Promoting Scientific Integrity: The Long Road Ahead–Some Considerations from Espírito Santo, Brazil

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> "We live in an historical moment of transformation of the scientific paradigm which questions the criteria that scientific rigor in and of itself is ethical." BB Sawaia, 1999.

While the promotion of research integrity has tended to receive widespread governmental and institutional support in the United States and Canada, the responsible conduct of research, including preventing and handling of misconduct, are not always prominent issues in many developing countries such as Brazil. This paper examines the need to stimulate institutional awareness and debate on major issues such as production and communication of scientific knowledge as well as the ethical challenges for developing responsible research practices in the human and social sciences.

A lack of Federal or state legislation, institutional policies or public concern regarding the quality and the ethics of scientific research do not exempt researchers or universities from establishing programs to insure research integrity. The institutional context of a medium-sized Federal government university, the Federal University of Espírito Santo, is examined in an attempt to describe work conditions, the institutional culture and other obstacles for establishing a program to promote research integrity.

In Brazil, recent Federal resolutions in the areas of health, medicine and medical research have established guidelines for human protocol, research integrity, and the protection of human subjects and have determined a local project review procedure along the lines of North American legislation. These guidelines extend themselves to all scientific or academic research activities that involve human subjects. The Brazilian university system and the National Council for Research (CNPQ), however, have neither acknowledged the relevance of these resolutions for research practices nor incorporated them into grant procedures.

At the local level, universities, research institutes, academic centers, departments and graduate programs establish their own policies for research projects and scientific production. Institutional procedures seldom exist for handling allegations of scientific misconduct or establishing protocols for human subjects.

The recent expansion of the number of graduate programs also has increased the need for programs to promote the teaching of research integrity, the ethics of mentoring, and academic career pressures. Further, data management, recording, retention, etc., require pro-active policies to anticipate conflicts and incidents of misconduct.

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What are the implications of these conditions for research with human subjects in Brazil? Is the Brazilian population unduly exposed to doubtful research practices and scientific misconduct, particularly the lower population strata (over 50% of the total population) and more specifically, vulnerable sectors of this population?

At first glance, the answer would be an uncategorical "no." Even considering the lack of a more systematic analysis of actual research practices, there is no direct or indirect evidence that medical, health, human, or social sciences research in Brazil is unethical. What could be considered unethical is the lack of priority for such research at all levels of government in light of the rising indices of preventable social diseases, human violence, drug abuse, and the subsequent decline of living conditions/quality of public services for the lower strata of the population.

With financial support and investment in social policies at an astonishingly low level, social research tends to be descriptive, exploratory, or action-oriented. Academic research seldom receives external or internal financing, and most funding is limited to scholarships for undergraduate trainees or the support of field work.

The lack of a regulatory system of project approval and norms for the protection of human subjects should not be misinterpreted as a lack of research ethics. In a country like Brazil, the few individuals actively engaged in research with human subjects do so with great dedication and considerable respect for their human subjects. Ethical values are not necessarily culturally ascribed or limited by adverse institutional and social conditions.

Nevertheless, what are the actual circumstances in which the social and human sciences are being practiced in Brazil? In what institutional context might it be necessary to initiate the promotion of research integrity and at least provide guidelines for misconduct regulation? How may this promotion of research integrity be best approached?

Design

This paper is a descriptive essay based on personal observations and a review of scientific journals, research methodology textbooks published in Portuguese, Internet homepages, records of research projects available in the Pró-Rectory for Graduate Study and Research, Federal University of Espírito Santo and the annual reports of the Office of Research Integrity, U.S. Department of Health and Human Services, Office of Public Health and Science. The journal editions of the Cadernos de Ética em Pesquisa [Notebooks of Research Ethics], published by the Brazilian National Commission of Research Ethics were specially useful in providing background information for this text.

Results–The Brazilian Context

In Brazil, Federal resolutions first established the National Commission of Research Ethics (CONEP) in 1996 and determined guidelines for human protocol, research integrity, and the protection of human subjects in 1997. The 1997 resolution determined a project review procedure in the areas of health, medicine, and medical research by local Committees of Ethics and Research. At the present time, there are approximately 266 Committees of Ethics and Research (CEPs), the majority of which are located in institutions related to medical instruction or university-associated hospitals.

Although the guidelines extended themselves to all scientific or academic research activities that involve human subjects, the Federal Brazilian university system and the CNPQ have neither acknowledged the relevance of these resolutions for research practices nor incorporated them into institutional procedures.

Data from CONEP reveal the registration of 559 projects in 1999. In a classification by Specialty Topics, most of these projects were grouped under the topic of "international cooperation" (78.3%), and a majority within this category (80%) involved new medications. Distribution in other topical areas included human genetics (7.8%), reproduction (5%), indigenous populations (1.6%), new medical procedures, and equipment (5.3%) (1).

In observance of the data cited above, it is not surprising to conclude that medical and health research formally lead the way in establishing human protocols for research with human subjects. Also, it is not accidental that the majority of the projects reviewed involve international funding and/or cooperative agreements. A recent review of the literature available within Brazil points exclusively toward bioethics and medical and health ethics as dominant topics in the field of ethical considerations (2).

In the humans sciences, there is little to report. However, in 1997, the Federal Council of Psychology determined that new methods or procedures in the field could be utilized if presented as research following research norms for human subjects. The Committee of Ethics in Research at the Catholic University of São Paulo (Catholic University—SP) was implemented through the work of a sociologist who lead discussions to delimitate general principles regarding research ethics, which "took into consideration the specificity, plurality and scientific creativity of the production of knowledge in the human sciences" (3).

Unlike the CEPs created in the medical area, at the Catholic University-SP, the Committee has developed educational functions to represent the ethical principles of the institution, serving as a review board for special recourses. Research projects that are considered to have special ethical questions are sent to the Committee by academic orientators, or by dissertation, thesis, or research commissions for educational evaluations. This university understood that ethical evaluations were already occurring at other institutional levels and that the centralization of the approval process in one committee would be not only impossible but would fail to capture the different optics of research ethics.

Another indicator of the extent of concern for research integrity was presented in a study entitled: "Analysis of ethical aspects of research in human beings contained in the authors' instructions of 139 Brazilian scientific journals". (4) Although the study was limited to a review of scientific journals in the areas of medicine, nursing, odontology, and the general sciences, the authors discovered that 79 percent of the journals made no reference to ethical considerations in their notes to potential contributors. Only 12 percent of the journals made reference to the necessity of approval or analysis of the research project by a Committee or Commission of Ethics in Research.

This author has no knowledge of instructions to authors in the area of the social and human sciences. With the growing number of scientific publications in Brazilian universities, there is some concern for establishing selection processes for articles and the evaluation process of the journals. During May, the Faculty of Education at the University of São Paulo organized a conference to discuss the publication policies of scientific journals in education. Discussion was focused on the role of the journals in improving research quality, technical aspects of the journals, and proceedings for evaluation/selection of articles. The last session included an item on scientific and ethical aspects of journal editing.

Increased public concern with electoral opinion polling has attracted attention in the last national elections for president and congress, and most recently in municipal elections. The concern voiced by media and politicians is directed, however, to the possible undue influence of the poll results on the voter and the political system. No ethical concern for poll subjects has been registered. Issues regarding informed consent, the use of the poll results, or the subjects' knowledge of the funding sources have not been publicly evaluated.

Although the lack of governmental support for scientific and technological research and development is a constant criticism throughout the Brazilian society, there is no strong public support for financing academic research. Resources from private and international foundations are centered on corporate interests with little direct university participation. In short, there is little grant money, private or public, which might warrant an institutional policy being created in order to qualify for grant applications.

While international funding or "cooperation" might be instrumental in aligning research interests in the biomedical sciences to installing parallel regulatory proceedings for research ethics, there are no similar external stimuli for the human and social sciences in Brazil. With no public pressure or support for human research, little or no funding, and a lack of issues that might stimulate institutional response tend to neutralize the need for more relevant, modernized research policies in the Brazilian University system.

A Short Case Study–the UFES

Current research policies at the Federal University of Espírito Santo deal principally with the administrative approval of faculty involvement in research as well as release time from academic classroom schedules. Authorization to conduct research is granted by the department council, after a written evaluation often by a research commission of peers. A simplified regulatory system presently requires project approval by the council of department

heads at the level of the academic center and eventual registration of the project in the Pró-Rectory for Graduate Studies and Research.

Details of the project must be outlined on a basic form that specifies the usual information regarding the nature of the study, authors, methods, objectives, and bibliography. No human protocol is required. References to study samples, human subjects, and data collection procedures, when indicated, usually are located in a section on "methodology."

Research projects involving human subjects must have the approval of the Committee on Ethics in Research only for professors from the Biomedical Center. This Committee was registered in March of 1997. No communication from this committee to other academic centers has been documented by the institution. The potential institutional role of this committee could be to distribute and discuss the present regulations, which affect other areas of knowledge.

The lack of information on the necessity for compliance with existing regulatory standards for human protocol or the absence of academic/ administrative requirements for recognizing the ethical consideration of data collection with human subjects are seen as substantial obstacles for promoting research integrity. However, the implications for dealing with possible misconduct are the most serious.

The first dilemma is the extreme negligence with which most universities treat their internal problems of human communication and academic relationships among faculty and students, with no viable procedures or mechanisms to identify, solve, or prevent such problems. In the case of the public Federal universities, professors and university functionaries are classified, by law, as federal public servants, subject to Federal legislation. The legislation is basically a disciplinary regime where duties and obligations are specified. Denouncements of irregularity/misconduct are treated administratively in an process that can consume a year or more.

These laws as well as the university statues and internal regulations date from the years of the military dictatorship in Brazil, seldom having been reformed to establish a less authoritarian academic administrative structure. These instruments refer to problems with faculty or student behavior in terms of order and discipline, keywords common to public policy of the military government. Academic problems involving misconduct in research, plagiarism, misrepresentation of academic production or other problems of research integrity can only be handled administratively under the existing legislation and institutional procedures (5).

In synthesis, academic or research integrity as a terminology or concept plays little part in the actual institutional culture, or at least is not configured as a formal organizational principle in the university culture. This is not to say that academic integrity is not present in many of the pedagogical and academic actions of students and faculty, nor in the daily practices of this institutional culture. Nevertheless, the fact that academic/scientific ethics or research integrity are not explicitly registered in formal university institutional norms considerably complicates the institutional capacity to develop scientific integrity and deal with ethical problems of any nature.

Conclusions

These results confirm the necessity for urgent institutional action to establish normative standards that promote a responsible research environment and a critical consciousness of the need for training/research in scientific integrity in all areas of knowledge. However, the advancement of academic/scientific ethics depends upon a critical analysis of present research practices and the recognition of the protection of human subjects as one component of research integrity inherently connected to the ethical production of knowledge.

Institutional research is needed to identify academic areas with accessibility for a new approach to teaching research integrity as well a current researchers' concerns with research ethics. Institutional support for such curriculum reform is vital, but must occur with a greater strategy to set university goals for excellence in research with human subjects and to reform regulations that are obsolete and ineffective in dealing with problems of academic/scientific integrity.

Caution is necessary to avoid "overdeveloped" procedures that do more to serve the rule makers than to protect the victims of unethical research practices. Perhaps, instead of taking the long road and merely reproducing regulations and administrative procedures for projects review, or awaiting federal legislation, local universities such as the UFES should

consider the middle road, one which is not a short cut or dodges vital issues, but one which stimulates a process that provides access to information, provides debate about research integrity, and acknowledges institutional needs for guidelines to avoid scientific misconduct and to safeguard human subjects, particularly those subjects in situations of cultural or social risk.

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