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## **University Career<sup>1</sup>**

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*Abstract* — In this paper I present a discussion on the university career which should reflect the possible dichotomy research-teaching.

## Keywords — Teaching-Research; University Career.

A Few months ago I sent a message to the e-mail discussion list belonging to the Brazilian Computer Science Society on the University Careers, whose goal was to instigate and collect opinions on the subject. Afterwards, I posted on my blog this two pages: number of higher studies institutions decreases for the first time in five years and Higher Education has 1.5 million vacancies in its classrooms: something is changing and we need to rethink the University model.

Since the publication of the most recent result of the new access system for Federal Universities, it became evident that there are more vacancies than candidates with the ability to occupy them. The clear consequence is that we have started to receive a less prepared audience (which will keep coming) and must rethink the university model.

It is obvious that the solution should be the improvement of education prior to the University, but that is a long way to go. Besides, there are socioeconomic problems that must be faced and some questions that must be answered, namely: Why do so many believe that the University is their path for professional satisfaction? Why aren't there many who prefer technical careers whose return is faster and sometimes even bigger?

Some years ago I have already addressed this issue in the column "Why do we need a diploma?". We need to define which careers are necessary. It may be late for that, but the discussion is necessary for the future.

In order to start the debate, I believe that we must have two distinct career paths: professors that are connected to teaching and its quality, essential for this new public, and professors researchers, for the part of the student body that will follow the path of graduate studies and research.

A solely Humboltian University<sup>2</sup> seems to me to be

impossible at the current situation. I agree that the University must keep teaching, research and extension close together, but that should be applied to the collective (course or department), not to each individual separately.

There must be space for brilliant researchers and excellent professors working together in a complementary way. Maybe we should start having public selections for professorsresearchers and other for professors-teachers. Is it worth the while to select only professors-researchers will we have enough candidates with this profile and will they be qualified? Will we be stuck for 30 years with persons with the wrong profile? Wouldn't is be better for us to have some places for good professors-researchers and others for good-professorsteachers? This is a hot issue that deserves to be discussed thoroughly.

The following sentence by professor Nizam Omar is a clear example of this:

"For almost a year, I have walked by Paulista Avenue three times a week, giving me the opportunity to pay attention at the different faces, clothing and behavior of the passersby. Recently, I started to search for similarities and I happily surprised myself by realizing that there is more diversity than in the past and I came to the conclusion that even though the Human Being can be defined ontologically, there are no similar specimens and everyone is unique".

More recently, I received a reference to an article in the newspaper "Folha de São Paulo", written by Adalberto Fazzio and Sideny Jar da Silva on the "University for the 21<sup>st</sup> century", where the following Max Weber quote pleased me for I shared the same idea:

"In the beginning of the lest century, the famous German sociologist Max Weber observed that only by random accident we could find in the same person the vocation for scientist and professor. Only in fortuitous circumstances we would have the joy of entering a classroom and find an academic equally able for teaching and research ".

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<sup>&</sup>lt;sup>1</sup> Translated by the journal's editorial staff.

<sup>&</sup>lt;sup>2</sup> The main principle of the Humblotian idea is the famous impossibility to separate teaching and research.

The writers complement:

"The Weberian dilemma still anguishes aspiring students and professors of all knowledge areas. On one hand, students disappointed for they cannot understand the brilliancy of their professors-researchers. On the other, professors-researcher bitter for they cannot teach their knowledge for hard working students."

This is exactly the point I have been trying to make. There is a strong opinion, including colleagues and good friends that almost came to violence against me for proposing the separation of both categories. Hence, now that I have Max Weber's support, I feel much better!

It seems to me that it is clear that there is a need for different and complementary profiles at the Universities. Slowly this need is being recognized and I was very pleased when CNPq created the scholarship on Technological Productivity.

I received the following e-mail on classroom based evaluation:

"Without the intention of diminishing the importance of research and innovation, I remember that the pressure and the evaluation are based almost exclusively on research. Hence, there is incentive to make a better research, incentive to make more innovation (with companies) but no incentive to improve the quality of our classes. Improving only research and innovation does not guarantee better classes, of course, even though without them we might lack interesting themes to teach in class."

It seems to me that the perception that there are different careers is becoming clearer, but kept behind by conflicting interests and by the lack of acceptance of plurality and the natural difference in human beings.

I share with you some contributions received from other universities:

"Here at University of York where I am pursuing my PhD, they also proposed a similar program for graduate students, with several activities similar to those proposed at the Waterloo University. The participant students even have a "pedagogic advisor" during the year they participate in the program. More information can be found at: <u>http://www.york.ac.uk/admin/hr/training/gtu/pfa</u>/. What I found most interesting was the treatment given to diversity concerning the quality of the teaching. The teaching university performance (strongly evaluated by the students' feedback) is an important part of the evaluation of the university and consequently, of the professors themselves."

Here is another message with the same underlying intention:

"I believe that I was privileged. During he time I pursued by PhD at the Waterloo University in Canada, I had the chance to participate in a program the university offer to graduate students called "Certificate in University Teaching" whose details can be found at the Internet address http://cte.uwaterloo.ca/graduate\_programs/CUT/index.html" The official Brazilian position over what a professor must be is described by a message I received:

"In a "research university" as in North America and Europe, every "professor" must be foremost a good "researcher". He must lead a research group, advise students, find financing, generate and transfer knowledge and interact with the society through many different projects. Besides, he must also teach at the undergraduate and graduate level, transmitting his first hand knowledge to the students. Obviously, it is expected that he has good didactic, knowing how to transmit knowledge and motivate students. Only in very specific cases they hire persons in partial time solely to teach. This is far from being a common fact.

Therefore, in these countries there is no such dichotomy between "professor" and "researcher". The title "professor" assumes necessarily both sides of the coin: research and teaching. By the way, those that dedicate themselves solely to teaching have another title (teacher, lecturer or instructor). Hence, I believe that we are seeing a false polemic. In the universities that intend to have research, either in Brazil or in any other country, every "professor" must necessarily be also a good "educator". This does not mean that everyone achieves this goal. Nevertheless, those in North America and Europe that are not good "researchers" will not achieve success in their career".

My comment on this position is: does this happen in all USA and EU universities? Is it possible that all universities are research ones, such as Stanford and Carnegie Mellon? Are there resources for that? All graduates from a university must be researchers?

He is another opinion on those universities:

"Here at Carnegie Mellon, a professor-researcher must have a PhD while a professor-teacher must have at most a masters degree (for example, engineers and scientists that have non academic careers are often professors-teachers, for they know how to teach the subject in a clear and objective way). A professor-teacher is often hired part time, for he keeps working in the industry (IBM, Google, Microsoft, etc.). This is one of the factors that increase the interaction between academia and industry. Both careers have the same title of assistant/associate/full professor (for example, assistant teaching professor, and associate teaching professor in the case of a professor-teacher). In terms of wages and prestige, it is clear that a professor-researcher has more prestige and autonomy, but wages are not that different. The differential here is that a professor-researcher must complement his wages by consulting and using part of the financial help that pays the expenses of his scientific projects. That is, the better his research results, the more he will have financed projects and the better his wages. When the project is sent, it usually is specified how much will be spent with human resources (how much the professors, students, programmers, etc will receive to implement the project). This model is not very common in other countries, but it is in my opinion what makes American universities an Excellency center. Those who are good at research, does research, and those who are good at teaching, teaches. This is simple and effective."

A comment on France:

"In France there are three types of classes for the same course: magisterial classes, guided classes and practical classes. Magisterial classes are taught usually by the full professors (professeurs) in auditoriums, guided classes are practical classes taught by adjunct professors (Maître de Conferénces) or even assistant professors (A.T.E.R) for smaller classes in classrooms or laboratories Besides, there is the researcher career and the system works fine. ".

I did not present the author of each comment because I am not authorized by the writers,, but they are mentioned in my

specific columns. I would like to thank each person that issued an opinion for they showed that the subject does not come to an easy consensus and that there are multiple views.

In conclusion, I would like to say that we really need to deepen the debate and given the diversity of opinions and the quality of the arguments, it is absolutely clear that there is no consensus on this subject. The SBC events such as its annual congress – CSBC – where we can find the WEI is one of the adequate forums for this discussion.