

GUEST EDITOR'S NOTE

“Silence is common to women”, asserts Michelle Perrot in *Les femmes ou les silences de l'histoire* (Paris, Flammarion, 1998), one of her most inspired and astute texts regarding the condition and place of women in history. Although feminine discourse and presence has appeared since the 19th century in an innovative manner in scenarios that were previously forbidden or unfamiliar, “an ocean of silence, related to unequal division of the traces of memory, and even more of history ...” still subsists regarding the past. Even admitting that those dominated or subordinated may be able to find ways to circumvent the prohibitions, “filling the vacuums of power”, the symbolic order, as the author warns, imposes silence on speech and writing, disciplines their bodies and functions as a political, social, familial and social rule. The silence extends to humanity as a whole, but weights most heavily on women, by virtue of the inequality of the sexes having been an important structuring force in the past of societies.

The historiography of this silence continues up to the 19th century, to the start of history as a discipline concerned with politics, wars, phenomena, etc. in which women are not present. The substitution of the political by the economic and social, introduced by the *Annales* in the 1920s, did not signify a rupture with the ‘virile look of history’.

For Michelle Perrot, the history of women is entirely identified with the notion of gender, i.e., the social and cultural construction of the difference between the sexes, a difference that, in practice, implies inequality. Such a perspective results in the conjunction of several factors in the 1960s and 1970s, including the crisis of the large paradigms of the human sciences and a tightening of innovative disciplinary contacts between historians, anthropologists and ethnologists. Also important was the development of family and demographic history, which evidenced sexual differentiation from the angle of marriage, celibacy and mortality, at the same time that the so-called ‘new history’ stimulated approaching new subjects – infancy, madness, sexuality, private life etc. The rupture of the silence that weighed on women was also due to factors of a sociological nature such as feminization of the university and the emergence of new expectations and interests that redounded in courses and research about women. In turn, the feminist movement, if not born with the intention of writing the history of women, does develop criticism of the foundations of constituted wisdom: the universal, the idea of nature, the difference between the sexes, private and public relationships and the neutrality of language, among other aspects.

In the 1970s and 1980s, the field of women’s history was involved in heated theoretical and methodological polemics, being criticized for excessively favoring their participation in history. Such centrality would be incompatible with the notion of gender, which is not synonymous with woman nor does it pertain only to feminine things and processes. According to this perspective, the concept of gender, in addition to rejecting biological explanations of the sexual differences, involves a relational analysis: understanding these

differences requires a reciprocal definition of the sexes, which cannot be understood in isolation. As the historian Joan Scott affirms, in “Gender: a useful category of historical analysis” (*The American Historical Review*, v.91, n.5, Dec. 1986), the study of one involves that of the other. For this author, the history of women still possesses a marginal status in the history discipline, both by virtue of predominating descriptive approaches – incapable of explaining continuities, discontinuities and inequalities – as well as for not problematizing the dominant disciplinary concepts in order to weaken their power and, if possible, transform them.

Starting in the 1970s, feminist studies carried out in the United States questioned the neutrality of gender in the production of knowledge, as well as the very criteria of demarcation between what is and what is not science. One milestone in this school of studies was that of scientist (Ph.D. in physics at Harvard) Evelyn Fox-Keller, who in 1978 published “Gender and science: psychoanalysis and contemporary thought”, an article articulating for the first time the terms gender and science. In it, the author affirmed that the association between masculinity and scientific thought was a myth and that the absence of critical analysis in this regard was due to the dominant representations in Western culture concerning the emotional and sexual neutrality of science.

Thereafter, work developed in several countries brought new analytical perspectives to the history of women, which had been restricted to recording their presence in the sciences, as well as strengthening feminist studies through their interaction with conventional approaches in academia. The feminist criticism of the natural sciences looked in many directions, exposing the effects of gender preconceptions in the selection, organization and interpretation of the data.

In the last three decades, during the course of this academic debate, a voluminous bibliography has been produced by historical, sociological, anthropological, psychological and linguistic studies that sought to reveal the role of gender in the construction of scientific knowledge, as well as conferring visibility to female scientists. It is also worth noting the relevance to the studies of gender and science of the approach of the social studies of science, inaugurated in the 1970s with the work of David Bloor, Barry Barnes and Michael Mulkay, to which would soon be joined the multifaceted constructivist current led by the studies of the laboratory of Bruno Latour and Karin Knorr-Cetina.

In Brazil in the 1990s, the diffusion of social studies of science influenced to a certain extent renovation of the historiography of the sciences and technology, especially with respect to the analysis of the process of implantation in Brazil of conceptual and institutional models generated in other national contexts. On the other hand, with respect to women, gender and science timid interest was still perceived, being few and disperse the historical publications and records organized in this respect.

Supported by the Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro, this edition originated in the symposium we organized as part of the International Seminar Making Gender 7 – Gender and Preconceptions, which took place at the Universidade Federal de Santa Catarina in August 2006. The symposium focused on the dissemination and debate of historical studies regarding gender relations in the natural and exact sciences, and some of them are presented in this number.

In the Analysis Section, three articles deal with the institutionalization of the sciences and scientific professionalization within the Brazilian context in its decisive era, situated more or less between the creation (late) of the university, in the 1930s, and the first great reform of the university system, at the end of the 1960s. This is not mere coincidence. One of the singular aspects (and least studied) of the 'formation of the scientific community' in Brazil is its insertion in the broad process of social and cultural changes that had as a consequence, among others, the restructuring of the gender system. It becomes transparent in the analysis of the role of Marina de Vasconcellos in the foundation of the Brazilian anthropological tradition, in the superimposition of the public image of Bertha Lutz, at once a militant feminist and a scientific professional, and in the dynamics of gender manifested in the scientific production of that period.

Two articles deal with higher education and professionalization. In the last thirty years, the scholastic supremacy of the young female population compared with the masculine contingent of the same age group, notably at the university instruction level, has generated new questions regarding the unequal distribution of power and prestige between the genders in the techno-scientific professions. Traditionally the approach to the presence of women in Brazilian higher education highlights the obstacles imposed to their access and/or their confinement to so-called feminine careers. Feminization of university instruction emerges as a phenomenon that eludes the paradigm of current analysis. How to explain it? By examining the formation and professionalization of female dentists in the first decades of the past century and the recent intensification of the presence of women in university instruction, these articles provide us with the means to understand the remote causes and immediate consequences of feminization.

The social construction of the sexes and genders founded on the production of scientific facts and representations is the subject of the remaining three articles. They endeavor to understand the distinction of the 'natural history' and 'social history' of bodies and behaviors according to the sex and gender attributed to them. To do so, the analysis of medical-scientific knowledge and practices serves as a fertile field of study. Sexuality, maternity and mental pathology – subjects of medicine situated on the border between 'natural' and 'social' – are explored, based on perspectives that point out the 'hybrid' and/or 'relational' character of the representations about the sexes and genders.

One article included points out a topic relatively unexplored: the representations of gender and the public image of science in the pages of pioneering publications popularizing science in Brazil. Only in the 19th century was science professionalized, with its activities no longer restricted to the ambiances of the courts or the invisible colleges of scientific academies. The public image of science became a relevant social problem. Indications of this are the emergence of science fiction as a literary genre, the cycle of universal expositions and the proliferation of publications directed to popularizing science and technology. All of these phenomena had impacts on the representations and social roles of gender.

The American science historian Londa Schiebinger also collaborates in this special number. She participated with us in the 1998 Latin American Congress of History of Science and Technology in Rio de Janeiro. Schiebinger is one of the main constructors in the field of research on feminine studies of gender in the history of science. Of her works,

only *Has feminism changed science?*, which won various awards, has been translated in Brazil (*O feminismo mudou a ciência?*, Bauru, Edusc, 2001). In the Sources section, we make available to the lusophone public an essay in which Schiebinger examines, in the American context, theories and practices related to the search for equality for women in the sciences. The author analyzes the development of these discussions at three levels: the participation of women in science, gender in science cultures and gender in the scientific results. Based on her vast experience and studies conducted by the Clayman Institute for Gender Research, she emphasizes the last of these three aspects, showing how the analyses of gender, when directed to the sciences, can profoundly impact human knowledge.

In the Interview section, we present an interview with Leda Dau, a botanist with the Museu Nacional who, in addition to carrying out research and teaching activities, has assumed various positions in the academic hierarchy, including leadership of that hundred-year-old scientific institution. Her professional career, initiated in 1953, is illustrative of the conditions that enabled a scientific career for an expressive contingent of women, taking advantage of the professional strategies and models available at the time.

The current edition of *História, Ciências, Saúde – Manguinhos* is the first one dedicated entirely to gender, women and science. Our intention in doing so is to attract other people interested in the subject, particularly historians of science, who can do much to contribute to the theoretical and methodological renovation of this field in Brazil by adopting the perspective of gender, a perspective that increases our critical awareness of the forms of being and knowing and of interpreting the past.

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