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For anyone interested in the history of science in the twentieth century, the volume provides good summaries of a variety of subjects. Some chapters would be disappointing to experts within their own fields. The book, however, is an invaluable source of reference for anyone wishing to dip into the history of science.

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Volker Hess (ed.), Normierung der Gesundheit. Messende Verfahren der Medizin als kulturelle Praktik um 1900, Abhandlungen zur Geschichte der Medizin und der Naturwissenschaften Heft 82, Husum, Matthiesen Verlag, 1997, pp. 226, illus., DM 69.00 (3-7868-4082-2).

Towards the end of the nineteenth century, "norms" became prominent in sciences from physiology to psychiatry, anthropology to genetics, criminology to embryology, and in such rationalizing movements as Taylorism and eugenics. Norming health: medical measuring as a cultural practice around 1900, based on a workshop organized by Volker Hess in Berlin in September 1996, is a collective attempt to develop a medical historical approach to this phenomenon. That is a tall order, one measure of the difficulty of which is the complexity of relations even between "norm" and the other "nor"-concepts, "norming", "normal", "normality" and "normalization". The most influential models are Georges Canguilhem and Michel Foucault. Canguilhem critiqued the nineteenth-century reframing of disease as quantitative deviation from a medically defined norm, which he argued did not do justice to the norms proper to other ways of life. According to Foucault's concept of "biopower", disciplinary technologies came to constitute the individual, e.g. as a subject of psychometric testing, while regulatory technologies constituted the population, and sought, e.g. through eugenics, to reduce the proportion of those who deviated from psychometric norms.

Engaging critically with Canguilhem and Foucault, and embracing recent studies of setting standards and agreeing measures in scientific practice, this stimulating volume explores the construction of biomedical norms and their articulation with wider "cultural practices" a hundred years ago.

Chapters of various perspectives and qualities, each followed by a commentary, deal with the rise of the concept of normal value (Johannes Büttner), norms in psychiatry (Heinz-Peter Schmiedebach), the semantics and aesthetics of the electrocardiograph (Cornelius Borck), and photographing criminals (Mariacarla Gadebusch Bondio). But it is of clinical thermometry, the focus of Hess's own work and a theme in several other contributions, that we are given the most sustained and satisfying discussion, and one which takes us interestingly beyond the Anglo-American studies such as Stanley Joel Reiser's *Medicine and the reign of technology*.

In 1868 the Leipzig clinician Carl Wunderlich pronounced that "Not everyone is healthy who has a normal temperature; but everyone is sick whose temperature, upwards or downwards, exceeds the limits of the norm" (p. 170). Hospitals soon took up thermometry as a means of managing ever more patients; temperature charts organized other "practices of objectification" (p. 176) such as taking the pulse and weighing. Michael Martin describes sanatoria which caricatured what this could mean: taking temperatures became the central preoccupation of lives obsessed with systematically observing the minutest of bodily changes. Wunderlich had had such confidence in the self-registering power of thermometers that he was prepared to allow laypeople to read them, leaving the physician to interpret the temperature. Measurement in the sanatoria, typically every two hours, was increasingly entrusted to supervised patients. But some doctors warned of "metromania", and would hand out only "dumb thermometers", which patients warmed for a nurse or physician to add a detachable scale (pp. 155-6).

The dominance of thermometry in total medical institutions is well known. More

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challenging historically is the general acceptance of the new instruments and their values in private practice and homes. In 1913 the Imperial Physical-Technical Institute tested over 110,000 thermometers a year, many for domestic use, and—this is crucial—by about 1900 normal body temperature and what counted as a raised temperature were common knowledge. Why did laypeople accept these instruments, apparently with little resistance? Because, Hess suggests, thermometers did not simply extend, but could also limit medical authority.

Patients themselves insisted on diagnostic instruments and a "thorough examination", and in increasingly silent medical encounters temperature---when the patient was allowed to know it-became a key topic of conversation. The numbers were so completely abstract that they left plenty of room for interpretation. The middle class, at least, also bought thermometers to keep at home, possibly because they could use them to re-appropriate powers of decision-making which they were otherwise losing to physicians. Gunnar Stollberg tells us that the feminist Lily Braun remembered her exhaustion in December 1902 after the Social Democratic Party conference and Christmas shopping. "How weak I was and how glowing hot! With my last strength I crawled into the bedroom and put the fever thermometer under my arm: 391/2-I called for Berta [her maid] and sent to the doctor" (p. 133). Braun did not have her temperature taken under medical supervision, but rather used the thermometer to decide that she would consult a physician. Far from invalidating her lay diagnosis of feeling feverish, she converted it into a by then binding norm, to which, within limits, the doctor would also have to submit. Working-class patients may have done the same. And, not surprisingly, some clinicians now began to contest the "overvaluing" of mere numbers.

Drawing upon the work of Theodore Porter, Hess argues that within a new "culture of objectivity" medical experts were as bound by the norms they produced as were their patients. I am struck by what an unusual medical instrument the thermometer was: a key biomedical tool, generally available and usable by laypeople who also knew, and to some extent were medically acknowledged to know, how to interpret the numbers it offered. Much norming in medicine around 1900 was far less "democratic" (p. 188) and much less benign. But however we assess it, here is a set of practices crucial to the making of modern medicine on which this book usefully prompts us to reflect.

Nick Hopwood, University of Cambridge

Mathew Thomson, The problem of mental deficiency: eugenics, democracy, and social policy in Britain c. 1870–1959, Oxford Historical Monographs, Oxford, Clarendon Press, 1998, pp. ix, 351, £48.00 (0-19-820692-5).

Mathew Thomson's new book, its somewhat misleading subtitle notwithstanding, provides us with a valuable overview of how the British (or rather the English, for there is nothing here about Scotland and Ireland) dealt with the problem of mental deficiency in the first half of the twentieth century. Developments between 1870 and 1913 are disposed of rapidly in a few pages on "the prehistory of mental deficiency" that form part of the introductory chapter. Thereafter, the focus is resolutely on our own century, and most especially on the notorious 1913 Mental Deficiency Act and its aftermath.

Thomson seeks to examine his subject from a number of overlapping perspectives. He looks at the "high politics" of Parliament and the Civil Service; the interest group politics of professions, voluntary groups, and pressure groups; activities at the level of local government; and the micropolitical interaction between those on the sharp end of social policy—social workers, families, and the "defectives" themselves. He examines both the total institutions into which the mentally defective were segregated, and the growth of "community care", an approach whose origins