LANGUAGE AND LOGIC AS EFFICIENT TOOLS IN ARGUMENTATIVE WRITING

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Abstract: Even though largely used in numerous instances of verbal and written communication, especially in business contexts, persuasive techniques are not paid proper attention and sometimes seem to even be neglected by students specializing in areas of business where persuasion skills are an essential asset. The current paper aims, in its first part, at investigating the logic behind successful arguments, reflecting on deductive and inductive reasoning, its uses and misuses in argument creation as illustrated in several contexts. The second part of this work will provide a detailed (yet, not exhaustive) analysis of some specific language tools used to build argumentative texts such as essays and memorandums, with a special focus on transitional words and phrases, discourse markers and other main ways to achieve text coherence.

Keywords: argumentative writing, induction, deduction, transitions, coherence

Introduction

Even though largely used in numerous instances of verbal and written communication, especially in business contexts, persuasive techniques are not paid proper attention and sometimes seem to even be neglected by students specializing in areas of business where persuasion skills are an essential asset. The current paper proposes an investigation into the form and content of argument construction, which will be conducted by adopting a blended approach which brings together elements from logic and linguistics at the same time.

A discussion about persuasive or argumentative writing should perhaps start by clarifying what a debatable argument is and what it is not. An argument arises when two parties disagree about something; one party gives an opinion and offers reasons to support it, while the other party gives a different opinion and offers evidence in its support. However, people may disagree about many aspects that cannot be argued effectively enough to pursue them in writing or in public speech. Arguments of preference, of belief or religious faith and of fact, for instance, are not the type of arguments one can effectively and logically explore in formal persuasive writing or speech.

Within written academic work, the presence of an argument does not always indicate a disagreement. An argument can be used to:

- support something that has merit – a position, a point of view, a program, an object;
- persuade audiences or readers to take or not to take a particular course of action;
- convince audiences that something is true, likely to be true or probable – a fact, an outcome;
- show readers the problems or difficulties associated with something – a theory, an approach, a course of action;
- reason with people to get them to change their mind or their practice.

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The kind of argument which can be argued logically, and which we are interested in analyzing here as an essential tool in persuasive techniques, is one that is based on an opinion that can be supported by clear evidence such as facts. An essential characteristic of an argumentative piece of writing (such as the persuasive memorandum) or a persuasive presentation, is that the ideas expressed attempt to change the reader's/listener's mind, to convince the audience to agree with the point of view or opinion of the writer or speaker. Therefore, we may say that argumentative writing or speech attempts to be highly persuasive and logical. An argumentative thesis takes a side of one particular issue and, quite enough, it proposes a specific course of action related to the issue discussed.

Effective persuasion requires a well organized argument – *structure*; it also necessitates logical reasoning – *content* and appropriate expression – *language*. These are the key elements of its successful creation. While it is true that eloquent orators have often played successfully on the emotions of an audience and advertisers and other authors rely on similar appeals in print, it is wise to assume that readers or audiences are as intelligent as the creator of a text or speech and therefore to focus on logical reasoning when aiming to defend one's point of view.

All formal arguments are based on logic. There are three kinds of formal logical reasoning: inductive, deductive and a combination of the first two. Inductive and deductive reasoning differ in the fact that they arrive at conclusions from opposite starting points in the thinking process: *inductive reasoning* begins by examining details or individual instances to draw a general conclusion, while *deductive reasoning* proceeds from a generalization to draw a conclusion about a particular case. These can be illustrated as follows:

Induction (individual instance → general conclusion)
This supermarket brand item is cheaper than its comparable private brand item.
Each of these other eleven supermarket brand items is cheaper than its comparable private brand item.
Supermarket brand items are cheaper than comparable private brand items.

Deduction (determined generalization → conclusion about a particular)
Supermarket brand items are cheaper than comparable private brand items.
Washing powder X is a supermarket brand item.
Washing power X is cheaper than comparable private brand items.

Comparing the two basic reasoning methods from the point of view of their power of persuasion, it appears that inductive argument is weaker, as induction may lead to a conclusion which is probable but may not be certain, while deduction can result in more persuasive argument, leading to conclusions that are not only certain, but valid and true at the same time. The choice of one of the two methods over the other or the use of a combination of the two is dictated by necessity and purpose in each instance of communication. It is useful to examine each of these reasoning processes in greater detail in order to understand the logic behind persuasive arguments, as well as the advantages and drawbacks of each method.

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The methods of inductive reasoning

Among the methods of inductive reasoning, the use of evidence, the appeal to an authority, analogy and causal generalizations are largely used to build strong arguments.

The use of evidence in argument creation brings authenticity and validity, thus increasing persuasive power in both written and verbal communication. When using evidence to generate inductive conclusions, it is important to check and determine whether the evidence is accurate, representative and sufficient; otherwise the resulting argument will not be credible enough.

When appealing to an authority to support an inductive argument, the authority should be a reliable person or source that is well informed about the subject of the argument and completely impartial about it. A successful persuasive writer most likely avoids statements by well known individuals who may be authorities in their field of expertise but are foreign to the topic under scrutiny, or who have some self-interest that causes them to be biased. The use of authority which has passed the tests of being well-informed and completely impartial can add great persuasive power to arguments.

Analogies are often used in inductive reasoning to show that because certain previous circumstances have produced specific results, similar circumstances are expected to produce the same results. People are used to making assumptions on the basis of analogy. For instance, we may buy a book by a certain author because we have read his/her previous book and enjoyed it. The problem with analogy is that its conclusions may be uncertain. We may enjoy a book written by an author but not another by the same author. Analogies are sometimes fallaciously used in arguments to relate dissimilar things or circumstances, but this incorrect practice should be avoided, as readers or listeners may ask themselves a set of questions to determine the validity of analogies:

- Are the circumstances similar?
- Did the circumstances produce the result?
- Was the result the one claimed?

If constructed properly, analogies can add interest, color and edge to persuasive writing, illustrating points effectively, and often have high persuasive power.

Cause-and-effect reasoning which leads to causal generalizations is a very effective persuasive method. For instance, it may be employed to increase the time spent on homework in the case of high school students. The argument will show that a recent study has demonstrated that next to intellectual ability, the amount of time spent on homework is the best predictor of the grades obtained. Therefore, the desirable effect of improving the quality of high school education may be achieved by eliminating one of the causes of poor student achievement: the lack of time spent on homework. But the use of causal reasoning in building arguments should be approached carefully, only after having satisfactory answers to questions such as:

- Is the stated cause true?
- Is the stated cause the only one?
- Is the stated cause a direct or an indirect one?

Therefore, when writing a persuasive text, one should avoid being vulnerable to counterarguments about overlooking a cause or its relationship to the effect.

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The methods of deductive reasoning

In inductive reasoning, one relies on specific evidence discovered or believed to be true, yet the generalization that induction leads to is only probable. On the other hand, in deductive reasoning, if a conclusion about something particular is based on generalizations or premises considered true, then it can also be considered true. In order to achieve optimal efficiency, deductive reasoning must not only start from true premises and lead to true conclusions, but the reasoning process must be logically sound, also. True premises are essential for successful argument construction, since it is possible to build a sound argument based on false premises, as bellow:

All students who turn in typed essays on CSR related topics automatically receive a 10.

All the students in Professor Y's class turned in typed essays on CSR related topics.

Therefore, all the students in Professor Y's class automatically receive a 10.

The form of this argument meets the criteria for sound reasoning: a conclusion based on premises whose terms are logically related. Yet, a deeper analysis reveals that the conclusion is worthless because it has been derived from a false premise – all typed essays do not automatically receive the highest grade.

The logic behind deductive arguments can be decoded by analyzing the *syllogism* it is based on. In classical logic, the syllogism consists of three statements: an initial generalization, called the major premise, a specific case called the minor premise, and a resultant statement with a "therefore" relation to the first two statements, called conclusion. This logical engendering of ideas is illustrated in what follows:

All electronic devices must pass quality control tests before being shipped abroad.

The laptops our company produces are electronic devices.

Therefore, the laptops our company produces must pass quality control tests before being shipped abroad.

In the example above, the first statement – the major premise - sets forth a generally accepted principle or rule about electronic devices. The second statement – the minor premise – identifies a particular electronic device (the laptop) as belonging to the class mentioned in the major premise. The conclusion follows logically from these two premises and is consistent with them, therefore the reasoning is sound. Besides being logically sound, the syllogism is also true, since most people would accept the premises as truthful ones. Consistency, logical soundness and truth are necessary components of effective deductive reasoning, no matter what form the argument takes, for in argumentative writing the syllogism actually rather appears as an outline or a framework which lays behind the text as such. To avoid failure in deductive reasoning, a few simple principles may be applied to check its logical soundness:

- Only if the major premise and the minor premise are true the conclusion will be valid;
- The major and minor premises must be set up to follow a correct logical structure in the form of the argument;
- The terms in one premise must be used in the same way in the other premise.

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Language tools in argument construction

Making a claim and presenting evidence to support the claim will not qualify as an argument in writing a persuasive memorandum or an essay unless the right language tools are employed in building the unity and coherence of the text. Using the right connectives, sentence structure and discourse markers will help create the logical connections between ideas, resources, statements and conclusions. It is important for readers or audiences to understand why the author has included a particular piece of information, and its relevance to the overall claim, as this contributes to greater clarity – an essential ingredient of efficient argumentative writing.

Good persuasive writing is highly observant of the principle of *coherence*, namely that one idea must follow logically and smoothly from the previous one. A variety of techniques may be employed to achieve coherence in essays and memoranda, as in all argumentative texts. For instance, to express deductive reasoning, specific words like *coordinating conjunctions* and *correlative conjunctions* can be used to support premises and conclusions, as bellow:

- for supporting premises: since …, because (of) …, given that …, in order to …, in order that …, rather than …, the reason is that …, whether or not …, due to …, not only … but also …, if … then …

Examples: Our company should spend more money on R&D *because* we are behind our competitors when it comes to innovation.

Given that we are behind our competitors when it comes to innovation, our company should spend more money on R&D.

- for conclusions: so …, therefore …, thus …, then …, it follows that …

Example: We have attended his presentation during yesterday's meeting and we are familiar with the media reports. *Therefore*, we can contradict him concerning the success of the product launch.

Transitional words and phrases are very valuable in creating coherence. They are mostly attached to the beginning of sentences, usually being preceded by a period or a semicolon, and their function is to indicate the relationship between the two sentences from the point of view of meaning. Some of these *transitions* will be listed below, with indications of the relationship they denote:

- chronological order: first, second, next, after, last, finally;
- example: for instance, for example, to illustrate, thus
- addition: also, furthermore, moreover, in addition, besides that
- conclusion: finally, to conclude, in conclusion, to sum up
- result: therefore, consequently, as a result, hence, as a consequence
- comparison: like, likewise, similarly, in the same way, on the other hand
- contrast: conversely, however, in contrast, despite this, although, in spite of, on the contrary, even if, even though

Besides these transitions, there are many more *discourse markers* which can be used to indicate the logical connections between ideas, the author's attitude to the research included in the argumentative text and the relationship between the evidence and the claim made. Some useful discourse markers are listed below:

- Citing evidence:

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According to Smith, …
Smith claims that …
Smith states that …
As Smith claims/shows/illustrates, …
This idea is supported by …
Research findings indicate/show that …
There is evidence to show that …

- Showing agreement/showing disagreement:

At the same time, …
As indicated, …
Further to, …
In support of …

- Expressing disjunction:

While …
Nevertheless, … Whereas …
Regardless of … Yet …

Specific language for addressing the research consulted in order to bring consistent evidence to support an argument may look as follows:
It is clear that …
As shown, current research …
In relation to X, this is very important/ significant because …
As can be seen, many theorists hold that …
There are serious implications that can be drawn from …
These findings indicate that …
This seems to imply that …
It is still not completely clear that …
Interesting research has been conducted by …
They extend the idea of …
Evidence of this can be seen in the work by …

Another way to achieve coherence is the *repetition* of key words, synonyms and pronouns. Even though argumentative writing is often based on strong viewpoints expressed by the author, the use and repetition of the pronoun "I" is rather avoided in papers that are not self-reflective. The introduction is usually the only place where the use of "I" is sometimes accepted. The following examples illustrate its appropriate use: In this paper, I discuss/ will discuss …, I argue/ will argue that …, I will show …, I will present …, I will put forward the claim that …, I refer to the work of/theory by … Nevertheless, some lecturers and writers prefer not to use it at all. The use of the personal pronoun "I" can be avoided altogether by:

- Changing the subject, as in:

This article discusses . . .
This essay puts forward the claim that . . .
This paper argues that . . .
The findings indicated . . .
The intention of the research was to . . .

- Using the passive voice, as in:

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It will be argued that . . .
Four articles will be analyzed . . .
Eight professors were interviewed . . .
It was found that . . .

Conclusions

Although the analysis of linguistic tools used in successful argument design can be extended significantly to cover many more pages, the series of elements proposed above has included a detailed discussion of essential ingredients in constructing persuasive texts. Besides inductive and deductive forms of logical reasoning that underlie argument construction, methods of achieving text coherence have been presented and illustrated as efficient ways of increasing the persuasive power of all pieces of argumentative writing. These key components of persuasive techniques are largely used in business areas and elsewhere to produce successful written and verbal discourse and it is just in their extensive use that their significance is made obvious.

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