

# *Britain and the Single Factor thesis Once More - a Comment on Kristine Bruland*

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Kristine Bruland's<sup>1</sup> criticism of Gaski<sup>2</sup> on technological change as the cause of the British industrial revolution may be taken *in situ* as interesting and probably correct. At the risk of boring all and sundry, I would wish to question her upon the last page of her account, which relates to an aspect of my own short note.<sup>3</sup> I quote (p. 191),

"If a conjunction of technological feasibility and need are sufficient, then how does one explain (a) the timing of British industrialisation (for most of the crucial innovations had been feasible for some time, and presumably needs also existed) and (b) the fact that Britain was first (were textile innovations not within human capabilities in France and Germany? Did they have fewer needs?).

Why is my argument, *per se*, "implausible" (p. 187) because it ultimately rests on the supply side and emphasises short-term social factors operating within England and Scotland in the years after 1780? Given that the demand argument for separating out Britain from France or Germany is possibly redundant and certainly so as an explanation for the *aggregate* economy, (whether as "needs" or effective, money demand), my belief remains that socio-cultural factors operating in Britain, and in *Britain alone*, "combined with" existing characteristics of space and demography as triggering mechanisms, created a significant burst of technological *adaptation* and *diffusion* which did not occur elsewhere and is sufficient to explain the identifiable rise in the growth rate of productivity improvement. That is, both my explicans and my explicandum were unique to the British economy of that time. I do not see how this formulation may be depicted as a "single-factor" explanation.

<sup>1</sup> K. BRULAND, "Say's Law and the Single-Factor Explanation of British Industrialisation: A Comment", *Journal of European Economic History*, 14, No. 1, (1985), pp. 187-191.

<sup>2</sup> J.F. GASKI, "The Cause of the Industrial Revolution: A Brief 'Single-Factor' Argument", *Journal of European Economic History*, 11, No. 1, (1982), pp. 227-233.

<sup>3</sup> I. INKSTER, "Technology as the Cause of the Industrial Revolution, Some Comments", *JEEH*, 12, No. 3, (1983), pp. 651-658.

I do view the rush on the British patent office as of more importance than do most economic historians. This is simply because, historically, multiple minor innovations, whilst themselves not necessarily definable as technological change (i.e. giving rise to the same outputs with lesser value of factor inputs), provided the supply of information for highly significant technological breakthroughs. Without this, in later eighteenth century England, economic forces (a change in relative factor prices) might well have induced a need for new technologies, but one which could not be satisfied in the production process. In which case, critical productivity jumps would have waited upon knowledge-technique transfer from other nations or upon the success of specifically enterprise-oriented research programmes. I believe that, historically, many technological "jumps" are consequent upon a fervour of adaptive minor improvements of technique. This fervour may itself be induced by short-term factors operating outside the "economy" as narrowly-defined.

To refer to the quotation from Kristine: (a) the timing of the British industrial discontinuity was not a result of Schumpeterian leaps (which operated elsewhere also and which were transferable at relatively low economic cost), but of Rosenbergian shuffles; a complex of small, adaptive activities which lay at the heart of the artizan-based economy: (b) Britain was first because such adaptive innovative behaviour was not to be followed in other nations on a similar scale until after that time, when, in fact, it became increasingly formalised and institutionalised. The "cause" of such behaviour was not primarily to do with demand (I remain agnostic about the possibility of some positive result arising from a rise in effective demand, but probably amongst producers) but, rather, related in a coherent, historical fashion to a series of social factors which in turn promoted the short-term inducement mechanisms for technological diffusion so emphasised by Nathan Rosenberg.<sup>4,5</sup>

My argument certainly relates to the supply side and to autonomous (in the short-term) social "factors", but for all that it is not ridiculous. It might be remembered that my own explanation, which requires elaboration, is not designed to explain the growth of industrial capitalism, of "industrialism", etc. I believe that it may help the historian to explain the growth and productivity gains evidenced within the British economy in the last twenty years or so of the eighteenth century. It is my version of McCloskey's "ordinary inventiveness".<sup>6</sup>

<sup>4</sup> N. ROSENBERG, "The Direction of Technological Change: Inducement Mechanisms and Focusing Devices", *Economic Development and Cultural Change*, 18, No. 1, (1979), pp. 1-24.

<sup>5</sup> N. ROSENBERG, *Inside the Black Box*, Cambridge, 1982.

<sup>6</sup> D.N. McCLOSKEY, "The Industrial Revolution 1780-1860: A Survey" in R. Floud and D.N. McCloskey, *The Economic History of Britain Since 1700*, Vol. I, 1700-1860, Cambridge, 1981, pp. 103-127.