# DIFFERENCES BETWEEN POLITICS AND SCIENCE IN CUBA

## DIFERENCIAS ENTRE POLÍTICA Y CIENCIA EN CUBA

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#### ABSTRACT

This article is the outcome of the systematic use of the application of the ethnographic method, supported in the participative observation and the interview to determine the current status of the relation between the official policies of the Cuban State and science in Cuba, demonstrating a substantial divorce between both institutions, which attempts against creativity, generates dissatisfactions in scientists, creates incongruity between the academic qualifications or scientific grades granted with the scientific quality results, allowing a proliferation of the opinion science which does not generate knowledge. On the other hand, some actions are proposed to contribute to the necessary approach between science and politics.

#### **KEYWORDS**

Policy, science, policy and science, scientific policy, cuban science, cuban policy

#### RESUMEN

Este artículo es el resultado del uso sistemático de la aplicación del método etnográfico, apoyado en la observación participativa y en la entrevista, para determinar el estado actual de la relación entre las políticas oficiales del Estado cubano y la ciencia en Cuba, el divorcio entre ambas instituciones, que atenta contra la creatividad, genera insatisfacciones en los científicos, crea incongruencia entre las calificaciones académicas o las calificaciones científicas otorgadas con los resultados de calidad científica, permitiendo una proliferación de la ciencia de la opinión que no genera conocimiento. Por otro lado, se proponen algunas acciones para contribuir al acercamiento necesario entre ciencia y política.

### PALABRAS CLAVE

Política, ciencia, política y ciencia, política científica, ciencia cubana, política cubana

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#### 1. PRELUDE

During the first 30 years of the socialistic period in the Republic of Cuba, dating from January, 1959 and December 31, 1988, substantial achievements were obtained, mainly in education, health, sports and arts. The growth in these sectors lead to the improvement in the social and economic areas, even though the role of the extinct Union of Soviet Socialist Republics (USSR) and the Council of Economic Mutual Help (CAME in Spanish)in this improvement should be emphasized.

Regarding the previously stated facts, it is worthy to admit that from 1989 on, accompanied by the end of the socialist union, in Cuba we started to feel the effects of an extremely dependent economy, worsened by lack of self- sufficiency, low levels of productivity and scarce exports. This way Cuba entered the so called "special period", of which it went out with a significant help from abroad.

From this perspective, it is necessary to talk about the decision making process on the subject of policies, which, criticized or praised, has managed to maintain Cuba out of difficult situations. Nonetheless, the answer to the question on the role science played during this period to support the decision making process is still vague.

It is appropriate to point out that the emergence of a new context demanded to be described scientifically; it was instead explained using old theories, which is incompatible with science. But it happens that science in Cuba has been limited by the fact that it cannot contradict the policies, even if this would be one of the significant contributions of science, allowing policies to change just when needed.

To confirm the previously stated ideas we quote the following text: "... for a long time our social and humanistic scientists, abroad, were considered to be simple representatives of the government and of the official politics, limiting their capabilities to represent the Cuban academy..." (Morales, 2007) Morales in 2007 also writes: "We must set off, then, from the idea that the best policy is the one which, from the moment of its application, is regarded as subject to change in the future, an indispensable dialectical comprehension of the fact that there is not an eternal policy, neither the situation that generated it."

Nevertheless, how much damage to the science can make an only and perennial policy, or how science has failed to contribute to the official policy of the state, are questions that remain unanswered, but even if they were answered, what would be the point of doing so.

According to the explanations provided so far, a divorce between science and politics has been illustrated; it will be discussed in this article, revealing elements of legitimate fidelity to the truth, which are realities that serve to demonstrate the above-mentioned divergence. The ethnographic method has been fundamental for this investigation, supported in instruments such as the participative observation and the interview, for which the author has contacted and shared intentionally during the last three years, important moments with more than 500 scientists of the country.

## 2. THE STIMULUS TO CREATIVITY

The scientific investigation and the technological progress in Cuba have developed traditionally under the insufficiency of social stimuli. On the one hand, the investigators have lacked the indispensable minimal conditions to carry out their work, and on the other, the results of the investigations are mostly poorly introduced or not applied, in some worst cases they are not shared or praised. Besides, we lack sufficient public policies directed to instigate creativity.

The previous analysis is justified with such elements as the restricted access to the scientific information, the limited interchange with scientists from abroad, limitations for the publication of the results, the legislation concerned with the intellectual property, the payment to scientists and other material stimuli, as well as the marked adversity towards the theoretical investigations.

Referring to the previously discussed matters, most of the Cuban scientists do not have full access to the Internet, and those who have it have a restricted limited access to the www, which does not allow them to access or unload files of more than two or three megabytes, nor see online videos. This aspect is a consequence of the blockade that the United States of America has maintained against Cuba, and also, the Cuban internal policies do not favor these kinds of accesses, being Internet a taboo issue for the Cuban government, and this is common opinion of the majority of Cuban scientists. On the other hand, the more updated books and scientific magazines are practically absent on the market and libraries in Cuba, since their import is not a priority for the country.

In the same order of ideas, many scientists are invited to teleconferencing, chats or synchronic forums, which they cannot access for the reasons already exposed. These technological limitations conduce to the commonly experienced senses of sadness or indignation that the people who dedicate their life to science encounter.

On the other hand, the migration policy of Cuba and the North American blockade have been the main obstacles for the relations between Cuban and foreign scientists; and in particular between Cuban and North American scientists. In spite of the changes in the Cuban migration policy, the economic status of Cuban scientists is the main impediment to travel abroad. That is why the participation of Cuba in international scientific events in other countries is very scarce.

As for the publication of the results, first, Cuba possesses very few scientific magazines located in the main international databases, and this phenomenon can have several interpretations: or there in not high quality in the scientific articles that make them, or there is a policy against the Cuban publications, or the publishing policies are not pertinent to earn that right. Regardless the prime mover, the fact is that Cuban scientists are forced to publish in foreign magazines if they want to share their findings in prestige magazines. Many of these magazines have charges that no Cuban can afford, either for lack of money or for lack of instruments to

pay; in the latter case it is worthy to mention that the number of scientists who own money for such transaction is insignificant.

It is necessary to add that publishing a scientific book in Cuba is quite an Odyssey. First, the number of publishing houses is very limited. Second, the economic situation of the publishing houses is extremely deficient. And third, the scientists do not have the backup of the existence of an effective policy for scientific publications.

About the previously stated, it must be said that in Cuba exists a System of Certification of the Scientific and Technical journals, created by the Ministry of Science, Technology and the Environment; nevertheless, another Ministry, in this case that of Higher Education, has established groups to classify the publications considering the databases in which these are recognized. This way, the certification issued by the first Ministry has no influence in the classification of the second one, which demonstrates discordance in the way of acting with regard to the scientific publications, therefore, incoherence in the policies on this matter.

On the other hand, the press in general goes without spreading those scientific results that are difficult to explain in elementary words, which leads to the ignorance of almost all the population about who are the Cuban scientists and which are the results of their investigations. The results declared non publishable because of the official politics cannot be socialized even if they are known in the popular voice.

Also, the discussion of touchy topics by a scientist, even when they are evident, is viewed as a taboo by the government policies, and it can limit the approval of a scientific publication or force its author to make changes in its text, that will lead to losing the value that the truth has when said or written.

Bearing in mind the exposed arguments it becomes necessary to make reference to the legislation on intellectual property, where the scientific results do not have any type of backup except the ones that generate a patent. In spite of the problems with the publication in magazines of prestige, which is always a guarantee of the copyright, the scientific discoveries are not even recognized, and the copyright is framed only in the works of literary or artistic character.

To keep on talking about the previous idea, another aspect to consider is the non-existence of a policy of payment for scientific results, limiting the compensation for scientific relevant results to the salary of the month, which does not exceed 50 dollars in almost the totality of the cases, proving that the persons devote to science in Cuba have low wages. The same happens with the material stimuli, because in fact, the government has used and abused the called moral stimuli, limited generally to a Diploma, even when the state representatives are aware of the material needs of scientists.

Another element to be taken into consideration is that the scientists, who create concepts, novel instruments or any other element of theoretical or methodological value, are seen by the public managers as the only persons in charge of the introduction of those results in practice. This element has favored the boom of science á la carte, so far it has become the only option for the majority of scientists, and contributing to the downfall of creativity, even when those who should be science claimants are not apt to generate a clear demand based on their needs.

In summary, there is not a coherent official policy that takes into consideration the reality we are living nowadays and the conditions to stimulate creative thought have not been created, which turns to be cause of the insufficient scientific results in relation to the demands of the country.

## 3. THE RELATION BETWEEN ACA-DEMIC QUALIFICATIONS OR SCIEN-TIFIC GRADES AND THE SCIENTIFIC RESULTS

Although it is quite true that the official politics of the state has guaranteed a massive process to study and to graduate from university, with the purpose of increasing the number university professionals and, thinking that with it qualitative aspects would also grow; it is also real that the previous did not result into achievements, because in spite of the many graduations, a large number of the graduates has remained mediocre. Being such, most of the scientists are of the criterion that this policy increased the number of alumni in the country, but they do not possess the knowledge that endorses their diplomas.

Regarding the previously mentioned, an essential cause is that the policies do not take into consideration that, on taking the university up to the municipality level, existed the risk that the formative process was relied upon inexpert hands -which happened- and the government wasted time and money in an incomplete formation.

All the facts provided serve to illustrate what has happened also with the process of formation of Masters in Sciences, even when it is true that it cannot be no compared to the extreme conditions of the university cases, let us make emphasis in the case of the qualifications in education, which massiveness affected greatly the quality of the graduate.

At the same time the acquirement of the scientific degree of Doctor in Sciences in certain specialties has also been stimulated, being the requisite for the obtaining of such title only one scientific paper -a thesis- and a process of selection that does not take into consideration the scientific trajectory of the person, which has caused that many inexpert persons have been granted the scientific degree, regardless the fact that a true doctor in sciences' investigative results are a guarantee of the perdurability of his contributions to science, the consequent contribution to the economic and social development, and the protection to the environment.

Consequently, most of the "contributions" of the mentioned theses end up in the drawers of its authors and tutors, having found no perdurability in practice. On the other hand, the policies favor that the scientific degree is granted by the Ministry of Higher education, in spite of the existence of a Ministry of Science, which is the institution designated by the Academy of Sciences of Cuba for acknowledging such aspects. In other words, the policies concerned with scientific degrees are supervised by the same ministry in charge of the formation of the aspirants, which makes of it judge and jury at the same time.

In the same way, the use of apparent indicators of quality have caused a deceitful notion that we are doing things right. For example, the number of Masters and Doctors in Sciences is an indicator only of quantity and it is interpreted in the praxis as a quality indicator: nevertheless, if the reason is calculated between the number of relevant scientific results in one vear and the number of persons with the abovementioned qualifications, the value could be very near zero, and this is, in fact, an indicator that demonstrates the poor quality of the alumni since they do not generate the scientific results expected. But if we reduced to these relevant results those obtained by persons who do not possess the scientific degrees previously stated. then the indicators will be even less.

It is valid to dedicate a brief analysis to the case of the scientific degrees, bearing in mind the following assertion:

"The scientific grades were multiplying and multiplying. In that we copied, when all the ideas of our technical staff, of our engineers and of our scientists must have been dedicated, from the first moment, to solve the problems of the country and to look for resources for the country. And it is not that I underestimate the scientific degrees; but I believe that we could have, even, thought in other ways of granting the diplomas for scientific postgraduate studies, because we have an example in the same area of medicine where there is a step-by-step trajectory based on the specialties and specialists of first degree, then second and third degrees, or of a specialty or other and in that sense we would not be copying. In the area of science we copy, and copy up to the title of candidate for doctor which does not explain clearly what a candidate for doctor is, and I am asking for excuses now from

all the candidates for doctors that may be here, where, of course, might be for certain a few.

It is neither that at what we are looking today, nor what none of you are thinking about, and I have not heard of the presence of any candidate for doctor, or doctor here. I have heard about workers, about technical staff, about investigators, about innovators, about people who manage to save the resources of the economy. We could have opted for more particular ways for training and qualifying our scientists, our technical staff, our investigators" (Castro Ruz, 1991).

Obviously, since back then, there was no interrelation between the qualifications and the results of science and technology, besides, the *more particular ways* mentioned above, referred to not copy other countries, establishing excessive bureaucratic processes. Also, after some time, the reception of the academic title of Master or the scientific degree of Doctor have become massive processes, where quality of the study creates plenty insatisfactions when valid and reliable quality indicators are evaluated.

This way, the policies on which the granting of the grades has been based has not been materialized as an effective element of the official politics of the state. The diplomas require a background guarantee of the knowledge of the person to demonstrate what he is able to achieve.

## 4. THE OPINION AS SCIENTIFIC TRUTH

Another setback of recognized significance for the scientific investigation and the technological progress is the so called "science of opinion", which justifies a very significant quantity of scientists, capable of publishing their opinions as absolute truths, without demonstrating or proving the veracity of them, and they are not even able to exemplify or comment on the way in which they used the scientific investigative methods to arrive to conclusions.

Not few of the papers enunciate a series of social or economic problems (in verbal or written form), diagnostic which only needs the simplest observation, and worst, is that the authors explain problems but are unable to propose solutions, which is, in fact, the essential task.

In another sense, a divorce is still visualized between science and politics through a decision making process at government level without all the necessary and essential support of science, prevailing the opinion of a few over the totality of investigators on the matter in question.

### 5. TALKING ABOUT SOLUTIONS

In this section we will only make reference to the most evident aspects that came to light with the observation method applied for this research, which were suggestions to solve the main problems spotted, for minimizing, at least, contradictions of a more complex character. The author of this article shares the opinions about these aspects entirely, they are:

- 1. The proposal and implementation of a policy about the stimulus to creativity.
- Reforms to the intellectual property law seeking for an improved protection of the scientific work.
- The access to the Internet and the scientific information must be part of the official policies of the state, as well as increasing the participation of Cuban scientists in events abroad to socialize their investigative results.
- 4. The directors must prove full mastery of the activity they direct, and to recognize as part of the policies the existence of credited advisers, who apply their scientific knowledge in the decision making process
- 5. Give the diploma of Doctor of Sciences to those persons who prove high scientific

- knowledge, and demonstrate aptitude to face and to solve scientific problems in an independent way, demonstrating a great theoretical and practical mastery in the field of the knowledge in question.
- 6. Real, novel, profound and effective science must be promoted over any opinion, repetitive work, or projects that only aim at obtaining material benefits and offer no valid or novel scientific results.
- 7. Generate a new model University, which guarantees quality in the exercise of the profession by the graduates.

If policies are implemented or actions directed to satisfy the previous statements are carried out, then, greater coherence levels will be achieved between politics and science in Cuba.

### 6. CONCLUSIONS

Little remains unsaid; this article has managed, attached to the truth, to describe the reality about the existing differences between the official policies of the state and science in Cuba. The paper also proposes actions that will contribute to a necessary approach of the two sectors.

The way of seeing things of the author, and the criteria of other scientists who collaborated for this analysis, are the outcome of social interaction established with investigative purposes, bearing in mind all the time the purpose of the investigation, and respecting spontaneity.

Finally, it is convenient to remember when Bertoldt Brecht in his work Galileo Galilei gives voice to the personage who screams: "poor is the land that needs heroes"; then it is worthwhile expressing a similar phrase, and say: poor is the politics that needs science.

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