

REFLECTIONS ON THE SCIENTIFIC DIALOGUE

Introduction

The word dialogue comes from the Greek *dia* "between" and *logos* "word, speech". In general, it designates a talk among two or more people. Dialogue also means exchanging ideas among two or more parties (states, political parties, organizations, etc.).

Dialogue is rooted in Antiquity. Plato's writing, "Dialogues", is already famous and it comprises 28 such themes, of which "Republic" and "Laws" have the characteristics of a treatise. Dialectics itself has as its origins the art of dialogue.

Nowadays, numerous national and international congresses, conferences and symposia take place every day, whose goal is the exchange of scientific ideas and the development of the cooperation among scientists. Globalization manifested itself earlier and more strikingly exactly in the scientific field.

These scientific meetings prove their usefulness if and only if an effervescent participation in scientific debates occurs. Scientific dialogue has proven more and more a general method of ideas confrontation, concept clarification, phenomena decipherment, as well as of finding the best methods and techniques for analyzing nature, society and thinking phenomena and processes. Questions and answers are, to a great extent, the only method that can really determine people to think.

People having a scientific reputation or holding high positions have the duty to be the actors of the debates and even examples worth taking when having dialogues. Thus, younger researchers have a very good opportunity of developing their careers through serious, substantial contributions to debates. Due to these debates, one can present or even solve certain personal scientific differences with the protractor or lecturer of the meeting, which is a significant way of comparing research hypotheses, proofs, opinions and results on the endless path of knowledge.

In these cases, a remarkable interest is generally manifested towards preserving the true character of the dialogue, whenever a deviation from the meaning occurs, either by mistake or on purpose.

This study comprises a series of dialogue methods, with concrete and suggestive examples. The main goal is that of providing the people interested in the subject with useful knowledge meant to improve their behavior related to the art of dialogue.

Regardless of the reference method, it cannot be applied or usefully suggested unless all conditions competing for the support of the scientific criterion have been previously met; namely, on the one hand, that the documents have a real value and their criticism does not lead to truth disparagement or depreciation; on the other hand, that the information and exposition have received, due to their organization and style, what guarantees their preciseness, even rigid, adequately presented and beautifully outlined. Only after such an assessment we can ponder over one of the methods mentioned below, which would certainly reveal whether in the scientific dialogue we find negative or positive aspects.

Dialogue methods

1. Method of modified limited conditions

This method generally proposes the invention of certain indices, parameters or extreme conditions. There will be postulated primarily those conditions that one knows for sure - after analyzing the paper - that they have not been and probably will not be accessible to the referent or to any other researcher. For instance, in an economic microanalysis paper which specifies the period it refers to and the indices analyzed, the dialogue can be initiated by asking the lecturer whether he/she also studied a previous period and by suggesting that he/she should consider certain conditions of complete uncertainty, very difficult to grasp by the research.

The method can be emphasized more easily by experiments. Thus, for instance, if the pressure has proven to be of 10 atmospheres and the temperature of 80°C, one can interfere in the debate by changing more or less the conditions presented, with questions like: "Have you also experimented at 20 atmospheres?" Or, furthermore: "What will happen if you increase the pressure and the temperature or the other parameters?"

This method of the modified limited conditions raises difficulties for the protractor, while the person asking questions appears to the audience as an experienced and broad-minded interlocutor. Therefore, the success predicted by the lecturer is greatly threatened.

Since the method does not require too much knowledge and experience, even beginners can use it without any risks.

An experienced lecturer has to answer calmly to the questions. He/she will generally be under the impression, similar to that of the audience, that he/she has met a young person with special intellectual characteristics and who deserves to be taken into consideration.

2. Method of the doubt

This method is based on considering doubt towards an intellectual product as a principle. The method of the doubt is not recommended to young people since skepticism is rather a privilege of aged people.

For instance, if it is a paper in the field of economic decision-making, the following question will be asked, if needed: "Are you absolutely sure that the method of making the adequate decision is the best?"

Or, if it is an economic mathematical model, the following question should be asked: "Are the relations you inferred rigorously valid and do they reflect entirely the complexity of the phenomenon subjected to modeling?" In such cases, one can make use of quotations of certain famous scientists who, to a certain extent, "strengthen" the question. "Allow me to remind you the statement of A. Einstein, according to which «As long as mathematic proofs are certain, they are not related to reality, and as long as they are related to reality, they are not certain»".

If we consider a chemistry experiment, then the question can take the form of: "The substance you used was really pure?"

These difficult questions generally cause embarrassment to the referent who is not able to find a good answer on the spot, while the person who utters the question appears in a favorable position.

The method of the doubt also has, regardless of its speculative aspect, a beneficial reverse side, since it stimulates the search for truth, smoothing the passage from skepticism to certainty. But the exaggeration of the meaning of this method may exacerbate the appetite for nihilism, which obviously exceeds the proper field of constructive dialogue.

It is noticeable here a certain inconsistency in using the method, since the subjectivity varies from person to person. In any case, the method of the doubt, remains the prerogative of mature persons, whose skills in asking questions can lead to remarkable successes.

3. Method of the apparently stupid question

This method belongs to the effective dialogue methods, having as main element a smart course of action (a trick) of creating at the very beginning an impression of stupidity, then passing all of a sudden to a surprise situation made up of very difficult questions.

All starts from a deceiving preamble: "Allow me to ask you a stupid question..." which the lecturer must not take it *ad litteram*, because it is conceived as a misleading opening to create the impression that either easy questions or naive, even stupid questions could follow. In this case, an experienced lecturer must be very careful.

Without passing effectively to questioning, the elementary, even inoffensive character of such questioning is stressed, to induce to the public a more unpleasant impression when the lecturer does not give the best answers.

The decisive phase is the one when very difficult and open questions are asked. They make up actually the element of surprise which, not rarely, may cause embarrassment to the lecturer.

Frequently, persons who know substratum of the method, disapprove those who use it, even if they end triumphantly the dialogue game.

4. Preparative method

When there is no certitude for the participation to discussions on the theme of the conference either due to the lack of interest or due to the insufficient ability of the public, then this method is used.

Even if, at a great extent, it affects the spontaneity of talks, the preparative method does not have to be looked down on *ab initio*, because by its programming character, it draws a significant number of persons whose participation by questions and comments, covers the main aspect of the conference themes.

The preparative method implies a logic succession of specific activities. First, the conference theme is informed, after which the interventions for the scientific debate are carefully prepared.

The bibliography must be procured in due time in order to ensure a good scientific documentation. It is also recommended to prepare the necessary posters, according to the principle that the visual representation reasonably used facilitate the understanding of the theme.

A very important objective of the method is the avoidance of the impression that the talks are the result of an arrangement well made. This is why, ensuring the appearance of spontaneity and naturalness remains the most difficult problem to settle.

5. Method of reiteration

This method is used only by the persons who have the role of presiding scientific meetings. Usually, these are well-known personalities appreciated by the scientific community. The method of reiteration is used in crises situations, being unavoidable when the conference of an important scientist has no echo within the public. It has a difficult character because it requires from the moderator solid specialized knowledge and also attention during the conference.

The chairman of the scientific reunion will feel, at a large extent, guilty for the failure he forecasts. This is why he will come back on the conference theme, making an abstract that will satisfy the following conditions:

- to stress with clarity and conviction those aspects of the conference theme he thinks would stimulate questions and participation to talks (characterizations, assessments, disagreements with lecturer's opinions);
- to suggest even with ability certain questions;
- to be sufficiently extended to give the public the time to formulate questions.

It is easy to understand that only a well prepared chairman with a lot of experience and wit can restore the conference spirit.

Passivity within the public has at the basis objective and subjective causes and is due to:

- organizers (guests do not have the necessary training to understand the conference theme, absence of valuable persons upon which the organizers relied, unfavorable weather, etc.)
- lecturer (temporary ill-disposition, monotony of lecturing, inadequate time in relation to his biorhythm, etc.)

6. Method of self-flagellation

The method of self-flagellation is applied to cause a positive reaction to the public, generated by his posture of apparent victim by self-flagellation. The lecturer who makes the speech masters the theme discussed. He feels that he dominates the hall and presents his speech in an irreproachable manner. Yet in the end of the speech, after he exposes briefly his conclusions, the lecturer creates a shocking situation because he accuses himself of some shortcoming to the theme, expressing even his doubt that his lecture succeeded.

This self-flagellation will cause, in normal circumstances, a positive reaction from the part of the speakers, who will search to balance at least the lecture appreciation. The public is induced the idea that in this case the user is unusually self-exigent and uncommonly modest.

Usually, a competent public not only will highlight the merits of the lecturer, but will also be predisposed more or led to overestimate them. The overestimation effect that he relies upon by this procedure runs a great risk if the speaker does not know his public well.

The method of self-flagellation is rarely used. It supposes a knowing and sensitive public to the negative exaggerations on himself. Otherwise, the lecturer may find himself in a very embarrassing posture if the public does not react positively.

7. Method of the attractive lecturer

Irrespective of the nature of the subject, either it is strictly specialized or it is of general interest, no lecture should miss the manner of attractive lecturing which the public should enjoy. Even in the case of the aridest subjects, thanks to the gift and to the training and experience of the lecturer, these may induce to the public a true state of spiritual comfort. Such a state may be generated by the interesting manner of the lecturing, by finding or underlining new meanings that are given to some concepts or phenomena, by the use of metaphors, comparisons or nuancing, to which the subtle manner of treating the subject is added.

The erudition and the charm of the speaker, his capacity to thrill the public are not to be underestimated.

Nevertheless, the *sine qua non* condition of such method is the provision of clarity and accessibility of the lecture issues. This is required as the public is often made up of persons with various levels of training, preoccupations, jobs and ages.

The better understanding of the subject, the remanence of the intellectual satisfaction, the inciting character of some issues presented by the lecturer are undoubtedly favoring conditions for questioning and answering.

Yet, this method does not belong to the actual dialogue ones, having a character of additional method, helping to ease the scientific, cultural or artistic discussion.

Conclusions

By his omnipresence, dialogue exerted in time a beneficial role in idea movement and eventually in culture and science development.

We stress willingly the less orthodox aspects of using various dialogue methods, giving a critical nuance to such shadows. I think that there is the risk of giving to these methods a misleading meaning, which means speculation and fraud, as to normality and truth.

Almost in every method we can find positive and negative values, it depends on the manner we use them, on what we actually are looking for. Fundamentally, the scientific talk plays its important part in research. Yet, in my opinion, it is not sufficiently well used.

In this essay of scientific dialogology, we have presented only a few of the possible methods to use. Undoubtedly, other methods or variants of these may be designed. The inventive and prospective spirits are called undoubtedly to develop what is efficient and durable for the scientific dialogology progress.

References

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