Let us discuss the quality of the education provided today by the thousands of graduate courses of all fields in Brazil. We will address here some issues that are delicate but crucial, even if they are seldom discussed. We have been following in the last few decades a model that has consecrated graduate studies as the best field of education in our country but by now it needs to be rethought.

While the number of doctoral and master’s degrees delivered increase every year in Brazil, sometimes at high rates, the quality of most theses or dissertations is lower than desired. Some fields of knowledge, particularly exact and biological sciences, as well as some top-ranked Higher Education institutions, desire their best students to get a doctoral degree bypassing the master’s: this trend, even if it has not become an official policy, reduces to a minimum length of time the educational experience of those who should be researchers in the future. But the main problem is that, if graduate students do a lot of work during the courses, research, and the writing of the final paper, the results end up being less than expected. (I recommend reading the chronicle published by Mario Prata on October 7, 1998, “Uma tese é uma tese” [A thesis is a thesis], where he addresses this point). Many people interrupt their personal lives and their children's (in the fields of Human Sciences people are older than in the exact and biological sciences when they do their theses), and, in the end, write a dissertation or thesis that is barely worth reading. It often falls short of what the master or doctor himself told his friends or colleagues about his research. When he or she puts those interesting if not always brilliant ideas on paper, they are worth less than they could be. I recall a sentence by Rousseau about the preachers of his time, who yelled so loud but could barely be heard: why did they spend so much energy for such a poor result?

I do not question here the many good results of graduate courses. They educate a significant amount of professionals updated with the good literature in their fields. However, I wonder what is the quality and purpose of this education. Increasingly less original researchers are graduated. Of course there is a tendency in every school – of thought or of education – to engender conformity. When we use the term “critical mass”, pointing to faculty members and also to all doctors in a field of knowledge, we mean that we have such an amount of well-qualified people that it becomes possible to produce new knowledge. Yet the problem is that this very amount of people were graduated under conditions that rather tend to reproduce what has been currently done than stimulate contestation over it. Hence, knowledge which is new has been often produced, but not new knowledge. The same goes for the several evaluation processes we have developed. An expert opinion, especially a double-blind one – when the author does not know who will be the referee of his paper and conversely the referee ignores the name of the paper’s author – has become our usual way of ensuring quality. It has enormous advantages – we do not need to elaborate about them. Nevertheless, precisely because it is expected that those who provide expert opinion on articles, funding grants, or scholarships are highly accomplished researchers, it is hard to believe they easily accept theses that go against the theories that prevail within their respective fields of knowledge. The difference between a strict expert opinion making room for new hypotheses or theories and another one seemingly strict, but which attaches to the orthodoxy of what prevails today, exclusively depends on the ethical – or unethical – standing of the referee. It depends almost only on his acceptance of divergence, encouragement for oppositions, belief that he does not have the last word. This quality has little to do with his scientific qualification. The system fails thus in what should be one of its main targets, openness to new hypotheses. New ideas are indeed constantly emerging, but the system’s ability to admit or at least tolerate ideas that subvert the scientific status quo is minimal. It was not programmed to do so.

So, it is just when the “critical mass” rises up and some autonomy becomes possible to the community within a certain science that the danger of conformism watches over it more closely. This means that students will be stimulated to repeat what is already given instead of breaking with the status quo. Bold theses become dangerous to their authors. And, thus, theses with no thesis spread out. “Thesis” is not just the name of a product that a faculty board validates. It is a word that comes from the Greek and it is translated by our informal “statement”. You claim, state a certain idea, which is more than a hypothesis because it was justified, supported, tested by you. However, how many theses present a thesis in our times? For instance, in some fields the president of CAPES recommended that a selection of articles by the Ph.D candidate, accepted in scientific journals, should be enough to constitute a doctoral thesis. But are not these articles published in co-authorship? In fact, can we consider the graduate student, often no more than a co-author of those papers, as their main author – or is he only one among several authors, usually under the advice and power of his research supervisor? Does a degree obtained this way actually recognize an intellectual adulthood? Is there
a driving idea in these articles, a strong statement? I am not even thinking of intellectual maturity. I distinguish the doctoral degree, which might attribute citizenship or intellectual adulthood, from maturity, more demanding, which may correspond within the São Paulo state system to the title of Livre Docente (from German Privatdozent), and in CNPq, our National Council for Scientific and Technological Development, to the research productivity fellowships granted to full time faculty members. Yet, even at these levels researchers fear taking risks.

Let us add that group research has been increasingly stimulated. In fields that require expensive resources, such as scientific laboratories, scientific research could hardly be possible if not by a team. But, considering that such groups have a hierarchy, intellectual audacity becomes even more difficult. I have already seen one of the biggest Brazilian researchers refer to a Ph. D. colleague of hers, a senior lecturer, and research fellow at CNPq, as “student” or “supervised researcher”. If by holding such a degree and recognition he has no autonomy, what should we expect from people who have no more than their doctoral degree? In the very fields of Humanities, where the working material conditions require less team research, solo working has been increasingly frowned upon. It seems to express a deficiency – which is not true. All this makes it very difficult to conduct groundbreaking research. A clear sign of this is the very deviation of the word “innovation”, which should be the goal, the core, the libido of every research – but ended up becoming the poor cousin of technology, translating technological innovations into the factory floor. This, perhaps, because our system does not want real innovation. Or because, despite claims to the contrary, it has been increasingly structured to inhibit innovation.

With this, we are at a crossroads. Increasingly, the education for masters and doctors walks towards a “training”, to use the term that CAPES employed in its early days. I remember the historian Fernando Antonio Novais telling his more productivity-prone young colleagues: “I believe in education, you in training”. A term also used that shares this decreased ambition is “qualification”. I recall that, at the request of the ethics committees from the federal ministries, I organized a series of lectures on ethics when I lived in Brazil, as Evaluation director at CAPES. They were grounded in twelve programs I created for TV Futura°. According to the concepts of public administration, it was decided that the series would be a “qualification” in ethics, something I think is plainly impossible. True education always put in question our standing as subjects. True education changes people. Capacity does not. It adds information, which is very good, but it falls short of what Romance languages celebrate as formation.

Education – the other side of academic education, which should be a must in the person’s “education years” – to remember the title of Goethe’s famous novel Wilhelm Meisters Lehrjahre (1795), which deals with the years of W.M.’s education – is that education puts in check the subject. Let us suppose I learn how to use Excel and PowerPoint, thus getting some professional abilities. They belong to the sphere of acquired information. Now, if in the same course I understand how I can become a different teacher by using PowerPoint, how it changes relations in class, for better or even for worse (for instance, making knowledge conveyed this way indisposable, inhibiting discussions and even, as Nelson Maculan says, making people fall asleep, given the penumbra inherent to the projections), the course will deal with education. There is no education if you do not put the subject’s position at stake. Or Excel: if it accelerates your calculations, if it allows you to better see the overview of the issues at stake, if it – above all – facilitates the comparison of various possible scenarios, and if you intensively uses this ability to simulate the various options to choose, what you are learning is not just a technique, but a change – in my view, highly positive – on your stand as a subject of knowledge and action.

However, precisely due to this, if our ideal ended up being the excellent student, the student forever, the brilliant perpetual teenager who masters all references only to always reiterate the accepted positions, but will never become an adult, will never contest the established values, where is autonomy? And can there be education if it does not confer autonomy? I remember an expression I often read in the debate among economists, some of them important members of academe or the market: some of them said that if one of their students held a particular thesis – which was the one advocated by economists who took the opposite view – he would reprove the student. This recurrent topos implies seeing divergence as error. But divergence has an academic status. In fact, it is one of the main ingredients of the best academic life. In the Middle Ages themselves, so often decried, and especially in scholastic philosophy, even more decried because it has wrongly been associated with the image of a paralyzed thought, disputatio was a crucial moment in the university experience.

Obviously, not every contesting project is good. Few divergences have a good quality. Or, as it is often said, it is not because Spinoza did not publish during his life and he still is a great philosophers of history, that anyone who publishes nothing is a great thinker. However, the problem is that our models, all of them, bet on variations around the same thing, with little openness to scientific revolution or, more modestly, to important discoveries. There is today a frequent account of how great scientists did succeed in their career against all odds. But they almost always stress their effort, especially to go international, for instance, showing how difficult it was to adapt to the U.S. campuses... They are not scientific adventure accounts, they are accounts about overcoming. It is like saying that, despite poverty, or having

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1 They were aired in 2008. The two series – “Dilemas éticos” [Ethical dilemmas] and “Liberdades” [Freedoms] – are available on the website www.futuratec.org, as well as on YouTube channels. I was almost sure that I would be fired as soon as the conference-debate on freedom in the workplace was held...
Portuguese or Urdu as your native tongue, you have “gotten there.” These accounts should be sold as self-help books. They celebrate convergence, not divergence. They do not help the advancement of science.

There may be some concrete steps in this direction. In 2009, Louis Maheu, from the University of Montreal, and I took part in an international meeting on doctoral courses, in Kassel, Germany. Since then, we have reviewed several times an article that should be published quite soon in a volume coordinated by Maresi Nerad and Elizabeth Rudd. Within the broader theme “Intellectual Risk Taking in Doctoral Education”, it discusses “Challenges & Opportunities Embedded in University Institutional Arrangements and the Policy Arena Beyond Universities”. Along with other educators who helped to frame the point at Kassel meeting, we discuss how to create an environment both in the context of top educational institutions and in terms of government agencies that could strengthen the tendency to take risks among Ph.D candidates. It was not and it is not a consensus that doctoral students should take risks. Some people think risks should come later; a doctoral course often works as an education moment that accredits the person; later, after the instruments have been mastered, the new doctors could sharpen them and use them in a better way. Some people think it is difficult to take risks without being supported by the research supervisor, something which, in turn, implies a reduction in risks, as the latter has a stronger institutional endorsement than the student. Yet, anyway, what we intended to do was at least to send a signal that it is possible to go beyond repetition and that new proposals are welcome.

Also, on several occasions, I have recommended that there be institutional niches favoring studies against the mainstream. A small fraction of the money provided by funding agencies could be aimed at mainly low-budget, high-risk projects. The ideal is to expect that about 80% of projects funded this way will not succeed. I used italics to leave no doubt about what I mean. We will know that a project is audacious due, in part, to its little chance of succeeding. As obviously public money should be treated with special care, the proposals of bold high-risk projects should involve little resources, both regarding the total amount and that provided for each beneficiary. The latter, in turn, must have proved their intellectual strength in the arena of practice, i.e. they must have a doctoral degree plus some significant experience of accomplishment. These are the wisely conservative anchors of eligibility to obtain the resources. However, assuming this, we must invest in people who, having this qualification, intend to test unorthodox hypotheses. The 80% that go wrong probably will work in terms of education for human resources – the researcher himself, who will become more mature after a reasonable failure, and his or her collaborators.

The point is to create a spirit of taking more risks, avoiding a deeply marked separation between subject and object that we have observed in scientific research, including the very Humanities, where by principle the closeness between subject and object is stronger (you are unlikely to work on a theme that does not impact your psyche, except perhaps in the fields of humanities most marked by mathematization). There must be room for this in the academic world. Life of course is not easy for geniuses or dissidents. If they end up as geniususes or dissidents, this is partly due to the fact they had to overcome obstacles. This is why divergence may not become too easy. Those who venture off the beaten track may not need to have a father. However at least we, who discuss high research, should know that the current script favors a certain conformism and that in an era where research increasingly depends on funding – even within the Humanities, which for long time have done their best work without endorsement from the funding agencies – we need to be aware of the dangers of conformity. By endorsing it the creation of new knowledge may decline. We should avoid this. We have very good researchers and students, who should not be inhibited in their ability to go through new tracks.

REFERENCES
