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The Logical Pragmatics of Arguments in Argumentation

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Abstract

Logic is understood so far as a product perspective, either formal or informal. The topic is still, though interesting, imprecise, sketchy and problematic. Besides, the relevance of logic to linguistics has not been explained. This research focuses on dealing with logic as a product and a process. It introduces how logic is relevant to understanding language. Logic is surely not irrelevant to real human language. In this research, we coin 'logical pragmatics' to refer to "the structure of an argumentation and its parts used by the speaker for the purpose of persuasion to have an effect in the addressee and passive audience". As such, the research mainly aims at providing a definition of "logical pragmatics" as well as developing an ideal model for it. To accomplish this aim, the research studies what this approach entails and the relevance of logic and pragmatically oriented contributions to the field of argument and argumentation. The study mainly concluded that in real communication, simple logical relations become very complex and part of a wider context where we have a speaker's communicative intention, a hearer's communicative inference, and context.

Keywords: argument, argumentation, hearer's communicative inference, logical pragmatics, speaker's communicative intention

التداولية المنطقية للحجج في الحجج

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المستخلص

يفهم المنطق على أنه منظور المنتج أما كونه منظورًا حسابيًا أو كونه منظورًا غير حسابي (واقعي). لا يزال هذا الموضوع على الرغم من أنه مثير للاهتمام يحتمل النقاش والجدل ولم يتناول بدقة وإنما بشكل سطحي؛ فضلًا عن ذلك، لم يتم توضيح علاقة المنطق بعلم اللغة. ينصب التركيز في هذا البحث على التعامل مع المنطق بوصفه نتاجًا وعملية تمر في مراحل؛ لذا يوضح البحث كيف أن المنطق له علاقة بفهم اللغة. فالمنطق بالتأكيد له علاقة بلغة الإنسان الواقعية. في هذا البحث، تناولنا التداولية المنطقية بوصفها بناء للحجج وأجزائها التي يستعملها المتكلم لغرض الإقناع للتأثير في المستمع والجمهور. وهكذا، يهدف البحث بشكل رئيس تعريف التداولية المنطقية، فضلًا عن تطوير نموذج مثالي لها. ولتحقيق هذا الهدف، يدرس البحث ما تتضمنه هذه المنهجية وأهمية المنطق والإسهامات التداولية إلى حقل الحجج والحجاج. من بين الاستنتاجات أنه، في التواصل الحقيقي، تصبح العلاقات المنطقية البسيطة معقدة للغاية وجزءًا من سياق أوسع حيث يكون لدينا القصد التواصلية للمتحدث، ولدينا الاستدلال التواصلية للمستمع، ولدينا السياق.

الكلمات المفتاحية: الاستدلال التواصلية للمستمع، التداولية المنطقية، الحجج، الحجج، القصد التواصلية للمتحدث



1. Introduction

Many linguists agree with the classical view that understanding the compositional meaning of, say, sentences (elements, premises, propositions, etc.) in a language through human interactions is decided through understanding the meaning of each sentence and how they are put together. However, Szabo (2013) argued, like some other linguists, that in human languages "the very same sentence can mean one thing in one context of use and quite another thing in another" (p. vii). This is true on the basic ground that to determine whether the proposition is true or false (consider Fig. 1 below) depends on the context and not only on its compositional meaning. For example,

(1) John says that the moon is made of green cheese.

Here, we notice that this proposition is false, though its compositional meaning states that *the moon is made of green cheese*, based on the simple fact that the moon is not made of green cheese. However, the meaning that the speaker intends to convey still depends upon the pragmatically oriented composite meaning of other propositions in the whole argument.

The following sections are devoted to: first providing a definition of "logical pragmatics", distinguishing between logic and informal logic. Then, theories of logic will be given attention. Next, logic in the wider context of argumentation is dealt with. Then comes the strategies and criteria of logical pragmatics to end our research with a theoretical ideal model for logical pragmatics followed by a section of conclusions.

Accordingly, the aims of the current research are presented in the form of the following questions: (1) what is logical pragmatics? (2) what are the criteria of logical pragmatics? And (3) what are the strategies of logical pragmatics?

2. Theoretical Background

2.1 Logical Pragmatics

Unlike classical logic where propositions are simply either true or false, to us, logical pragmatics is:

A field that combines logic and pragmatics that takes into account a speaker's intention, a hearer's inference, and the context when figuring out the overall composite meaning from a group of propositions of an argument and how they are structured and utilized by the speaker to support his/her claim and reach the best desired outcome.

For example, though the speaker's proposition in the above example is false, he may intend to convey a certain meaning which can be reached through the speaker's and hearer's shared knowledge, and the context; and this is undone unless the hearer refers to the other propositions the speaker utters. Moreover, if the proposition is false and not relevant to the whole argument, why does the speaker make efforts to utter it? As such, we can postulate that the speaker's complete composite meaning is derived from propositions (i.e., the intended meaning), and how they are inferred by the hearer can be determined through the argument's elements and structure where logic and pragmatics play a core role.

Turning to logic, it can be codified as the art of reasoning. It is the art of logical relations. Certain formulas have strictly been assigned to it, such as the deductive syllogism. But human language cannot be limited to such fixed kinds of reasoning. As such, a lively debate has inspired researchers concerning the use of logic in arguments. Since humans began to communicate, each language user has his/her own expectations and aspirations on how to uncover the strongest tenets of his/her language. However, the ultimate goals are similar, since all human beings share the common intention of using language for communication. Ghabban (2021) further posited the importance of the internal structure of communication.

As per pragmatics, we cogently envisage here that the rules of pragmatics are enforced by society on the ways a particular language is used



as well as on the speakers and hearers of that society. We believe that these rules are enforced on logic as well. For example, any speaker may provide incomplete sentences or incomplete arguments even though speakers of a particular language are supposed to provide complete ones. We are going to discuss in this research the possibilities and interpretations of such incompleteness as far as logic is concerned. Incompleteness is not unintentionally used by speakers. Besides, not all propositions and the relations between them are direct and easily detected. Thus, to decide the acceptability of an argument and its propositions depends on the relevance that holds among the argument's propositions in support of a certain claim. This means that the logical intention produced by a speaker and the inference reached by a hearer and how arguments are accepted or not grant logic a pragmatic force.

2.2 Criteria for Logical Pragmatics

To decide true and false propositions or strong and weak ones, there should exist certain criteria. Carnap (1937) stated that it is hardly feasible to try and figure out the unsystematic and logically imperfect structures that are in use. Thus, he (1938) stated that attention should be paid to "the action, state, and environment of a man (*a speaker*) who speaks or hears *any language*" [italics ours] (p. 4). He called this as a complete theory of language, and he used the term 'pragmatics'. For Alston (1964), logic is the "attempt to devise criteria for separating valid from invalid inferences" (p. 3). That is absolutely correct, but how are we going to do that? For Wenzel (2006), logic is the study of standards by which one can evaluate arguments as acceptable or not. He added that it is a set of statements: of a claim and supporting premises.

Furthermore, (for Chapman, 2011), logic is seen as "the best possible system for explaining how meaning works [...] or ideally should work in language" (p. 23). Chapman noted, that "reactions to logical positivists' accounts of meaningfulness had profound effects on subsequent developments in philosophy, which

in turn had consequences for the beginnings of pragmatics" (p. 49). If we ascribe to logic only those simple mathematical relations that hold between propositions, this means that logic is useless. If we say that propositions and the relations that hold between them are either true or false, then what about those which are difficult to be determined as true or false, should they be shelved and ignored? In natural life situations, we hardly stick to true and false propositions. Rather, we find that logic is concerned with propositions and the relationships that hold between them when they are uttered, which is closer to a descriptive than to a prescriptive kind of language; to discourse than to simple relationships; to pragmatics than to semantics. One interesting point of view is that of Weiss and Weiss (2012) who explained that nearly all courses and books on argumentation tend to tilt toward one of two different points of view: as inquiry (theoretical/critical thinking or formal logic) and as advocacy (applied/practical or informal logic). The authors posit the idea that we have either formal logic or non-formal logic. We can say that the former (where the audience or context is not considered) is theoretical in the sense that it is still in the mind - not spoken; whereas the latter (where the audience or context is considered) is practical and no longer in the mind -but spoken.

Logic is known to challenge the minds of others through flawless formal logical rules. Accordingly, it is thought that it is connected with mathematics and exactness. Weiss and Weiss (2012) stated that "we argue with a judge in mind" (p. 5). For example, according to them, good arguers are those who possess certain characteristics: leadership, effectiveness in writing or speaking, ability to think arbitrarily, confidence, and decisiveness. In this context, we can reach others' minds via ways other than formal logic.

Logic can be dealt with as part of our competence that is developed throughout life because of the enforcement of the rules of pragmatics pertaining to living in a society. We

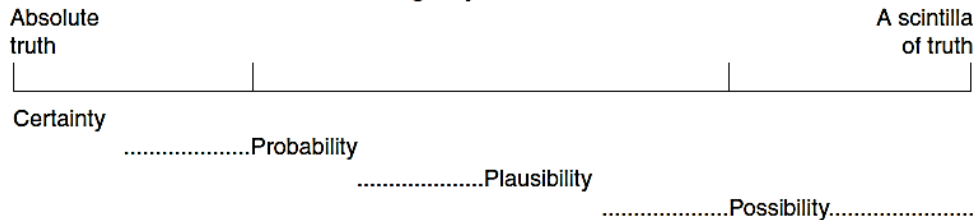


can say that people use logic as a series of propositions to interact with each other especially when they discuss critical points. Propositions are combined together in various ways for presenting different effects in the hearer's mind. They can be deductive, inductive, disjunctive, causal, symptomatic, analogical,

conductive, and presumptive (see Al-Juwaid, 2019, for more details).

To sum up, Freeley and Steinberg (2014) offered a promising unrivaled description of how logic works which supports our point here in this research. Fig. 1 below can help us understand how logic can arise in degrees from absolute truth to a scintilla of truth.

Figure 1
Cogency Continuum



Freeley and Streinberg's (2014) Cogency Continuum

We see that once uttered, propositions become part of a society, i.e., they are part of the cooperative principle, politeness, conversational implicature, and so on. In other words, once uttered, other factors are involved and enforce their influence on what speakers intend to mean by those propositions and how they are relevant to each other.

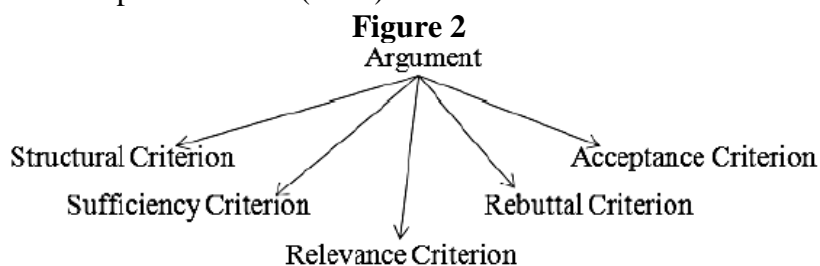
Thus, we still need to ask how we can appropriately judge that those propositions are true or false. How can we make others believe them to be true? A fairly complete theory of logic and how it is used in discourse requires us to incorporate a pragmatic perspective.

Thus, to determine the acceptability of a standpoint and to decide the strength of propositions and how they are utilized to support a standpoint as far as logical pragmatics is concerned, our research adopted Damer's (2013)

five criteria: structural, relevance, acceptance, sufficiency, and effective rebuttal. According to him, an argument must have:-

- a. a well-formed structure,
- b. premises that are relevant to the truth of the conclusion,
- c. premises that are acceptable to a reasonable person,
- d. premises that together constitute sufficient grounds for the truth of the conclusion, and
- e. premises that provide an effective rebuttal to all anticipated criticisms of the argument, respectively.

These criteria of good arguments are depicted in Fig. 2:



Damer's (2013) Criteria of a Good Argument



Acceptability and strength of an argument's propositions can come in degrees according to the criteria that are satisfied by a speaker. If an argument does not satisfy all these criteria, it can be regarded as less logical. As such, some arguments are strongly logical in relation to others.

To recapitulate, authors devote a considerable amount of time to figuring out what constitutes a good argument. Various fields of study and genres (political, social, religious, legal, literary, clinical, academic, and so on) have been dug into and have captured the attention of great scholars and researchers. The following section will take into account the possibility of an ideal model along the "logical pragmatics" approach.

2.3 Theories on Logic

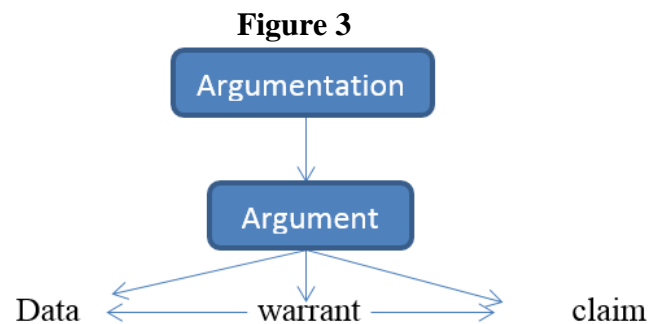
The ideal model, this research proposes, deals with all aspects of an argument as a product and as a process. The product depends on the process in that it is necessary, if we want to reach an appropriate decision and the right force of logic, that we go further beyond the domain of the argument itself to include the process of two people arguing their standpoints. The following sections discuss the theoretical background from which the model has been proposed in addition to our own observations.

2.3.1 Logic and the Elements of Argument (Toulmin, 2003)

Stephen Toulmin stated that logic is considered as "a development of sociology rather than psychology" and is concerned with social practices (p. 3). How people communicate their ideas or assert (whether to claim something or to defend it) their claims is invariably influenced by the knowledge that they gathered and gained from their parents, friends, teachers, etc. (i.e., what their society offers them). For individuals to reach and share an intellectual understanding (among other things), it is important to focus on the communicative processes involved in argumentation; processes that have an effective impact on our life and our well-being.

As such, logic can be regarded as a process of linguistic and social interaction. Earlier, Toulmin, Rieke, and Janik (1984) stated that the use of language is for the purposes of reasoning where a speaker presents his/her claim and supports it with premises. Accordingly, Toulmin (2003) presented logic as justified actions in the course of arguing and as the application of practical assessment with the use of arguments.

As for the elements of an argument, Toulmin proposed that it involves data, warrant and claim. Data is defined as reasons, facts or supporting evidence that bolster the claim (conclusion) which refers to propositions speakers ask other people to accept and respond to. Data can also be opinions, or quotations. Data and claim are linked to each other by means of inferences as warrants. Toulmin argued that after a claim has been challenged, participants must be able to make the claim convincing and justifiable. Al-Hindawi and Al-Juwaid (2018) portrayed the relationship between argument and argumentation as in Fig. 3:



The Relationship between Argument and Argumentation

Here, we can find that the elements (data, warrant and claim) as pragmatically oriented strategies help the speaker to argue well in the sense that a claim needs to be explained and supported with clear logic through the relationship that holds between the claim and the supporting elements (data and warrant).

It is worth citing that as per Aristotle's syllogism and enthymeme, Toulmin's contemporary approach to arguments is different



from Aristotle's classical logic in the sense that the structure of classical logic is in terms of syllogism and enthymeme, whereas the structure of Toulmin's logic is in terms of claims, grounds, warrants, backing, modal qualifications and possible rebuttals (see Freeley and Streiberg, 2014; Al-Juwaid, 2019).

The current research's ideal model deals with an argument as a series of propositions that are uttered to achieve a point. These propositions epitomize the arguments' elements (data, warrant and claim). Each of these elements represents a certain speech act that a speaker intends to convey.

2.3.2 Logic and Pragmatics (Walton, 2008)

Douglas Walton (1990) showed that formal logic and informal logic are complementary rather than adversarial. This means, Johnson (2000) stated, that "formal logic deals with the syntactic and semantic aspects of arguments, whereas informal logic is more concerned with the pragmatic aspects" (p. 149, italics ours).

Moreover, Walton (1990) clarified the matter stating that while formal logic has to do with syntax (forms of structure) and semantics (truth values), informal logic has to do with "the uses of argumentation in a context of dialogue, an essentially pragmatic undertaking" (pp. 418-9). In other words, Johnson (2000) stated that "Walton relied on the traditional distinction between syntax, semantics and pragmatics, assigning to formal logic the syntactic and semantic aspects of the study of argumentation, and to informal logic the pragmatic aspects" (p. 103). Walton stated that logical pragmatics can be "conceived of as the study of the uses of reasoning in a context of discussion" (p. 402). Logic, according to Walton, can comprise "the uses of reasoning as emerging practices" because in a critical discussion we have a point of view to be expressed and argued. Reasoning needs to be placed in a pragmatic context of use to be fully understood (p. 403).

Our current research ideal model relies on Walton's ideas concerning logical pragmatics. Our model makes use of logic (as a series of

propositions) and pragmatics (how these propositions are relevant to each other to support a certain standpoint where the speakers' intentions, hearers' inferences and the context are taken into account).

2.3.3 Logic and the Illative Core (Johnson, 2000)

Ralph Johnson advocated a broader method to evaluate arguments than the older one of formal logic. According to Johnson, formal logic is different from informal logic in that the latter is a social, communicative practice of argumentation.

Johnson stated that an argument is situated within the context of dialogue. Accordingly, he posited an illative part he called the *core*, and postulated a dialectical part he called a *tier*. The core is basic, whereas the tier is secondary and yet essential to build a mutual process of interaction between the speaker and the hearer as well as the passive audience. We see that the core is in the domain of logic, whereas the tier is pragmatically oriented. We believe that when the two come together, then we have what we call logical pragmatics, i.e., where logic in the context of argumentation is worked through when the speaker's intention, the hearer's inference, and the context are involved. 'Dialectical' here means that the product is still subject to obligations, i.e., a speaker and a hearer have to follow such public commitments in front of the passive public audience. Accordingly, one's argument is to be either accepted or refused by the other and the audience.

Here, our ideal model has been depicted as a speaker's series of propositions reasoned by the speaker to support a certain standpoint. The propositions may be countered by others in case it is a two-way kind of interaction. As such, logical pragmatics can be portrayed as either a one- or two-way interaction where two people reason their standpoints.

2.3.4 Logic and obligations (Blair, 2012)

Another treatment of logic is by Blair who showed that for a speaker to reason well, he has to base his standpoint on certain logical



obligations. He described these as moral obligations. We can add that moral obligations are considered as cooperative on the grounds that for the conversation to continue, a speaker and a hearer have to follow certain obligations between themselves and the passive hearing audience. They have to commit themselves to say the truth and nothing but the truth. Blair explicated further that informal logic fluctuates between critical thinking and what he called argument management and cannot be reduced to one of them. By argument management, he referred to the "interpretation, structural analysis, and evaluation of arguments, a set of practices that in combination represent argument assessment" (p. xii). Argument management helps us to understand that the components of an argument and how they are used by a speaker (with a specific intention and in a specific context) cannot simply be narrowed to a formal structure or strict logical standards of arguments. Whether there are other people listening to the speaker and the hearer or not, there are certain obligations that the speaker and the hearer have to consider in conversation.

It is worth mentioning here that mention of obligations reminds us of Paul Grice's cooperative principles and Frans van Eemeren's rules of critical discussion (see Grice, 1975, and van Eemeren, 2001, for more details). Here, we advance the idea that a speaker and a listener have to observe these obligations as part of their credibility and responsibility in front of people who are hearing.

This section helps us understand that there are certain obligations that a speaker and a hearer adhere to in the interactional process.

2.3.5 Logic and Audience Perception (Tindale, 2015)

Christopher W. Tindale (2015) shed some light on logic from the perspective of the audience perception. He explained that logic

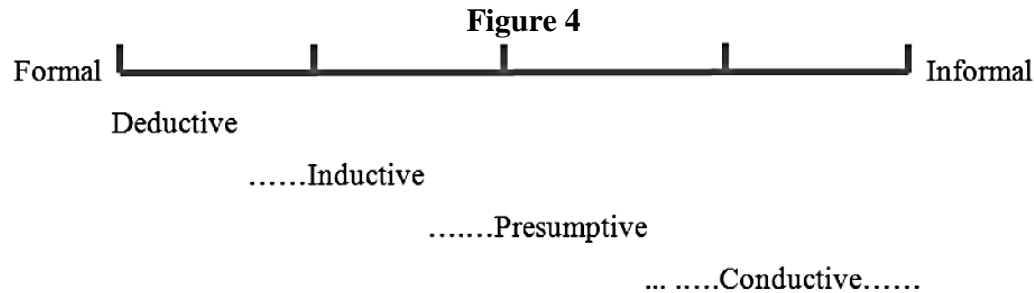
cannot be isolated from the social debate. The audience, whether active participants or just passive listeners, are part of the decision to be taken.

Tindale (2015) dealt with logic as a strand that values formal validity, postulating that logic is traditionally the most pronounced strand in arguments. He stated that in this tradition, logic in an argument is regarded as the product of a claim/conclusion structure. Argument can be regarded as a product that achieves its goal along with the process of argumentation. As such, the context represented by the audience is taken into consideration. Informal logic has been developed as a compelling alternative to formal logic. This deals with a deeper assessment of arguments and with problems associated with everyday reasoning which happen in actual and natural circumstances. Here, the important point is that a passive audience is directly or indirectly involved in the interaction which a speaker should take into account.

2.3.6 Logic and Cogency (Al-Juwaid, 2019)

Al-Juwaid stated that "logic can be portrayed as the product (argument) that is part of the process (argumentation)" (p. 8). As a product, argument here is part of argumentation in the sense that it relies on argumentation in order to reach an appropriate decision concerning the whole process where the participants exchange their arguments to end with one argument prevailing over the other.

Al-Juwaid drew a distinction, based on Walton (2008), between classical logic and logical pragmatics. He traced the development of logic from formal to informal (see Fig. 4) and suggested that logic can come in degrees in the sense that it is conceived according to the way a speaker structures his argument: deductive, inductive, presumptive, conductive among others.



Degrees of Logicality from Formal to Informal (adopted from Al-Juwaid, 2019)

By the formal-informal-according to Tindale (2004), behind a logical sense of argument, whether formal or informal, there is a further component: its intended aim, namely convincing the targeted audience to accept the speaker's argument's claim- continuum, he proposed that the relation that holds among an argument's elements is the one which is due to looking closely at the argument content and the relevance that holds among the argument elements. A speaker resorts to a structure whose propositions can be interpreted based on pragmatic phenomena such as the relevance that holds among the propositions. According to him, the acceptability of the speaker's argument is mainly considered with reference to certain logical criteria where the speaker should take into account advancing what will be attractive to the audience. Besides, a speaker should be aware of what leaves the audience dissatisfied. Surely then, a speaker has to consider a variety of pragmatic aspects, such as the cooperative principle, politeness principle, speech acts, conversational implicature, relevance, presupposition, inference, strategic maneuvering, fallacy, manipulation, and so on. He should consider what makes his argument logically more accountable so as to be accepted by the targeted audience.

We can understand from all these theories that they do not agree about the limited domain of classical logic. However, the domain to which logic belongs, say, philosophy or linguistics, has not yet been identified. We hope to provide fruitful explanation of how logic and pragmatics can come together.

2.4 Logical Pragmatics: Arguments as Parts of Argumentation

Johnson (2000) stated that there is a need to differentiate between argument and argumentation and he revised a definition of argument as "the distillate of the practice of argumentation" (p. 168). The American Heritage Dictionary 1981 (as cited in Rehg, 2009), defined good arguments as those arguments which are not easily resisted.

The idea of argument as a product is to fit argument to a certain predetermined logical form like a syllogism (Wenzel, 2006). Wenzel used the following example to illustrate this point,

(2) A vote for my opponent is a vote for higher taxes.

Here, the formula that can be constructed is that if you vote for my opponent, this means that higher taxes will be the result. Thus, you should not vote for him.

Argumentation refers to "the global process of defending and criticizing a thesis" (Walton, 1990, p. 410). For Wenzel (2006), to evaluate an argument and understand such an example "requires re-situation of an argument in a context where it can be evaluated with respect to form, substance and function" (p. 20). Earlier, Johnson (2000) also agreed that argument as a "product emerges from the practice of argumentation and must be understood in that context" (p. 144). An argumentation, whether it is a one way (monolectical transaction- one reasoner) or a two way (dialectical transaction- two participants reasoning together), is regarded as a process in the sense that it brings the hearer into



consideration (*the hearer* to whom the speech is delivered). In dialectical reasoning, Walton (1990) stated, each participant reasons based on the steps of reasoning of the other participant. Stated another way, argument as a product is part of argumentation as a process. Argumentation involves advancing an argument or series of arguments towards achieving the speaker's purpose.

A speaker and a hearer during the process of argumentation are committed to follow certain public obligations. Otherwise, they lose their face in front of the public. Groarke and Tindale (2004) argued that "to ensure that we argue in a reasonable way" we should take advantage of the [passive] audience "by respecting obligations that we have to a third party to an argument" (p. 9). They added that we should take seriously the audience's objections to our arguments, as well.

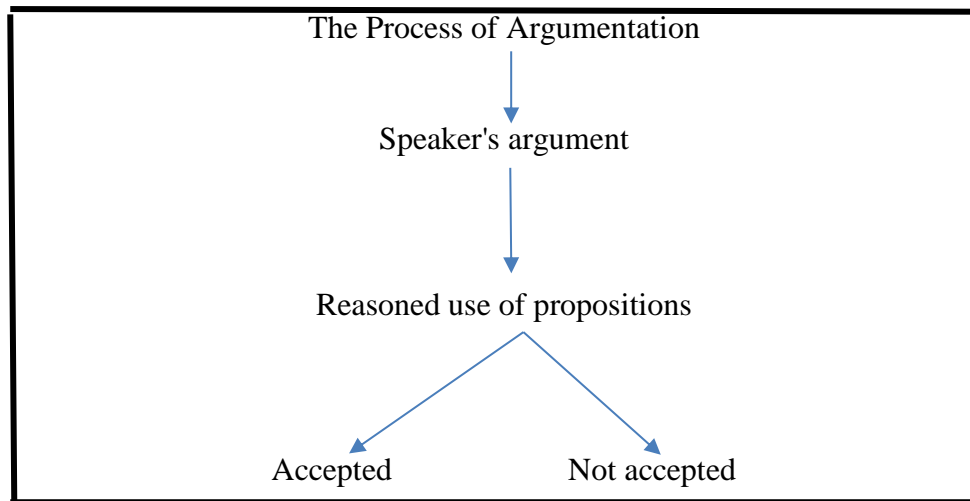
There should be a conclusion that we can work out from this claim/reasons structure. Pragmatics, Walton (1987) stated, is concerned with where such a conclusion comes from. We can say that some kind of relevance holds

between the elements of an argument. For example, to understand the whole structure and how the elements are related, we should pragmatically trace each element and see how pragmatically all the elements work together to support the claim.

According to Walton (2008), an argument is regarded as a reasoned dialogue. It is so since others' opinions affect it. Thus, speakers should carefully intend the suitable meaning. To persuade a hearer and the passive audience, an argument begins in the mind (i.e., thinking of relevant matters and format), is presented in reality, and then ends with how the hearer and audience receive it (accept it or not).

To put this in a nutshell, the structure of logical pragmatics as arguments as part of a wider context, i.e., the process of argumentation, can be presented in the following format in Fig. 5 where the arrows denote the flow of the interaction:

Figure 5



The Structure of Logical Pragmatics as Arguments as Part of Argumentation

From the illustration in this figure, we can say that logic is a process that goes from the mind of the speaker to the mind of the hearer or the passive audience. Whether it is accepted or not depends on its rationality and how well it

expresses a logical core along with the way the speaker structures his/her argument to make it more effective and reasonable. It is more accepted if it is more effective and reasonable on the ground that it is more attractive and it is more



amenable to not being rejected by the hearer or the audience.

Brandom (1994) explained that in the practice of arguing, two types of reasoning are available: monologic and dialogic. The former focuses on the commitment of one individual, whereas the latter involves the commitment of several individuals who are different in their social background. Whether a one-way kind of communication (like the monologic) or a two-way kind of communication (like the dialogic) is involved, commitment still refers to the obligations that a speaker and a listener must observe in front of the audience. However, we have stressed central pragmatic issues that both kinds of reasoning involve: a speaker's intention, a hearer's inference, and the context.

Still we can say that two types of logic are available as well: semantic and pragmatic. The following example (taken from Levinson, 1983, p. 292) showed that the truth or falsehood of some propositions cannot be determined unless reference is made to the speaker's intention, a hearer's inference, and the context.

(3)-

A: I want a room. B: OK A: I have one daughter and a dog. B: I am sorry.

Out of context the argument and its components are not always clear. Unless there is a second participant, the argument is unusual. B's second statement rejects the request for a room. And, we infer that the reason for the rejection is the inclusion of a daughter and a dog (probably, just the dog is the real reason). Thus, by reading "between the lines," and drawing on the assumed intention, the hearer's assumed understanding (as reflected in what B says) and what we can derive about the context, we arrive at an understanding of the reasoning from a logical pragmatics perspective.

The above example is a simple kind of two-way argumentation. In a more complex kind of argumentation where the logical form may be

incomplete, implicated or even seems illogical, more effort is needed to develop it into a meaningful and logically useful piece of arguing. And this is where *logical pragmatics* comes in, with its principal concern in helping us understand why what seems incomplete, implicated or even illogical makes sense and may be strongly accepted and relevant.

In a process of argumentation, a speaker should prepare and produce a claim that is true (one that is not questionable) and support it with sufficient reasons. Consequently, the cooperative principle as part of communication in a particular society is involved as rules that govern the use of language. Its rules or maxims are explained below in relation to the use of logic in communication:

- Quantity: Give the right amount of information (Grice, 1975). For example, there is no need to give more information than is required. Mentioning more information will not help in supporting your claim.
- Quality: Try to make your contribution one that is true (Grice). This means that you should not say something that both the hearer and the related audience know is false. Also, you should not mention something that you lack adequate evidence to support. A speaker has to present a proposition that he can support with evidence and reasons in order for it to be accepted as true by the audience.
- Relation: Your propositions should be relevant to each other and to your main claim.
- Manner: The way you present your propositions and how they support the main claim should not be ambiguous, or obscure. You should be brief and orderly as well.

For van Eemeren (2015), the adequacy of a "claim is supposed to be cooperatively assessed by eliciting premises" that serve as a commonly accepted starting point in a discussion (p. 9). He added that logic can be developed at the stage of argumentation to move the discussion to a more secure belief. A speaker should be confident and he/she has to make sure to present an argument that is logical enough so that essentially the



opponent is not able to deny it and also logical enough to be accepted by the audience to whom it is presented. Arguers aim to be logical in order to attract others' attention and thus cause a certain effect on their part, namely that they should be believed. According to Popper (1963), logic plays an argumentative function in communication where it represents the speaker's end during the communicative process.

However, if a speaker violates or flouts one or more of these maxims, a conversational implicature is intended. According to van Eemeren (2015), Grice's conversational implicature can help us identify unstated propositions which are mutually available in argumentation and "would be recognized by reasonable people". In communication, a claim and its supporting propositions are intended to cause a certain effect on the part of the hearer and the related audience. What is more logical and reasonable is more liable to be accepted by the related audience and not denied by the hearer. Now let's look at Example 4 (from Leech, 1983, p. 91):
(4)-

Steven: Wilfrid is meeting a woman for dinner tonight.
Susan: Does his wife know about it?
Steven: Of course she does. The woman he is meeting is his wife.

Here, the speaker says something (he is meeting a woman) that implies that the woman is a woman that the hearer doesn't know. Thus, through this proposition, the speaker wants the hearer to reach his real intended goal. Steven presents a true logical kind of proposition and thus he does not break the maxim of quality. However, he intentionally makes Susan think that the woman is not Wilfrid's wife and thus draw a wrong inference. Here, this causes the hearer to wonder why the speaker said that.

Accordingly, the surrounding context helps in building mutual understanding between participants in an interaction. The context can be

represented by the preceding and following propositions as well as the shared knowledge, background, and experience, among other context factors which help the hearer and the audience reach the right meaning the speaker intends.

3. The Practical Part

3.1 Methodology of the Study

The following section develops a theoretical ideal model of the structure of argumentation representing the logical pragmatics approach. The developed model provides a logical pragmatic perspective indicating the kinds, degrees, elements and criteria of logic as a core of an argument within the context of argumentation. This model mainly relies on the literature reviewed above in addition to the observations made by this research itself. This model constitutes an ideal apparatus to be used in the analysis of various political genres of communication.

3.2 The Logical Pragmatics Ideal Model

The present research aims to develop an ideal model to represent the logical pragmatics approach. The model is built taking into account the following points as far as logical pragmatics is concerned:

1. A speaker intends to convey a message (and he has to anticipate what will make his message believable). Thus, he utilizes a series of propositions that are highly structured and whose propositions are relevant to defend his standpoint (claim),
2. A hearer wants to infer what the speaker intends to mean,
3. The propositions once released become part of a larger context, i.e. argumentation where: a speaker's intention, a hearer's inference, the shared knowledge, and the related context should be taken into consideration.

It is time now to develop our logical pragmatics model of analysis based on what has been discussed above as well as on our own observations.

Both the speaker and the hearer are obliged to comply with the cooperative principle (in front

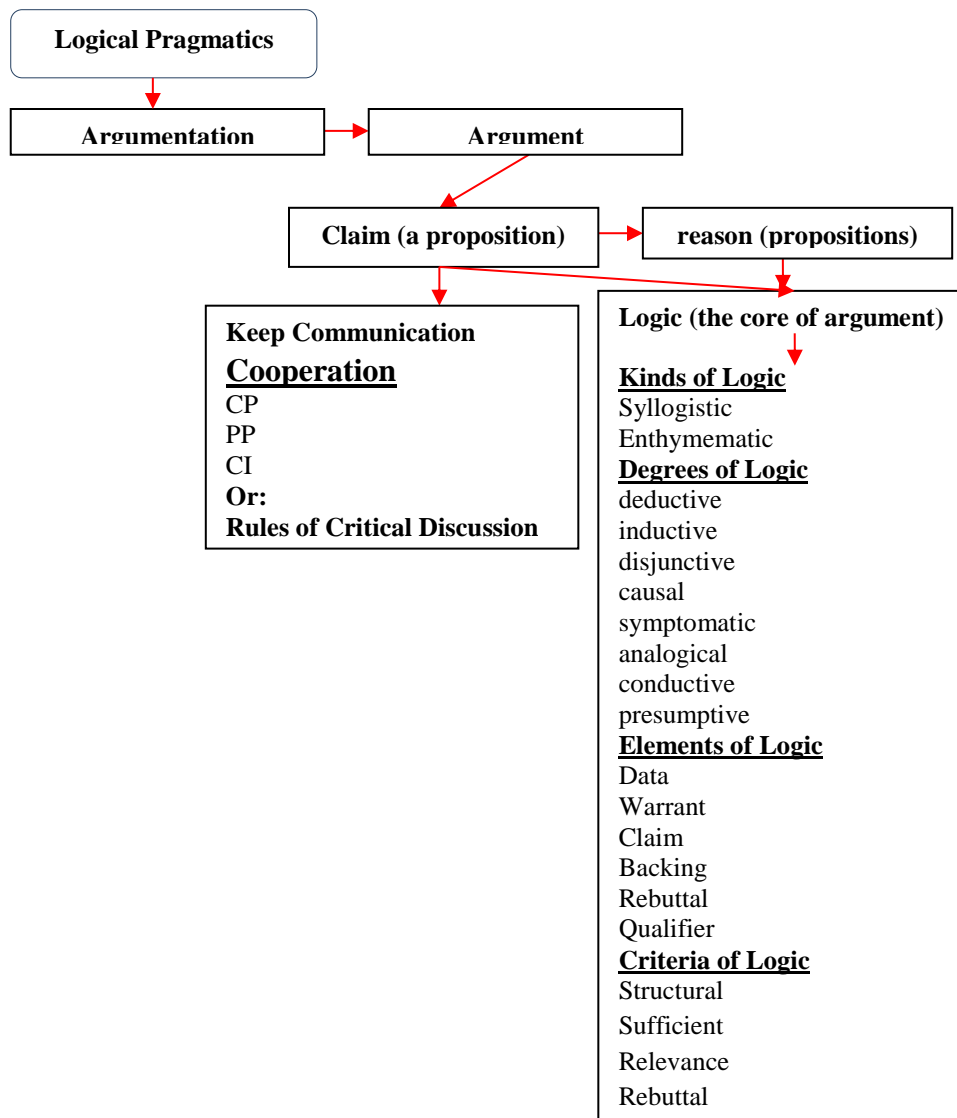


of themselves and in the mind of the related audience) to open the channel of communication and the politeness principle in order for the channel of communication not to be broken and thus continued. Throughout communication, they can challenge others' arguments logically through the use of reasoned propositions. They can use language logically in a skillful way so as to produce a particular effect in the mind of the hearer and the related audience.

In this model, we see that logical pragmatics involves the incorporation of kinds of logic (syllogistic or enthymematic), degrees of logic

from the most certain to the least (deductive, inductive, disjunctive, causal, symptomatic, analogical, conductive or presumptive), criteria of logical pragmatics (structural, sufficiency, relevance, rebuttal and acceptance)- see Damer (2013) for more details-, elements of logic (claim, data, warrant, backing, rebuttal and qualifiers)-see Toulmin et al. (1984) for more details-, and the logical pragmatics strategies (e.g. speech acts). These logical components are enforced once uttered by pragmatics rules: the cooperative and politeness principles. This structure of the logical pragmatics approach can be depicted in Fig. 6.

Figure 6



The Ideal Model for Logical Pragmatics



As we see in Fig. 6, the cooperative and the politeness principles are enforced on communication and on language. When a speaker finds himself in a clash between the cooperative and the politeness principles, he resorts to conversational implicature, i.e., through indirectness he keeps the channel of communication open (in order not, say, to be direct and impolite). As logic is part of communicative interactions, it becomes pragmatically oriented and thus results in the emergence of logical pragmatics.

We can see that the relation that holds between logic constituents is of two kinds of logic: syllogistic and enthymematic; we can see as well that there are *degrees of logical force*: deductive, inductive, disjunctive, causal, symptomatic, analogical, conductive, and presumptive; and yet still, there are *elements of logic*: data, warrant, claim, backing, rebuttal, and qualifier. In addition, there are *criteria of logic*: structural, sufficient, relevance, rebuttal, and acceptance (see Damer, 2013, and Al-Juwaid, 2019).

This ideal model of analysis can be applied to various political genres of communication: speeches, interviews, debates, negotiation talks, news reports, and the like. Politics is regarded as a critical area because it concerns what brings benefit to the lives of humans and to their entire nations.

4. Conclusions

Based on what has been discussed above, the following conclusions are derived:

It is true that logic is concerned with logical relations. But in the reality of actual circumstances, it is different from just the simple thinking of logical relations. In real communication, these simple logical relations become very complex and part of a wider context where we have a speaker's communicative intention, we have a hearer's communicative inference, and we have the context.

Furthermore, argument is part of argumentation. Argument is a product which is distilled from argumentation as a process. A

process takes into account the hearer, to whom the speech is delivered. A speaker whether in a one-way or a two-way transaction wants his speech to be rational in addition to being convincing and cooperative. Thus, he presents his speech in a logical way which is more effective and reasonable if presented in a certain structure.

The important thing here is to present a clear detailed picture of how logic is used by a speaker to make the audience believe that what he is saying is true and thus make them accept it, to make the audience believe what he believes. Besides, he/she can make their truth more effective if presented in a certain way. Logic contributes to providing solid grounds for making an acceptable kind of argument supported by dialectical and rhetorical endeavors. Logic has previously been understood as merely involving mathematical relations that hold between the propositions that make up an argument. However, in the light of the major developments explained above, it is argued that logic in an argument within the context of argumentation provides a core which needs to be explained with the help of pragmatics.

For such a logical form to attain its desired force, it has to involve certain criteria, similar to those employed by Grice's (1975) maxims (quality, quantity, relevance, and manner), Govier's (1989) and Johnson's (2000) criteria (relevance, acceptability, sufficiency), and Damer's (2013) criteria (structural, sufficiency, relevance, rebuttal, and acceptance).

The research comes up with an ideal logical pragmatics model of analysis which can be applied to various kinds of political discourse as well as any other kind of discourse, as far as we know. It is a model that shows how pragmatic rules enforce their influence on logic to result in logical pragmatics. We believe that the cooperative principle and politeness enforce their influence and effects on logic. We here envisage that pragmatics represents the effects of society on language and its users.



The final remark that this research rewards us is that any human judgment of their and others' language depends greatly on the logical consideration, which in turn depends on pragmatics to uncover its logical force. It is now more pressing than it has ever been before for us to approach logic—in the spirit of the many great scholars who have pushed for its deep exploration—from the perspective of pragmatics under the rubric *logical pragmatics*.

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