the other person to do something useful. This explains why the UN post expresses the speech act of directives using an imperative speech act employed by Post Two first sentence is a representative, where the speaker (here the UN) asserts a proposition. According to Mey (1993, p120), a complaint is justified if its content is truthful and represents the world in a true manner. The content of the first sentence is truthful in force of the UN belief that one cause or reason behind air pollution is the act of burning fossil fuels. The second sentence embodies a directive acting as an attempt by the UN to get people in charge to stop this. The purpose of This direct speech act of directives is expressed by an imperative is to make things happen in accordance with the UN's wishes and thus change the world.



Table 2a: Post Two:1st Sentence Burning fossil fuels like oil, coal and natural gas causes air pollution.

	Tilling lossii i	ueis like oli	, coai and na	iturai yas ca	uses an pon	ution.
						Pragmatic meaning of clause/ speech acts
Non-finite clause: burning fossil fuels like oil, coal and natural gas	People /you	Burning	Fossil fuels		Like oil, coal and natural gas	Representative or assertive.
Constituents	Implied NP: people	Verb	NP		PP	
GR	Subject	Verb	Object	Object		
SR	Actor		Undergoer			
Finite clause: Burning fossil fuels like oil, coal and natural gas causes air pollution.	Burning fossil fuels like oil, coal and natural gas	Causes	Air pollution			Representative
Constituents	An implied NP: people who burn fossil fuels	Verb	NP			
GR	Subject	Verb	Object			
SR	stimulus		theme			
Finite clause Keep fossil fuels in the ground for a healthy planet and healthy humans.	Implied you	Кеер	Fossil fuels	In the ground	For a healthy planet and healthy humans	Directive
Constituents	Implied NP	VP	NP	PP	PP	
GR	Subject	Verb	Object			
SR	Actor		Undergoer	locative	beneficiary	



Table 2b: Post Two: 2nd Sentence

Clause						Pragmatic meaning or speech acts
Keep fossil fuels in the ground for a healthy planet and healthy humans.	Implied you	Keep	Fossil fuels	In the ground	For a healthy planet and healthy humans	Directive
Constituents	Implied NP	V	NP	PP	PP	
GR	Subject	Verb	Object			
SR	Actor		Undergoer			

Post Three Analysis

From natural disasters to water shortages, the impacts of climate change are already being seen and felt globally. To protect against its severe impacts on the economy and human well-being, we must begin to adapt.

The first sentence lists two examples of the impacts of climate change in an initial position. It starts with two examples before the subject. Jacobs (1981) clarifies an essential point when he states that the terms noun phrase and verb phrase are distinct from the terms subject and object. Subject and object are names of grammatical relations (1995, p. 50). The noun phrase the impacts of climate change is in the subject position in the first sentence, which is written in the passive voice form. The corresponding active clause is we are already seeing and feeling the impacts of climate change globally, where the noun phrase the impacts of climate change is the object. Like the verb see, the verb feel has two distinct arguments, which are the two noun phrases that occupy the subject slot and object slot in the



active form, namely we and the impacts of climate change. Each argument is assigned a different semantic role from the other argument. The past passive clause has the same propositional content as its active voice counterpart. The difference lies in their arrangement. The subject noun phrase occupying the first prominent slot in the passive clause the impacts of climate change has the semantic role of the theme, whereas the experiencer 'we' is omitted. Thus, the passive clause specifies one fewer argument than its active counterpart. As for the order of the constituents, in the passive clause, the theme noun phrase comes before the verb because it is the subject, whereas in its active counterpart, the theme noun phrase comes after its verb because it is the object. Jacobs (1995, p. 159) points out that passive clauses in some contexts may be stylistically superior to their active. An essential role passives play in English syntax is that they enable speakers to place essential constituents in the initial position of the clause depending on discourse needs(Jacobs, ibid,p.156). The two noun phrases natural disasters and water shortages exemplify the impacts of climate change and have the semantic role of the theme.

The post' second sentence consists of the non-finite clause of purpose with an infinitive as its non-finite element and with no subject to protect against its severe impacts on the economy and human well-being followed by the main clause we must begin to adapt. The meaning of must is it's important or essential to do something. In other words, must expresses obligation. An implied subject of the infinitive clause is the same as the subject of the finite clause, namely we. Thus, the verb protect against assigns the semantic role of actor or agent to the implied we and theme to the noun phrase its severe impacts on economy and human well-being. The main verb begin in the non-finite clause assigns the theta role of the actor or agent to the subject we.



The speech act expressed in the post 1st sentence is expressive, whereas the speech act of the 2nd sentence is a commissive. Some important analytic points are illustrated in Table 3.

Table 3: Post 3

Clauses			Pragmatic meaning
A finite clause: the impacts of climate change are already being seen and felt globally	the impacts of climate change	Are already being seen and felt globally	Expressive
Constituents	NP	VP	
GR	Subject	Verb	
SR	Theme		
Finite clause: we must begin to adapt.	We	Must begin to adapt	Commissive
Constituents	NP	VP	
GR	Subject	Verb	
SR	actor	Verb	

Results of Analysis

Reviewing the analysis of the three posts reveals that various syntactic structures with or without non-finite clauses convey the idea of moral obligation. The omission of the subject noun phrase implies that humans are the intended subject. The verbs mainly assign the role of actor and undergoer to the obligatory noun phrases in the posts. The implied subject noun phrases and the explicit obligatory ones are given semantic roles. The speech acts in one-clause sentences and the two clauses sentences are various: directive, expressive and assertive.



Discussion of Analysis

The United Nations employ all the three main linguistic aspects (syntactic, semantic and pragmatic) in these three environmental posts to reflect the ethical principle that climate change mitigation is a moral obligation. The UN employs these posts to oblige human beings to reduce harm to the environment. Through using various syntactic structures with explicit or implied subjects that refer to people, it is clear that it is our duty to protect the planet. As for the semantic aspect, the posts are rich with expressions emphasizing the moral imperative to participate in reducing climate change effects. The speech acts in these posts express moral obligations explicitly through the directive type and implicitly through the assertive and expressive types.

Conclusions

- Environmental awareness posts consist of short brief sentences to be concise and easy to understand and remember.
- They do not necessarily employ direct obligations or necessities.
 Instead, the posts also utilize indirect obligations. Justifications and explanations mitigate direct obligations.
- These environmental awareness posts utilize passives and omitted subjects as the emphasis is on achieving actions rather than stating the doers of the actions.
- 4. Action to save the environment is necessary in such posts. Thus, it is expressed via directive speech acts.

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دراسة لغوية لبرنامج الامم المتحدة البيئي

مستخلص

ترعى منظمة اليونسكو "اعلان المبادئ الاخلاقية للتغيير المناخي" (اليونسكو، 2018) الذي يتضمن قضايا اخلاقية واخلاقيات تنطوي على مفهوم الألزام . ان مفهوم الالزام مصطلح هام في علم النحو. ومتكلمو اللغة الانكليزية يستعينون بتراكيب ومصطلحات هامة للتعبير عن الضرورة اوالإلزام . ويهدف هذا البحث الى بيان كيفية التعبير عن ذلك في صفحة على وسيلة التواصل الاجتماعي الفيسبوك عنوانها "برنامج الامم المتحدة البيئي" في ثلاث منشورات هدفها توجيهي للحد من الاضرار بالبيئة ونشر الوعي حول التغير المناخي . اذ ان الدراسة تحدد المصطلحات والتراكيب النحوية التي استثمرتها المتشورات للتحدث عن ما يتعلق بالتغير المناخي من أخلاقيات ومبادئ . والاطار التحليلي للمنشورات النموذج الذي وضعه ليتش وسفار تفيك Abertal والإلزام الطلب والاقتراح والتحذير وما الى ذلك . فالتحليل ثلاثي عن الضرورة او الإلزام الطلب والاقتراح والتحذير وما الى ذلك . فالتحليل ثلاثي الابعاد دلالي ونحوي وتداولي باتباع ثلاثة مصادر وهي: "مقدمة لعلم النحو" لمؤلفه وسفار تفك Van Valin (1994) و "النحو التواصلي للغة الانكليزية" لصاحبه ليتش وسفار تفك Searle في فلسفة اللغة" لكاتبها سير ل Searle (1994).

الكلمات المفتاحية: التغير المناخي ، تحليل المكونات ، الإلزام او الضرورة ، الأدوار الدلالية ، وافعال الكلام