

Davids, Karel, *The Rise and Decline of Dutch Technological Leadership: Technology, Economy and Culture in the Netherlands, 1350-1800* ((History of Science and Medicine Library 7, Knowledge Infrastructure and Knowledge Economy 1; Leiden, Boston: Brill, 2008, 2 volumes, XX, IX + 633 blz., ISBN 978 90 04 16865 7).

Innovation Studies Programs seem to be cropping up everywhere like mushrooms in a damp forest. A major push behind this development is the view that the stimulation and governance of innovation is a key to achieving technological leadership and economic growth on a national or regional scale. But are the policy makers and university administrators behind this trend right to forefront innovation as a way to attain leadership and 'grow the economy'? Maverick historians such as David Edgerton have offered counter-evidence by drawing our attention to the fact that most of what ought to be called the history of technology, but also its present and future, has much less to do with technological innovation and much more to do with using and maintaining extant technology. One consequence is that the current stress on the emerging, highly competitive, realms of nano-technology and bio-engineering needs at least to be augmented by attention to less sexy but certainly more widely employed (especially in developing economies) technologies whose manufacture, modification and maintenance continue to offer opportunities for employment and economic growth. In the two volumes of his impressively encyclopaedic study *The Rise and Decline of Dutch Technological Leadership: Technology, Economy and Culture in the Netherlands, 1350-1800*, Karel Davids also examines the links between technological innovation and economic growth with interesting results. Along the way, he offers a *tour de force* overview of the history of technology in the Northern Netherlands as he traces its rise to 'technological leadership' and subsequent decline and eclipse by Great Britain

by 1800. To make sense of his endeavour, it helps to begin by reviewing definitions. Davids defines technology in terms of the 'abilities of people to control or transform nature for productive ends', which leads him to focus on subjects that range from 'agrarian practices and seafaring skills to industrial processes and building techniques'. This is a precise definition that some might find too narrow, passing over, for example, as it does 'skills that relate to the manipulation of money or people (such as financial techniques, military tactics or the practice of administration)'. Given Davids' interest in economy and culture, as signalled by his title, one might expect attention to areas such as these in which they and technology so clearly interpenetrate. But all should be grateful for the richly detailed history he does provide, which will surely make this work a standard resource for people interested in the history of technology in the Netherlands during this extended period.

Davids' definition of technological leadership is likewise precise, taken 'to mean that a given country, region, town or cluster of towns plays an initiating role in the new technologies in a wide variety of fields'. Historians will appreciate that he examines the history of this phenomenon both by considering his own findings and what historical actors wrote on the subject. His attention to the eye-witness accounts by travellers is especially welcome along these lines as they help to bring extra historical depth to his analysis and life to his prose. Leadership is clearly tied to innovation for Davids (one could imagine other definitions, it must be said), which leads him to investigate the flow of knowledge both into and out of the Northern Netherlands as an important contributor to technological leadership. Recognizing that technological knowledge is sometimes embodied in skilled individuals (he also looks at the flow and collection of texts, models, etc.), Davids includes an analysis of key migration patterns. In answer to traditional claims that the Dutch benefited especially during the seventeenth century from immigrants fleeing French and Spanish Catholicism

(Huguenots, along with Flemish and Sephardic refugees), he shows both that significant levels of technological knowledge entered the Northern Netherlands between the mid-fourteenth century and 1580 – thus prior to the influx of these immigrants – and that this post 1580 immigration wave actually coincided with a century that saw a decline in the import of knowledge and a rise in its export.

More fundamentally, though, Davids wields his evidence to weaken another popularly held view. Against those who insist on coupling technological innovation with economic growth, he demonstrates that Dutch leadership followed a somewhat different pattern than that of its economic development. For it was while the Dutch economy was beginning its relative decline during the late seventeenth century that the Northern Netherlands established itself as a technological leader. Only in the late eighteenth century did the Dutch really begin to give way to the English, while concerns with Dutch technological prowess were still being voiced by well informed Europeans such as Jean-Antoine Chaptal in the early nineteenth century. This leaves open, then, the question of how to account for what Davids paints as (the Northern Netherlands') technological leadership and decline. Here he sides with those such as Joel Mokyr who call on us to buttress analyses of market forces with increased consideration of cultural and institutional factors. How pluriform is the ambient political system, for example? Do socio-cultural organisations and mechanisms exist to encourage the collection, demonstration and discussion of knowledge?

These two volumes have much to teach us about the intricacies of technological development and the crowded roads and waterways along which knowledge and opportunities – embodied likewise in people, texts, tools and commodities – travelled to, through and from the Northern Netherlands. Indeed the heaviness of this traffic might give us pause before we launch further into tales of national advance and superiority. What

does it mean ultimately to talk about 'Dutch' technological leadership or 'British' industrial superiority, when both rest so firmly on the global circulation of knowledge, skill, travellers, goods and trade? (See, for example, Christine MacLeod, 'The European Origins of British Technological Predominance', in: L.P. de la Escosura (ed.), *Exceptionalism and Industrialism: Britain and its European Rivals 1688-1815* (Cambridge 2004) 111-126; Maxine Berg, 'In Pursuit of Luxury: Global History and British Consumer Goods in the Eighteenth Century', *Past and Present* 182 (2004) 85-142.) One hopes that studies like this one by Karel Davids can help sensitive readers find a salutary balance between the search for local uniqueness and global interconnexions.

Finally a less pleasurable word needs to be said about the poor editing job done by Brill Press on a serious study for which they are charging €149. Surely the publishers could have hired a copy editor to review a manuscript written by a scholar who, after all, was not writing in his primary language. The text abounds with awkward sentences, typographic and spelling errors, poor punctuation and the like. The author, who has done a commendable job of marshalling a huge amount of empirical evidence and clearly explicating (in principle) numerous theoretical positions related to the topics of technological leadership and economic growth, should not be blamed for this situation; it is the publisher's job to see to it that an author's hard work is not marred by such things. As the co-editor of the series in which this study appears, Davids will certainly have much to say to Brill about their current practices.

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Janssen, Jette, *De deugd van broederschap. Sociaal kapitaal van gildebroeders in de Noord-Brabantse schuttersgilden, 1600-2000* (Dissertatie Tilburg 2009, Bijdragen tot de geschiedenis van het Zuiden van Nederland. Derde reeks 36; Tilburg: Stichting Zuidelijk Historisch Contact, 2009, 330 blz., ISBN 978 90 70641 88 7).

Noord-Brabant kent heden ten dage 200 actieve schuttersgilden die met kleurrijke kledij, vendelzwaaien en op buitenstaanders indruk makende tradities een levend en vaak gefotografeerd element in de samenleving zijn. Over de geschiedenis van deze gilden, die wel onderscheiden moeten worden van ambachtsgilden en religieuze broedersschappen, is sinds 1933 veel gepubliceerd. Vermeldenswaardig is het in 1993 verschenen boek van E. van Autenboer over de gilden in het hele vroegere hertogdom Brabant tussen 1300 en 1800. Het proefschrift van Jette Janssen (promotoren waren de Tilburgse hoogleraren A.J. Bijsterveld, P. Nissen en W. Arts) is niet bedoeld als dé geschiedenis van de schuttersgilden, maar zoomt in op de geschiedenis van de leden, de broeders. Centraal staan de vragen: wie waren zij, waarom werden zij lid en hoe beleefden en realiseerden ze het lidmaatschap met als essentiële elementen verwantschap, broederschap, traditie, eer en prestige. Het onderzoek nam bijna negen jaar (2000-2009) in beslag.

Een belangrijk en zeer bewerkelijk onderdeel van Janssens onderzoek is een prosopografie van een dubbel gestratificeerde steekproef uit de leden. De eerste selectie bestond uit 18 gilden verspreid over de hele provincie, zowel stedelijke als plattelandsgilden. Van hen konden voor de periode 1600-2000 in totaal 9.118 leden worden opgespoord. Daaruit werd een aselechte steekproef van 578 leden getrokken. Voor deze groep werden zo veel mogelijk gegevens over familierelaties, beroep, functies, geboorte- en woonplaats verzameld. Dit was niet zo eenvoudig

omdat sommige gilden heel goed voor hun archief gezorgd hebben, maar andere daarentegen bijna alles hebben weggegooid. De uitslag bevestigt grotendeels het beeld wat kenners al hadden: verreweg de meeste leden kwamen uit de plaats waar het gilde gevestigd was of uit de directe omgeving. Alle leden waren katholiek of gaven voor dat te zijn. Zoons volgden hun vader op, maar wel meestal nadat deze was overleden, of meldden zich als lid aan op aanraden van broers of schoonvaders. Overigens waren de gilden geen besloten clubs en het aandeel van uitheemse leden wisselde in de loop der tijd sterk.

Over de oorsprong van de gilden is veel gediscussieerd, maar wel is duidelijk dat de oudste schuttersgilden ontstonden in de steden en dat het platteland vanaf de late middeleeuwen volgde. De meeste gilden in Noord-Brabant zijn na 1550 opgericht. De kern van het takenpakket bestond uit verdediging van het eigen dorp tegen van buiten komend gevaar, bewaking en beveiliging, socialisatie, en deelname aan religieuze plechtigheden zoals processies, uitvaarten en bruiloften. Zeer onderscheidend was het schieten met voet- of kruisboog of geweer op de vogel. Wie de vogel eraf schoot werd koning, wie dat driemaal achtereenvolgens voor elkaar kreeg keizer. Of de gilden als defensieorganisaties werkelijk iets betekend hebben is nog maar de vraag. De meeste gilden waren te klein om een heel dorp afdoende te kunnen beveiligen. Toch organiseerden veel dorpen in dit door oorlogen geteisterde gebied een nachtwacht bestaande uit volwassen mannen die gewapend met een roer of ander schiettuig 's nachts de ronde maakten. Toen noordelijk Brabant na 1648 voorgoed deel ging uitmaken van de Republiek leek het er even op dat de Staten-Generaal onder druk van de gereformeerde kerk de gilden wilden verbieden, maar na 1678 ontstond er in Staats-Brabant een klimaat van leven en laten leven. De gilden werden niet langer gehinderd en enkele malen gaven de Staten-Generaal en de prins van Oranje, die in dit gebied zeer veel bezittingen had, zelfs nieuwe *caerten* uit.