

KNOWLEDGE AND POWER: THE DILEMMAS OF BRAZILIAN UNIVERSITIES

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The historical dynamics that engendered the post-medieval university – namely, the development of science and the emergence of the national State, relating university, science and power – also delimit the parameters of the complex milieu of today’s universities in the perspective of the new millennium.

The evocative metaphor of a French university president – “the university is a dinosaur landed in an airport” – seems to suggest that the contradictory nature of the university in the contemporary world is not limited to Latin America and does not result exclusively from a process that is climaxing under the neoliberal hegemony¹.

Looking retrospectively at the university institution, we will discern four periods for the purpose of our analysis.

The *first*, from the 12th century to the Renaissance, was the period when the university was *invented*, in full-blown Middle Ages, and when the model of the traditional university, derived from pioneering experiences in Paris and Bologna, was

1. See Rapport de la Commission présidée par Jacques Attali. *Pour un modèle européen d’enseignement supérieur*, Paris, Stock, 1998, p. 147. See also Friedberg, Erhard and Christine Musselin. *Enquête d’universités: étude comparée des universités en France et en RFA*, Paris, Éditions l’Harmattan, 1989.

established and implemented throughout Europe under the auspices of the Church.

The *second* period began in the 15th century, when the Renaissance university was impacted by the commercial changes of capitalism and by literary and artistic humanism, not to mention the effects of the Reformation and the Counter Reformation.

The *third* period, beginning in the 17th century, is marked by scientific discoveries in various areas of knowledge and culminates in the Enlightenment of the 18th century, when, not without resistance, the university began to institutionalize science and transit on to new models.

The modern State-run university emerged in the *fourth* period, during the 19th century. This phase, still unfolding to this day, introduced new relationships between the State and the university and gave rise to the latter's main institutional variants.

It is important to stress that while in Europe universities were being disseminated at every latitude – from the Iberian peninsula to Russia to southern Italy and the Nordic countries – the institution was also porting in the Americas.

In the early 16th century, the Spanish conquerors transplanted the first university (Santo Domingo, 1538) to the Caribbean, inspired in the model of Salamanca. By the end of the 17th century, a network of over a dozen “public and catholic”² institutions had been established from north to south in the continent. In turn, the colonies in the east coast of North America whose children were sent to study in Oxford and Cambridge from 1650 to 1750, adopted the model of the English schools after 1636 – in Cambridge (Harvard), Philadelphia, Yale and Princeton, and Columbia³.

University, Science and the State

The penetration of science in the universities irreversibly altered their structure, previously limited to the “natural philosophy” taught in schools of medicine

2. According to Durham, Eunice. “O Ensino Superior na América Latina: Tradições e Tendências”, *Novos Estudos Cebrap*, São Paulo, Jun. 1998, p. 92.
3. See Benjamin R.W. *La Educación Superior en las Republicas Americanas*, New York, McGraw-Hill Company, 1964.

and arts. Italy's role was central in this process. Outside the Italian peninsula, pressures were not as intense; neither Kepler nor Copernicus were academicians, and the experimental sciences remained out-of-bounds for almost one century.

Thus, the Renaissance university ensued from the profound changes that began to occur in the 15th century: the strengthening of royal power, the vesting of the national State and the overseas expansions. As a social institution, the university welcomed humanism and the sciences with open arms, and even establishments that had aligned with the Counter Reformation eventually abandoned their traditional theological/juridical/philosophical mien.

The historical context that engendered the modern university was shaped under the momentum of the national State and the development of science. Directly influenced by the Enlightenment and the *Encyclopédie*, its political and social bedrock were the radical effects of the 1789 Revolution, both within and outside France.

Under the sway of Newton, the “Century of Lights” was a time of preeminent scientific advances in the English universities. The experimental sciences disseminated to every other country, from the University of Moscow, founded in 1755, to that of Coimbra, renovated by the reforms of the Marquês de Pombal in 1772, and also Göttingen, in Germany, influenced by Leibniz, Upsala in Sweden, Edinburgh in Scotland, and Naples and Catania in Italy.

In addition to the egress of science into the university, another relevant fact was the new relationship being established between the university and the State, breaking with traditional formats and flowing into a complex interdependence. The new trends would lead to the State-run model (in France and Germany) and to the end of the corporate monopoly of the faculty.

In France, the Imperial University, founded during Napoleon's military expansionism in 1806, was subordinate to the State. Being subdivided into Academies that embraced isolated professional colleges, it became a powerful instrument for the creation of a technical and political corps of officials. The new model was founded on the power of the government to appoint teachers, under the guidance of a central committee, and turned education into a monopoly. The Napoleonic university and its Academies would spread to the Low Countries and into Italy.

In Prussia, on the other hand, a concept of an academic institution guided by the principle of uncompromising research and scientific work matured under the

tutelage of the State. With the appointment of Humboldt to the Department of Cults and Public Instruction in 1809, the University of Berlin sprung from the merger of the Berlin Academy, assuring freedom for scientists under the protection of the State – who defrayed its bills. National education was as central in Prussia as in Napoleonic France. The difference was that, in the absence of a nation-State until the latter half of the 19th century, Prussia became the potential harbinger of a national civilization, whereas the University of Berlin, conceived as a laboratory for a new nation, became the central axis in the struggle for intellectual and moral hegemony in Germany.

Both models had great international repercussion. The Napoleonic concept of isolated professional colleges has been influencing Brazilian higher education since the 19th century, even when not integrated into a university structure. It was also the model adopted by the fledgling Hispanic-American republics, after their independence, to reformulate the structure of their traditional universities. In turn, the “research universities”, highly prestigious in several countries, including the United States, were inspired in the Humboldtian model. In Brazil, the School of Philosophy, Sciences and Literature played a strategic role in the creation of the University of São Paulo, analogous to that of philosophy schools in German universities, notwithstanding the important presence of French professors during its inception. With the creation of the University of Brasilia and the implementation of the university reform in 1968, spurred on by the United States, this model would become definitive.

The triad university-knowledge-State reached a critical point with the advent of new relationships between science and power. The interaction between State and society affected the scientific paradigms, as science had to learn to come to grips with its economic and military efficaciousness. Likewise, the universities, engaged in scientific and technological production for the marketplace or for the State, were submitted to a logic that substantially affected their traditional academic/scientific autonomy.

In advanced industrial societies, the universities, science, and their organization have become an eminently political issue. The idea that knowledge may actually mean power is very old, as evidenced when science lost its innocence in the apocalyptic massacre at Hiroshima.

In our modern society, it would be naïve to believe that the scientific system is organized and developed autonomously. Science’s ideal of self-organization

clashes on a daily basis with the injunctions of governmental policies and the high cost of their actualization. The fulcrum of the problem is that today we can no longer refer to science in abstract terms, but only speak of the uses human-kind makes of it to further its own development. Inasmuch as science is also engaged in the power game, it runs the risk of becoming an instrument of economic and political interests.

Ultimately, the science-regulating policies that disseminated in almost every country have placed in the hands of the State or of multinational companies the responsibility for defining strategic priorities and allocating financial resources to substantiate the metrics of scientific and technological research. Thus, it is imperious to introduce an ethical factor, perhaps as an *ethics for researchers* in every field and for the scientific community as a whole, involving *science, its use and its social responsibility*.

A renowned expert⁴ has explained the new relationships between society, science and power from this perspective, showing that, overall, public opinion apropos of science has “oscillated from veneration of its mysteries to contempt for its maleficent power”. He identifies many phases in this postwar development. In the first, following the belief in a constructive and peaceful future, “general strategic considerations and the emergence of the Cold War largely guided the research and development effort toward military endeavors”.

A new phase began in the late 1960s, with the unprecedented expansion of the central capitalist countries and Japan, when “efforts to exploit the relationships between science, technology and production” were significantly enhanced. Europe was deeply disturbed by the predominance of the United States and by the technological gap that put its competitiveness dangerously at risk. In spite of the nuclear threat and the abyss that was being opened in the periphery of the capitalist system, this was attributed to “poor guidance or misguided applications of science”.

The third phase was characterized as a “time of disillusionment with science and technology”, when scientists practically became instruments of military and

4. King, Alexander. “Science et technologie depuis la fin de la Seconde Guerre Mondial” in Mayor F., and A. Forti. *Science et Pouvoir*, Paris, Editions Unesco/Éditions Maisonneuve & Larose, 1996.

economic power, insensitive to the social and ecological problems all around them. This period of disenchantment also affected the high technology industry, particularly the multinational corporations, and the evolvement of research, which had been constant until then, began to lose momentum.

The last phase began with the “oil shocks” of the 1970s, and was a time of feeble economic development and lacerating uncertainties. Heavy industry suffered a disastrous slowdown, while the expansion of the automobile and electronic industries in Japan seemed to know no bounds. It was the dawn of the age of micro-electronics, automation and robotization in the postindustrial society.

Overall, “scientific research emerged as a hypergenerator of power to further increase the might of the very powerful”.⁵ The relationship of dependence between science and the State changed dramatically in the postwar years, particularly because of the close interaction between pure science and science applied to civil or military uses. In the United States, with the wars in Korea and Vietnam, the more advanced technological/military axis moved to the Pacific coast. Without massive federal funding of the more prestigious universities, there would have been no bonds between research and high technology. The Silicon Valley and its state-of-the-art information technology companies would not be the world’s most dynamic spearhead had there been no Cold War and no quest for space. An interesting book by Rebecca Lowen analyzes the activities of Stanford University during that period. In a chapter titled “Stanford goes to war”, the author describes the academic/scientific and technological connections between the university, its departments and government funding⁶.

We have so far analyzed the so-called “hard sciences” and their relationship with society and power. But what goes on in the more sensitive realm of social and applied sciences? This issue is studied by Brunner and Sunkel, who diagnosed that social researchers, “toiling in their traditional domains of production – the departments or research centers – find themselves increasingly at a disadvantage vis-à-vis the symbolic analysts who perform the same functions in new domains (private consulting, legislative counseling, analytic bureaus and international agencies)”.

5. *Idem*, pp. 66-77 and 99.

6. L., Rebecca S. *Berkeley, Los Angeles, London*, University of California Press, 1997.

They admit “a system is being established that resembles more and more a market milieu, where the services developed by the symbolic analysts are organized” and where “the end services are more highly valued than knowledge”. Using whatever knowledge the social sciences have made available, what truly interests the “symbolic analysts” are the “services that manipulate to bring about the sought-after practical effects”.

The authors believe that this new “globalization of the market of symbolic analysts” creates and expands new forms of financing, rendering obsolete those that “in the past enabled the development of the universities”, because academic activities involving social research do not seem to be pertinent to the “effective circuit of their usage” and even less to the “decision-making arenas of relevant issues”⁷.

In short, knowledge and power interpenetrate at every level in today’s society, from the public sphere to the marketplace – reinstating the problem of what is “public” in the universities and affecting their “social mission”. In addition to interfering in the logic of the production of knowledge and its legitimate forms of application to benefit society, this issue also poses a central ethical question to the university community and to its managers, namely, that a public institution must not allow itself to be dominated by the logic of power or of the marketplace. This issue is at the core of the concept of university autonomy, notwithstanding the fact that university autonomy has changed throughout history in accordance with the various stages of society’s evolution since its original medieval form.

Dilemmas of the Brazilian University

Comparative surveys of higher education in Latin America have not adequately emphasized the singularities of the Brazilian experience. Brazil’s situation has always been unique. In fundamental education [elementary + middle school], we have a centuries-old deficit when compared to the countries of the Southern Cone. One need only mention the gap that existed between our limited school system during the Empire [1822-1889] and the Old Republic [1889-1930] and the

7. Brunner, J. J. and G. Sunkel. *Conocimiento, Sociedad y Política*, Santiago, Flacso, 1993, pp. 9-15.

highly advanced system our neighbors enjoyed from the mid-19th century on. Sarmiento's educational policies in Argentina, Varela's in Uruguay and Andrés Bello's in Chile, which aimed at creating the foundations of a republican citizenship, established a broad-based framework of fundamental education.

The effects of our age-old inferiority can be seen to this day if we consider the still critical situation of elementary and secondary school in many regions of Brazil, and the low rate of access to higher education. Although the gross number of college students increased significantly from 1950 to 1994, the percentage of young people in the 18-24 age bracket who enter a university (10%) is much lower than Argentina's (38.9%), Uruguay's (29.9%) and Chile's (26.6%)⁸.

Brazil's position in higher education is also unique when compared to the university tradition of Hispanic America. The Brazilian public university, regional and "extemporaneous",⁹ was never as central as its Iberian-American peers – which, after their countries' independence, became national institutions.

Whereas the Spanish conquerors founded universities since the 16th century, Brazil chose to implement a professional higher education system only in the 19th century, with the creation of various state colleges and schools (Medicine in Salvador and Rio de Janeiro, Law in Olinda/Recife and São Paulo, Pharmacy and Mining in Ouro Preto, Polytechnical in Rio de Janeiro, among others). Our imperial elites preferred to nurture in Coimbra their craving for academic titles. The University of São Paulo was only founded in the 1930s, but soon became the paradigm for Brazilian universities.

Another paradox that must be stressed refers to university autonomy. Public universities in Brazil (with the exception of those in the state of São Paulo) have never enjoyed this attribute – inherent in the very idea of university since the Middle Ages, and part of the Latin American tradition since the "Cordoba Reform" in 1918. In Latin America, university autonomy has been a permanent aspiration of the academic community, and was even one of the major demands of the "University Reform" movement in Brazil in the 1960s. However, over and above the is-

8. Cepal. *Anuário Estatístico de América Latina*, Santiago, 1994.

9. *Temporã* in Portuguese, something that arrives or happens before its time, or at an unexpected time. The expression was used by Luiz Antônio Cunha in *A Universidade Temporã: O Ensino Superior da Colônia à Era de Vargas*, Rio de Janeiro, Francisco Alves.

sue of autonomy, what is at stake are the new relationships between the State, the university and the financing of the latter. In Europe, in spite of the historical tradition of autonomous universities, it has been shown that over the last decades governments have taken the initiative of curtailing their breadth with new policies for science and technology. Even in the United States, surveys have shown state governments imposing increasing restrictions on their public universities. In Latin America, although preserved in some countries like Mexico and Uruguay, traditional university autonomy has also been impaired by State actions in Argentina and Chile.

A discussion of such a complex problem must not be limited to patronizing some historical banner in the realm of principles; on the contrary, its broad and concrete content must be examined in the light of government strategies under the pressure of international agencies. It must also be noticed that Unesco and the World Bank usually have opposite stances in these critical issues.

In fact, the great paradox in Brazil is that the principle of university autonomy, guaranteed by the 1988 Constitution, has been constantly breached in public federal institutions submitted to absurd controls, whereas private institutions, once homologated by the government, fully enjoy this quality, being exempt from any kind of governmental control.

From this stems the last paradox of higher education in Brazil: the hegemony of the private vis-à-vis public (at the federal and state levels) higher learning systems. Private institutions have grown in three decades from 40% to 75% of all enrollments, in a privatization process that was heightened during the military regime. In Brazil, the democratization of access to higher learning was not achieved by opening the public system "to the masses", as in Mexico and Argentina, but by creating private (i.e., paid) and often low-quality educational institutions.

It must be stressed that, in terms of Latin America, Brazil has consolidated the academic quality of its public higher education system: in addition to accounting for 90% of the country's scientific and technological research, the average quality of the system is much superior to that of the hegemonic private sector. This discrepancy is largely a result of policies stimulated by the militaristic dream of Brazil becoming a great power and which cohered these comparative advantages through massive investment in the public system. Postgraduate education was amply supported and consistent actions were taken for scientific and technological develop-

ment. The substantial funds provided to funding agencies (CAPES, CNPq and FINEP) led to the professionalization of the federal system, with a full-time faculty and a vast array of scholarships (for postgraduate work in Brazil and abroad) and “scientific initiation” grants). The academic community was expanded and the sciences and humanities enjoyed sustained growth.

On one hand, however, all these combined efforts contributed to bureaucratize our universities, turning them into highly complex organizations. On the other, they modernized and improved the quality of the public higher education system, which holds a leadership position in Latin America and is acknowledged by the foremost international university centers¹⁰.

Public universities have also prioritized advanced teaching and research, but have not shown equal concern with increasing the number of undergraduate admissions. Furthermore, the government, through the now-defunct Federal Education Council, by lowering the requirements for the creation of new private institutions, fostered the uncontrolled dissemination of true “edubusinesses” of very doubtful quality.

The media has given broad coverage of the ongoing debate, involving governments, university managers and members of the scientific community, about the situation of federal universities, spurred by a recent strike in the universities of São Paulo that threatened to spread to the entire public system. At times, it is the government itself that criticizes the high costs of federal universities, refusing to consider them a social investment. On other occasions, it is the university managers or the scientific community who claim to be smothered by insufficient funding, frozen wages, insufficient openings for all applicants, and deterioration of research laboratories and school premises in general. Within this context, it was announced that the “university in ruins in the republic of professors”¹¹.

10. The most important agreement France has established with a foreign country is the Capes/Cofecub Accord with the Santos Dumont network. It establishes reciprocal ratification of Master’s and Doctor’s degree between both countries. Most major Brazilian public universities are included in the agreement.

11. Trindade, Hégio (org.). *Universidade em Ruínas na República dos Professores*, 2. ed., Petrópolis, Vozes/Cipedes, 2000.

This debate must eventually lead the population and the government itself to realize the strategic importance of public universities in Brazil, as was recently attempted by the Institute of Advanced Studies of the University of São Paulo¹².

In addition to the specific problems of universities run by the states, we must also assess the consequences of governmental policies upon the fate of the 52 federal institutions spread all over Brazil, with 400,000 undergraduate students and a network of 44 university hospitals, with 10,000 beds, which are a national asset and dependent on the federal government.

A possible way to get to the bottom of this discussion is to enlarge its scope and try to see what goes on in Latin America and in developed countries with longstanding university traditions. Here are a few frames of references.

The dynamics of the tense relations between government and public universities can be seen at work not only in Brazil but also in Latin America and in the developed countries. They are a result of governmental actions to restrain the hearty expansion of the universities caused by demographic growth. The postwar period favored the opening of institutions of higher learning to the masses, and universities lost their traditional elitist character to become bureaucratic and complex organizations. The crucial moment of this process was the eruption of student rebellions in 1968 in France, Germany and the United States.

The growing demand for higher education in industrialized countries was repeated, on a reduced scale, in Latin America, leading to mass admissions from 1960 to 1980. Brazil, however, was the exception to the rule, because the military governments established, in practice, a division of labor between public and private universities. The result was that the public system would eventually encompass only 35% of enrollments. A socially perverse effect of this policy was that university access was democratized through paid, private, often low-quality institutions, so that the more prestigious careers remained off-bounds to those who could afford to attend quality private secondary schools.

12. *A Presença da Universidade Pública*. Document prepared by the Commission for the Defense of Public Universities, created by the president of the University of São Paulo at the Institute of Advanced Studies.

With the economic crisis of the 1980s, the governments of developed countries reduced the pace of university expansion – maintaining, nevertheless, acceptable levels of public funding. The great exception was England, where drastic educational policies developed in 1981 would become an international frame of reference, resorting to a draconian system of university evaluation with direct bearing on funding. This radical form of evaluation, however, did not make it into continental Europe, where alternative systems existed – e.g., the French and the Dutch – that did not rank performance in order to punish or reward institutions, but used instead internal or external peer appraisals to improve academic quality and assess if a university was fulfilling its “public mission”¹³.

That was a major watershed: on one side, governments who sought inspiration in the Thatcherian model or later submitted to the pressures of the World Bank; on the other, those that, in spite of the fiscal crisis of the State, sought to maintain a proper evaluation system aimed at improving academic quality and providing satisfactory levels of investment in infrastructure, laboratory equipment and competitive research funding.

What can we expect from universities in the early 21st century? First, we must be made aware that, beyond public and private issues, the university institution itself is threatened. For the first time in history, the crisis of the Knowledge Society is victimizing the multi-secular university institution itself by creating competing mechanisms for education and scientific or social research. These alternative mechanisms are fully intent on restricting the university’s traditional function of educating polyvalent professionals for the marketplace, hindering the fulfillment of its “mission” in a society where the public space is being transnationalized.

13. The PAIUB (Program of Institutional Evaluation of Brazilian Universities), propounded by the presidents of Andifes and incorporated into the evaluation system of the Ministry of Education during the tenure of minister Murílio de Avelar Hingel is inspired in the philosophy of the Dutch model, combining qualitative and quantitative methods with internal and external evaluation. The *Word Yearbook of Education 1996: The Evaluation of Higher Education Systems*, London, Robert Kowen & Philadelphia, Kogan Page, 1996 included the PAIUB among the successful international experiences. See pp. 34-50 and 163-168.

One of the modes of this neoliberal viewpoint – advocated by certain experts in education economics and higher education management associated with the University of Pennsylvania’s *Policy Perspective* journal – states that the university should “respond to several needs that are foreign to it” and become increasingly a “multifunctional, indispensable and useful organization”. This new international model, valid even in the United States, strongly emphasizes graduate studies and must become increasingly selective in terms of research, even if “providing economic and social services shares an equal role with research in the generation of new knowledge”¹⁴.

In the book *Reinventing government*, Osborne and Gaebler quote the example of the Fox Valley Technical College in Wisconsin, with 45,000 students, as “the most thoroughly customer-oriented public institution”. The authors’ propound that “the only and best way to make public services providers respond to their customers is placing the resources in the hands of the customers and letting them choose”. In conclusion, they go directly to the point: “If customers control the resources, they can choose the point of destination and the route to get there”¹⁵.

Understanding the different university dynamics and governmental policies in order to find new pathways is what we must take to heart. It is an urgent task and an academic and political requisite that cannot be subrogated. Just as the government is responsible for defining educational policies for the public system of higher education, university managers and the university community have the obligation of propounding alternatives that will enable the reforms needed to assure the future of the university.

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14. See “The Transatlantic Dialogue” and “An Uncertain Terrain” in *Policy Perspectives*, Institute for Research on Higher Education, University of Pennsylvania, 1993.

15. See Osborne David and Ted Gaebler. *Reinventando o Governo: Como o Espírito Empreendedor Está Transformando o Setor Público*, Brasília, M. H. Comunicação/ENAP, 1994, p. 190.