

Workshop, Call for Papers

Drugs, living things and the problems of standardization

Technische Universität Braunschweig (Germany), 25 - 27 March 2010

Organized by the ESF DRUGS network, Group Biologicals

+++ The DEADLINE for the submission of an abstract is 30 October. +++

Within the framework of DRUGS – the ESF-funded network on “Standard drugs and drug standards” – the present workshop focuses on a loose group of substances brought together under the head of biologicals.

DRUGS analyses the transformation of pharmacy and pharmacotherapy, and the interaction of industrialization, mass production and consumption from an international perspective. Using the theme of standardization, applied both to objects and practices, the network proposes to explore the development of twentieth-century medicine by looking at the production, distribution, prescription and consumption of major classes of therapeutic agents, such as sulfa-drugs, hormones, and psycho-active drugs. The aim is to evaluate the contribution of industrial, administrative and clinical standardization to the ‘therapeutic revolution’ (1920-1990) in which a series of ‘miracle’ drugs changed the face of Western medicine. (see: <http://drughistory.eu/>)

We define “biologicals” as medicinal substances that are “of natural origin” (however this is understood). We apply a broad definition of biologicals as agents extracted from or generated by biological material. Examples are vaccines and sera, hormones, vitamins, enzymes, macromolecules, bodily fluids (e.g. blood and sperm), and active substances from medicinal plants. Although the history of hormones has been the focus of significant historiography, this group of substances is often seen as peripheral to the pharmaceutical market of the 20th and the 21st century, since many substances lanced by the industry were „artificial“, chemical compositions. However a majority of the drugs described in the European pharmacopoeia or marketed as industrial specialties before World War II were preparations and combinations of some biological material, plant extracts in the first place. In addition, there are significant examples like vitamins and hormones that have become omnipresent commodities once they could be produced on a large scale. However, "biologicals" have kept the image of being more natural than drugs that originated in a

synthesis from anorganic substances. Thus, the „natural option“ can be described as being both industrial and not industrial. „Biologicals“ may point to different approaches of innovation in terms of discourse, production and advertisement.

In this context, the workshop will deal with a range of substances that are not usually seen as core products of the modern pharmaceutical industry. This industry has principally focused on ‘artificial’ synthetic chemical compounds, meaning that prominent ‘biologicals’ like vitamins and hormones only became ubiquitous commodities following their chemical synthesis. We can conclude from this that the ‘natural option’ can be considered as both industrial and not industrial. Furthermore, ‘biologicals’ open up different approaches to thinking about innovation in terms of discourse, production and advertising. Starting with these characteristics, we also hope to address some fundamental questions concerning the production and use of drugs as well as forms of standardization.

Our focus is on the twentieth century, but talks offering a *longue durée* perspective are also welcome. The workshop is not limited to pharmacy, but will also cover the sciences that have contributed to its growth in the twentieth century, both theoretical and applied. On the one hand, the development of the life sciences was characterized by major theoretical shifts or ruptures, such as, for example, the re-conceptualization of biological substances in terms of macromolecules. On the other hand, the laboratory work like that mobilized for the production of vitamins, hormones and plant extracts can be described in terms of standardization, development, and regulation.

Leading questions of this workshop concern the following topics:

(1) Industrial and governmental standardization

What is the relationship between industrialization, standardization and development with respect to biologicals? At first glance, biologicals could be seen as a threat to standardization, since they are commonly regarded as being more complex in comparison to synthetic drugs and thus harder to purify. To what extent and under what circumstances is standardization an appropriate category for thinking about the history of biological drugs? Do “biologicals” constitute an exception in the development of a general regime of standardization? Here, we are interested in counter-narratives that run against the trend towards standardization, and would like to bring out concrete historical examples. Some discourses on biological substances also challenge consensual procedures for establishing the efficacy of drugs. German drug legislation, for example, provides a separate procedure for the market approval of drugs associated with homeopathy, phytotherapy and other

‘alternative’ pharmacotherapies.

(2) Consumer perspective

In general we encourage submissions that explore the intersections where the cultural reservoir of meanings around biologicals came into contact with industrial calculation. The most obvious point of intersection is the consumer. A number of the topics already raised have not only been the object of discourses by professionals, but have also been reflected from the consumer’s perspective. Possible questions to pose concerning the consumer are: How, when and why did the Public view biologicals as natural/biological or artificial/chemical? What were the consumer expectations in relation to producer’s perspectives and how did these influence each other? To be more specific, how did the producers of drugs use standardization as an argument to sell to the consumers?

(3) Concepts of life and nature

Biologicals not only inhabit the industrial laboratory, but also have a life quite independent of industrial exploitation and production. We therefore urge to widen the scope in order to grasp the historical situatedness, including their cultural meaning and social significance of these substances. However, the interaction of older concepts (f.e. humoral pathology) and the new concepts of cellular biology and internal secretion then needs further elaboration. Therefore an analysis of such significant concepts as ‘purity’, ‘deficiency’, ‘efficacy’, ‘regulation’ or ‘control’ offer promising avenues to explore. To give just one example, biologicals played a major role in the junction of life reform movement and life sciences in the early 20th century. This perspective may also contribute to a *longue durée* genealogy of these substances. Most interesting are the shifts and conflicts within the discourse on ‘natural’ substances or the naturalness of these substances, respectively. How did images, concepts and notions associated with life and nature change? How do narratives about medicinal substances of biological origin interact with underlying concepts of life?

(4) Gender politics and (post-) colonial studies

Despite pioneering studies on sex hormones and gender (e.g. Oudshoorn, Fausto-Sterling) the relationship between biologicals and gender still needs further exploration. For example, female sex hormones were broadly advertised as substances regulating the gender-related functions (e.g. restoring femininity to postmenopausal women, or, on the other hand, opening up possibilities of employment for women still capable of bearing children). Exotic plants promised to appease suffering brought about by Western

civilisation (e.g. ginseng and cimifuga), but they also posed threats when they were psychoactive and started to change the behaviour of the colonizers from the West. Likewise, the connections between biologicals, culture and power relations in the context of colonialism need further exploration. As an illustration we can consider the two meanings of the phrase 'colonizing drugs'. While it suggests the appropriation of substances from 'colonized' regions and peoples and adapting their use to the needs of the colonizer, it also reminds us that drugs may play an active role in the colonization, domination, and regulation of individuals or of populations.

Local organizing team: Heiko Stoff, Florence Vienne, Alexander v. Schwerin, Bettina Wahrig
<http://pharmgesch.homeip.net/>

Please send an Abstract (not more than 450 words) to
Bettina Wahrig <b.wahrig@tu-bs.de>