

## Essay review

Quantitative technologies, administrative practices, and statistical minds

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Jacques G. S. J. van Maarseveen, Paul M. M. Klep and Ida H. Stamhuis (eds.), *The Statistical Mind in Modern Society. The Netherlands 1850-1940, Volume I: Official Statistics, Social Progress and Modern Enterprise* (Amsterdam: Aksant 2008), 432 pp., ISBN 978-90-5260-321-6/432; Ida H. Stamhuis, Paul M. M. Klep and Jacques G. S. J. van Maarseveen (eds.), *The Statistical Mind in Modern Society. The Netherlands 1850-1940, Volume II: Statistics and Scientific Work* (Amsterdam: Aksant 2008), 496 pp., ISBN 978-90-5260-322-3. ISBN 978-90-5260-323-0 (volumes 1 and 2), €49,90.

Here are two volumes totaling 920 pages on statistics in the Netherlands! Is it much ado about little? Perhaps so, but this is an excellent collection of academic essays, written to a consistently high standard by knowledgeable scholars, and meticulously edited. Not least among the features that impress us is the capacity of Dutch scholars to produce 31 papers by a total of 27 different authors in reliably idiomatic English and with virtually no linguistic or even typographical errors. Intellectually, the volumes achieve an unusual level of coherence for an edited collection, deriving partly from what they reveal about the Dutch, and partly from the perspective they develop on the rise of statistics.

The title of the volumes announces as unifying theme the 'statistical mind'. What takes place inside of skulls, however, generally mirrors social, political, technological, and bureaucratic practices. These include also the punch cards, circuits, and machinery that, beginning about 1900, held and processed the numbers, as well as the laboring women and men who gathered them. *The Statistical Mind* is alert to these social and material dimensions, a world made statistical. What the title is meant to imply, I think, is that statistics became, during the period covered by the book, an enduring reality of Dutch society and of the habits and beliefs of its members. The editors do not, of course, confine this statistical mind to the

Netherlands, though they are interested in a special Dutch configuration of statistical practice and reason, to be found in science as well as in state, society and business. That distinctiveness appears subtly against a statistical background that takes in most of the industrialized world and even, on occasion, Dutch and European empires.

What is special about the Netherlands? By 1940, the Dutch were beginning to demonstrate an exceptional faith in quantitative social science, evident particularly in the machinery of economic policy associated with Jan Tinbergen. Econometric studies and economic models served as guides to state policies and as a means of assessing them for the larger public. Few if any nations nowadays take their social science quite so seriously. And yet the Dutch experience is better understood as exemplary rather than unique, for the tools in which they put so much faith have become essential to the machinery of government all over the world.

During the period from 1850 to the early twentieth century, Dutch statistics was shaped by a strong commitment to markets and liberal voluntarism. Here again, such views do not place them in opposition to other European and North American states, but near the end of a continuum. Nineteenth-century liberalism, like classical political economy, was a bit hesitant about statistics, which was becoming, after all, the indispensable form of information for statesmen and administrators. Business leaders did not want the national government to know too much, for fear that it would expand more and more into their domain. One consequence of their doubts was that the Dutch statistical apparatus remained rather makeshift until the 1890s. Although bureaucratic agencies gathered up numbers in the domains where they operated, a considerable share of basic statistical collection and processing was in the charge of a voluntary organization, the Dutch Statistical Society. Finally in 1892 the Dutch established a Central Commission for Statistics, to be succeeded in 1899 by the Central Bureau of Statistics. The Bureau exemplified a model that concentrated the collection of statistical information in a single agency, rather than leaving it to each ministry and agency to collect its own statistics. This was in line with the ideal put forth earlier in the century by the Belgian Adolphe Quetelet, who thought of the statistical office as a kind of observatory, collecting data that would constitute social science. We should remember that, even at the end of the nineteenth century, the university-

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based social disciplines were just beginning to form. At the beginning of the new century, the continuity of academic social science with administrative statistics remained self-evident. International efforts, most notably the International Statistical Congresses held from 1853 to 1876, embodied the scientific aspirations of official statistics. They also formed an important context for the evolution of national statistics in the Netherlands.

The hesitation felt by a classical liberal faced with a burgeoning statistical agency was not alone about the concentration of knowledge in a government agency, but also about the grid that statistics imposes on a society and economy. As several authors here point out, statistics needs relatively homogeneous objects to count. The 'statistical mind' presumes and thus strives to fashion a world of standardized people and products, arrayed in their rows and columns. A society that can be classified and counted will be more susceptible of centralized administration. That was not what nineteenth-century bourgeois wanted for themselves. On the other hand, they recognized the need to contain somehow the instabilities of urban poverty and industrial concentration. The demands of social policy drove, to a large extent, the expansion of public statistics. The collection under review demonstrates important connections between statistical initiatives, both administrative and scientific, and pressing social questions regarding, for example, education, alcohol consumption, child labor, trades unions, social insurance, and unemployment.

While liberal politics went a long way toward defining the peculiarities of the Dutch in regard to official statistics, their distinctiveness in regard to scientific statistics is less systematic, more a matter of detail. Often, the Dutch story presents us with reservations about statistics in science that are familiar from the experience of other nations. Physicians in the Netherlands and elsewhere, for example, were long disposed to keep statistics in its place, for fear of allowing calculations of probabilities to supplant expert medical judgment. Economic studies in the late nineteenth century followed broadly the German pattern of emphasizing empirical quantification as an ally of historical understanding, and resisting mathematics.

Statistics in its more modern scientific form, as a tool of analysis and inference grounded in probability theory, began to flourish in the Netherlands mainly after 1920. Essays in this collection on agricultural research (especially in the Dutch East Indies), demographic forecasting, error measurement, and sample surveys demonstrate the expansion of

this kind of statistics in the Netherlands, in a fashion that is broadly consistent with other leading scientific nations. (The Netherlands recovered its role as a leading scientific nation after a hiatus of more than a century in the 1880s and 1890s). The mechanization of statistics, including punch cards and associated machinery, occurred in the Netherlands a decade or two after the United States, and more or less contemporaneously with other European nations. It is difficult to imagine that many countries could have developed graphical methods with such vigor and originality as we find revealed in a fascinating essay by Henk de Gans and Harro Maas, and yet the cases they discuss have parallels in the United States or Britain or Germany.

As the editors point out in their introduction as well as in four 'afterthought' essays, this collection is part of an efflorescence during the last three decades of historical and sociological scholarship on quantification. That work has been diverse, as befits its multifarious object, and has focused sometimes on the mathematics, sometimes on inference and modeling in the natural or social sciences, sometimes on the development of official statistics, or on relations of power and visibility in societies, or changing forms of information and classification, or public knowledge and the functions of government. The history of statistics is related to the history of accounting and business information, of markets and exchanges, of actuaries and social (as well as private) insurance, and of all that professes in our time to be 'evidence-based,' especially medicine. This collection follows specifically a predecessor volume edited by Klep and Stamhuis called *The Statistical Mind in a Pre-Statistical Era: The Netherlands 1750-1850*, about a time when the science of statistics was often defined as qualitative rather than quantitative. The editors also compare their work with an influential two-volume collection produced in 1987 by a working group at the Center for Interdisciplinary Research in Bielefeld, Germany, under the title *The Probabilistic Revolution*. That comparison helps us to comprehend what is distinctive and original in the Dutch volumes. The Bielefeld group was oriented around history and philosophy of science. They addressed the social sciences and even the field of history, but mostly did not pay much heed to bureaucratic activity and census offices. The project organizer, Lorenz Krüger, had originally conceived of the project in terms of a deep intellectual shift from a deterministic scientific world view to one that embraced chance, but he wisely allowed the project to develop into one concerned also with statistical tools and conceptions such as av-

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erages and variability. The Dutch volumes are more attuned to governments and bureaucracies, emphasizing social history (even of science) over intellectual and philosophical themes. Natural sciences such as physics, chemistry, and biology receive far less attention here than applied and social fields, from meteorology to population forecasts and social surveys. The other, still more obvious, difference between this collection and the Bielefeld volumes is that this one is about one small country, the Netherlands, while *The Probabilistic Revolution* addressed the sciences without regard to location. I would be surprised if the current volumes achieve as wide a distribution as did the Bielefeld ones. And yet their value is unde-

niable. Like many focused studies, this collection has implications going well beyond its particular subject matter. The greatest merit of this collection, in my view, is as a study of the interactions between statistical knowledge, including the agencies that produce it, and the many functions of state that took shape during the process of industrialization. Some of the developments it addresses seem fairly typical, while others are more distinctive to Dutch conditions. The typical and the unique, taken together, point beyond a description of processes to the motive forces involved in changing relations of knowledge and the state in the modern period.