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RAW MATERIALS IN THE HISTORY OF ECONOMIC POLICY

Or why List (the protectionist) and
Cobden (the free trader) both agreed on free trade in corn

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It's the eternal paradox – the poor live in nations which are rich from Nature's bounties.
(Jose Cecilio del Valle, economist and vice president of the short-lived Central American Republic,
about 1830)¹

The higher the civilization of a people, the less does it depend on the nature of the country.
(Wilhelm Roscher, German economist and inspirer of Marx and Schumpeter, founder of the
New Historical School of economics in Germany, about 1860)²

The commemoration of the repeal of the Corn Laws in 1846 presents an opportunity to look at the place of raw materials in what is virtually a non-existent field of academic enquiry: the history of economic policy. The history of economic thought has, to a large extent, become a study of the genealogy of neoclassical economics, which leaves out the history of an alternative tradi-

¹ Valle's works are published as *Obras de Don Jose Cecilio del Valle*, Ciudad de Guatemala, Tipograffa Sanchez & de Guise, 1930, 2 volumes.

² Roscher's four-volume *Grundlagen der Nationalökonomie* appeared in 26 editions, the first edition in 1854. This work formed a school of thought which was to dominate German economic and industrial policy until World War II. Roscher was the first economist to incorporate increasing returns and mass production in an economic textbook. His dynamic world view formed a platform for later dynamic theories, of economists with such diverse views as Marx and Schumpeter. The quote is taken from one of the two US editions of his textbook: *Principles of Political Economy*, Chicago, Callaghan and Co., 1882, volume 1, p. 137.

tion of economic policy which was not based on classical or neoclassical thought.³ In this alternative economic tradition – which I call production-centred economics (as opposed to the barter-centred classical and neoclassical tradition) – raw material production alone cannot, in the absence of manufacturing, lead to national wealth. A genealogy of the alternative production-centred economic tradition over the last 500 years is shown in Figure 27.1.

The main debate on economic policy in the nineteenth century [was between barter-centred English classical theory on the one hand, and [275] production-centred economic theory, represented by Germany and the USA, on the other. Later, into this century, the same line of reasoning is found in Canada⁴ and Australia.⁵ These later developments, however, will not be discussed here. The aim of this chapter is to show that the repeal of the Corn Laws was a policy measure where both classical barter-based economics in England – represented by Richard Cobden – and production-based economics – represented by Friedrich List – fully agreed that free trade in corn was to the benefit of England. Free trade in corn being agreed upon both by the free traders and the protectionists at the time, I shall argue that the repeal of the Corn Laws should not be seen as a victory of the principle of free trade, but rather as the final demise of English feudal privileges.

The debate around the Corn Laws calls the attention to one important stylized fact in the history of economic policy: All presently industrialized countries have, in the early stages of industrialization – from fifteenth-century England to twentieth-century Japan and Korea – been through a period where economic policy was heavily discriminatory against raw material production, and/or heavily favouring manufacturing. The particular mix of anti-raw materialism and pro-manufacturing policies varied, depending on the special circumstances of each nation.

Throughout the chapter I shall attempt to show why this discrimination against raw materials was a necessary stage to go through – why production-based economics was right in seeing the exclusive specialization in the production of raw materials as ‘bad trade’. I shall argue that the understanding of this point is a necessary step in order to comprehend an important aspect of the problem of world poverty and of sustainable economic development.

PRODUCTION-CENTRED VS. BARTER-CENTRED ECONOMIC THEORY

In the fundamentally barter-centred classical and neoclassical economic tradition there is, of course, no difference between raw materials and manufactured goods. I shall argue that there exists a very long alternative line of economic theory – which I shall refer to as production-centred

³ It can be argued that the last history of economics which gave good coverage of the history of economic policy was Othmar Spann's *Die Haupttheorien der Volkswirtschaftslehre* which first appeared in 1911 and by 1936 had reached 24 editions and a total of 120,000 copies printed in German. The US edition is *The History of Economics*, New York, Norton, 1930. In England the book was published under the title *Types of Economic Theory*.

⁴ See, for example, Innes, Harold, *Staples, Markets, and Cultural Change. Selected Essays*, Daniel Drache (ed.), Montreal, McGill-Queen's University Press, 1995.

⁵ This type of thinking was reflected in Brigden, J.B. *et al.*, *The Australian Tariff: An Economic Inquiry*, Melbourne, Melbourne University Press, 1929. Vernon, J. *et al.*, *Report of the Committee of Economic Inquiry*, Canberra, Commonwealth Government Printing Office, 1965.

(as opposed to barter-centred) – where an economy based on raw materials, in the absence of a manufacturing base, almost by necessity will be poor. I shall argue that all presently industrialized nations – the UK, USA, Germany and Japan – went through an important stage of production-centred economics, where the output of raw materials was seen as an inferior economic activity. Only after having completed the process of industrialization did the economic policy of these nations come more in line with the classical or neoclassical paradigm.

Neoclassical economics sees physiocracy (from *physio* = nature, *-cracy* = rule) as the starting point of its family tree. At the root of neoclassical [276] economics there lies a preference for raw materials – for agriculture – over manufactured goods; not only in the name physiocracy, but also since, as Adam Smith pointed out, agriculture corresponds more closely to the ‘natural’ state of perfect competition. Raw materials behave ‘more naturally’ than manufactured goods. Neoclassical economics has also taken diminishing returns from Ricardo’s corn economy to characterize its production functions, and, indeed most surprisingly, applies this constraint to a society of industrial mass production, which in reality is characterized by the opposite effect – by important increasing returns to scale. Here the problems created by general equilibrium analysis forced Alfred Marshall, although most reluctantly, to throw out of his model the increasing returns that he himself had observed as being perhaps the main characteristic of industrial society.⁶ This is an early example of economic theory developing along what Paul Krugman has called ‘the perceived line of least mathematical resistance’.⁷

The nature of neoclassical economists’ tools and the quest for equilibrium forced them to stick to physiocracy – to the economic behaviour of the products of nature, not industry – as the basis for their science. As a consequence of this, the economic theory of the whole historical period whose main characteristic was industrial mass production – the ‘Fordist techno-economic paradigm’ – was accompanied by an economic theory deeply entrenched in the assumptions of pre-mass production: the absence of any scale effects (in trade theory) and diminishing returns in the production functions.

In the alternative production-based economic tradition, there is a ‘curse of the resources’ underlying the theory. Specialization in raw materials – without a parallel manufacturing base – causes poverty for a nation. In this chapter we shall argue that this argument belongs to a very old school in economic theory, which goes back to the Renaissance, a school that heavily influenced economic policy for centuries, but which all but died out with World War II. This alternative tradition differentiates itself by being oriented around production and knowledge (‘mind’) – in contrast with the classical and neoclassical traditions which are centred around barter (supply and demand) and matter (goods). A family tree of production-based economics is provided in Figure 27.1.

The 1846 repeal of the Corn Laws was a case where both these schools agreed – both pre-Smithian production-centred economics and barter-centred classical economics viewed free trade in corn as being beneficial to England. Free import of corn was also seen as being beneficial in the pre-Ricardian *ancien regime* trade, under the set of policies we shall refer to as King’s Taxonomy.⁸

⁶ This process is narrated in Hart, Neill, *Increasing Returns and Economic Theory: Marshall's Reconciliation Problem*, University of Western Sydney, Discussion Paper Series no. E9004, 1990.

⁷ *Rethinking International Trade*, Cambridge, Mass., MIT Press, 1990, p. 4.

⁸ After King, Charles, *The British Merchant or Commerce Preserv'd*, London, John Darby, 1721, 3 vols.

We shall therefore argue that the repeal of the Corn Laws should not be seen as a victory of free trade, but merely as a final demise of the power of the British landed aristocracy.

This is the reason why Friedrich List – the famous protectionist – and Richard Cobden – the famous free trader – were fully in agreement on the [277] case of the Corn Laws. By 1846 Friedrich List had in fact been suggesting for more than twenty years that, in their own interest, the English move towards free trade in corn.

The core argument of 400 years of production-centred economics can be reduced to the statement that the circumstances of production of goods and services are the fundamental determinants of national economic wealth. These circumstances are determined by dynamic increasing returns – what Schumpeter called historical increasing returns – by diminishing returns, by the slope of the learning curve, and by the different levels of capital and skill which can profitably be absorbed by different economic activities at any point in time. The varying degrees of imperfect competition, and of barriers to entry which result from these factors, cause national differences in wage levels.

By essentially studying barter Adam Smith and his neoclassical descendants miss the influence of the circumstances of production national wage levels – which constitutes around 70 per cent of GNP in a modern nation. The alternative theoretical tradition – which was very strong both in the USA and Germany in the nineteenth century – argues that this influence is so powerful that, when trade takes place between nations of very different skill levels, free trade is frequently a decidedly suboptimal option. We have argued elsewhere that the take-off stages into industrialization of all presently industrialized countries – in a sequence started by England around 1485 – have been based on these production-centred and not barter-centred economic theories,⁹ and that barter-based classical and neoclassical economics have replaced the production-based theories only when a competitive manufacturing base had been achieved. This pattern holds true both for England (pre-Smith), for the USA, Germany and Japan.

⁹ Reinert, Erik S., ‘Catching-up from way behind, a Third World view perspective on First World history’, in Fagerberg, Jan *et al.*, *The Dynamics of Technology, Trade, and Growth*, London, Edward Elgar, 1994.

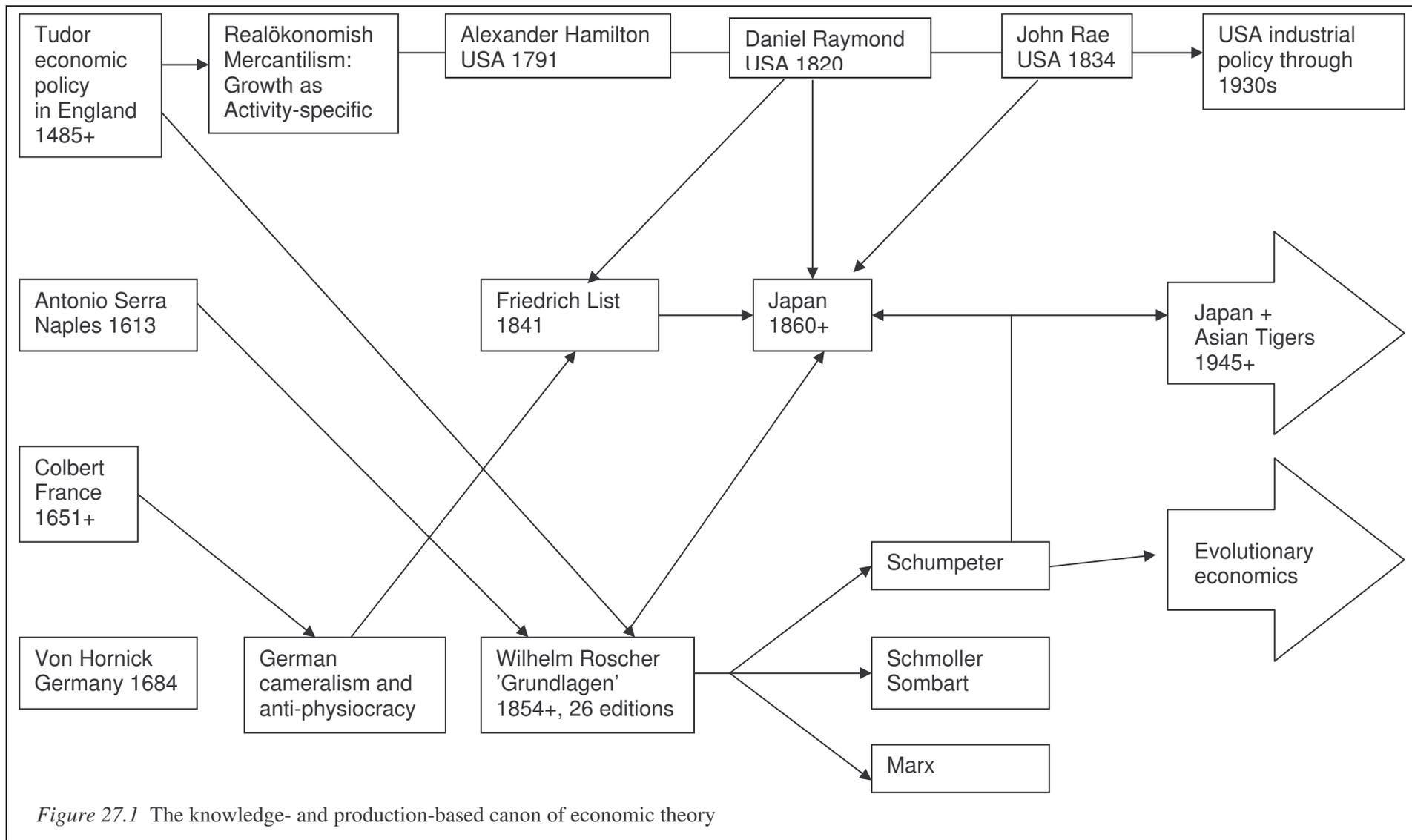


Figure 27.1 The knowledge- and production-based canon of economic theory

On 'good' and 'bad' trade

Historically the economic policies recommended in production-based economics follow two alternative lines of argument. The first concerns the risks and perils of a resource-based economy – being specialized in economic activities not requiring high labour skills and subject to diminishing returns. These two effects may combine into a lock-in effect trapping a nation in poverty (the ‘Bolivia syndrome’), which technical change will not solve. Exporting natural resources constituted ‘bad trade’ in the orthodoxy of English economic policy until long after Adam Smith and David Ricardo. The most clear statement of this orthodoxy is contained in three volumes published by Charles King in 1721.¹⁰ In King’s Taxonomy exporting raw materials was ‘bad trade’. We later find this same line of argument in nineteenth-century Germany, Japan and the USA and in twentieth-century Australia and Canada. The ‘curses’ of economies based on natural resources¹¹ are five: [279]

- diminishing returns;
- low skills/low wages;
- perfect competition;
- price volatility;
- lack of ability to create national synergies/linkages.

The latter point is emphasized by Gerschenkron: ‘the hope that industry in a very backward country can unfold from its agricultural activities is hardly realistic’;¹² and by Hirschman: ‘agriculture certainly stands convicted on the count of its lack of direct stimulus to the setting up of new activities through linkage effects: the superiority of manufacturing in this respect is crushing’.¹³

The second line of argument concerns the benefits of concentrating a nation’s economic activities in mechanizable, skill-absorbing activities, subject to increasing returns – a cluster of characteristics which for a long time could be efficiently shorthanded as manufacturing. Exporting goods from these activities qualified as ‘good trade’ in King’s Taxonomy – the English orthodoxy which built its national strength. The Canadian and Australian arguments later added to this by showing that the presence of a national manufacturing base upgraded skills in the resource-based activity and prevented these from going into diminishing returns – making raw material exports from a manufacturing country a viable strategy. In a previous paper we have argued that what today is called competitiveness reflects the pursuit of dynamic imperfect competition which in previous centuries was sought under the names of ‘good trade’ or ‘national productive powers’.¹⁴

¹⁰ King, Charles, *The British Merchant or Commerce Preserv’d*, London, John Darby, 1721, 3 vols.

¹¹ These problems are discussed in Reinert, Erik, ‘Diminishing returns and economic sustainability: the dilemma of resource-based economies under a free trade regime’, in Hansen, Stein *et al.*, *International Trade Regulation, National Development Strategies and the Environment: Towards Sustainable Development?*, Oslo, Centre for Development and the Environment, University of Oslo, 1996.

¹² Gerschenkron, Alexander, *Economic Backwardness in Historical Perspective*, Cambridge, Mass., Harvard University Press, 1962, p. 215.

¹³ Hirschman, Albert O., *The Strategy of Economic Development*, New Haven, Yale University Press, 1959, pp. 109–10.

¹⁴ Reinert, Erik, ‘Competitiveness and its predecessors – a 500-year cross-national perspective’, *Structural Change and Economic Dynamics* 6, 1995, pp. 23–42.

In this chapter we shall concentrate on the first part of the argument and try to explain the risks and perils of resource-based economies, why ‘bad trade’ was more than a primitive pre-Smithian superstition. This will also explain why protectionist Friedrich List so clearly saw the benefits accruing to England from the repeal of the Corn Laws.

On the differing capacity of economic activities to absorb skills and capital

In order fully to comprehend the argument underlying the philosophy of ‘good’ and ‘bad’ trade, it is important to understand how economic activities differ as potential carriers of economic growth. At any point in time different economic activities can profitably absorb very different quantities of human knowledge and capital, they present different windows of opportunity. You cannot upgrade the level of skill and salary of a person picking lettuce to that of a computer engineer by educating the lettuce picker, because the absorption capacity of human skills for the two professions are different. The absorption capacity for capital and skill of lettuce picking will only change at the point in time when lettuce picking is mechanized. Upgrading the economic situation of the lettuce picker can only take place by his changing [280] his job. That this fact applies to a nation as well as to an individual was the core argument of US economist Daniel Raymond in 1820.¹⁵ Raymond laid the foundation for ‘the American system of manufactures’ and heavily influenced Friedrich List.

As long as there is a demand for goods produced with both high and low skills, economic growth – left to the market – will be very uneven and strongly history dependent. That vicious and virtuous economic circles originate in this fact was already indicated by Antonio Serra in 1613,¹⁶ and also underlies nineteenth-century opposition to English classical theory both from Germany and the USA, and later from Japan. Only by producing a theory of economic barter – leaving out the production aspects – neoclassical trade theory proves that the wage earners in a nation making a living picking lettuce will be equally as rich as the wage earners in a nation of computer engineers.¹⁷ If production is introduced, the theory would be valid only if one introduces the counter-factual assumption that all economic activities have the same capacity to profitably absorb skills and capital (i.e. that a barber shop profitably can be made as capital intensive as a nuclear power plant, and that picking lettuce profitably can be made as skill intensive as developing new computers). A fundamental difference between barter-based and production-based economics is therefore that in the latter the process of economic development is activity specific – it can only take place in certain economic activities at any point in time. Historically we tend to name historical periods according to the activities where economic development took place – in the stone age industry in the stone age, in the bronze age industry in the bronze age, and – in the machine age – in the economic activities which were being mechanized at any point in time.

To nineteenth-century Americans this point was brought home by looking at the cotton grow-

¹⁵ Raymond, Daniel, *Thoughts on Political Economy*, Baltimore, Fielding Lucas, 1820. Raymond's work appeared in four editions from 1820 to 1840.

¹⁶ Serra, Antonio, *Breve trattato delle Cause che possono far abbondare It Regni d’Oro e Argento dove non sono miniere. Con applicazione al Regno di Napoli*, Napoli, Lazzaro Scorriggio, 1613.

¹⁷ Paul Samuelson's factor-price equalization.

ing industry. The observable fact that cotton picking was only profitable with slave labour made any English hint that the USA would be better off producing cotton and leaving manufacturing industry to the English not very convincing outside the circle of slave-owners.¹⁸ The US Civil War was therefore also a war between barter-centred English free trade theory, supported by the South, and production-centred economic theory, supported by the North.

In both Germany and in the USA there was a general feeling that England had achieved her wealth by going into skill- and scale-intensive manufacturing. By attempting to export a barter-centred economic theory which excluded these factors England was attempting to ‘draw up the ladder’ behind itself, in order to achieve a world monopoly in manufacturing. As we shall see, the writings of Richard Cobden all but confirm this. [281]

THE ‘RAW AND THE ‘COOKED’ – THE DIFFERENT PHILOSOPHICAL UNDERPINNINGS OF BARTER-CENTRED AND PRODUCTION-CENTRED ECONOMICS

In 1964 Claude Lévi-Strauss— a famous French anthropologist – published a book called *The Raw and the Cooked*, carrying the subtitle *Introduction to a science of mythology*.¹⁹ Lévi-Strauss suggests that ‘the cooked’ among ‘primitive’ peoples symbolizes the realm of the human, whereas ‘the raw’ symbolizes nature. The myths, drawn chiefly from the Amazon Indians, but also from countries like France, can be interpreted as ‘cooking’ being what differentiates man from beast. The domination of fire can be seen as the watershed between the ape and man. The main distinctions between man and beast in primitive societies were associated with the use of fire: man cooked his food, and he ‘cooked’ his pottery. ‘Unlike the deer, the Tarahumara (tribe) does not eat grass, but interposes between the grass and his animal hunger a complicated cultural cycle involving the care and use of domestic animals . . . Nor like the coyote does the Tarahumara avail himself of meat torn from a scarcely dead animal and eaten raw. The Tarahumara interposes between his meat and hunger a cultural system of cooking.’²⁰

Primitive tribes seem to have had a need to emphasize what differentiates man from other animals. Man interposes his knowledge and social organization between himself and nature – and ‘cooking’ is an early and powerful image of what characterizes this knowledge. Primitive myths therefore often tell stories on the origin of fire, the origin of cultivated plants or the origin of pottery – the watersheds that made *Homo erectus* into *Homo sapiens*. The distinction between the raw and the cooked turns into the distinction between nature and culture. Lévi-Strauss supports this view with many examples from all over the world. To this very day, ‘to sleep in the raw’ is a colloquial English expression meaning ‘to sleep naked’. In eighteenth-century France, *danser á cru* would mean ‘to dance barefoot’, and *monter á cru* would mean ‘to ride bareback’.

In the nineteenth century there was a strong conflict between English economic thought – rep-

¹⁸ The most complete account of the economic theory of the slave-owners is contained in *Cotton is King, and Pro-Slavery Arguments*, Augusta, Georgia, Pritchard, Abbot & Loomis, 1860. This is a massive tome of 908 pages, where the core of the economic arguments against the industrialization of the USA is found on pages 19–226.

¹⁹ New York, Harper, 1975.

²⁰ Zingg, M., ‘The genuine and spurious values in Tarahumara culture’, *American Anthropologist* 44 (1), 1942, p. 82. Quoted in Lévi-Strauss, op. cit., p. 336.

representing barter and matter – on the one hand, and German and US thought – representing production and mind – on the other. As a philosophical basis of this economic debate, we find – as in the myths of the Amazon indians – that the participants feel they have to define what differentiates man from beast: man the trader or man the producer and innovator. The replies to this question seem to distinguish the barter-centred from the production-centred economic theory (see Figure 27.2).

The reply from barter-centred economics

The division of labour arises from a propensity in human nature to ... truck, barter and exchange one thing for another... It is common to all men, and to be found in no other race of animals, which seem to know neither this nor any other species of contracts ... Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog.

(Adam Smith (1776) *Wealth of Nations*, Chicago: University of Chicago Press, 1976, p. 17)

The reply from production-centred economics

... Beavers build houses; but they build them in nowise differently, or better, now than they did five thousand years ago ... Man is not the only animal who labours; but he is the only one who *improves* his workmanship. These improvements he effects by *Discoveries* and *Inventions*.

(Abraham Lincoln, Speech of the 1860 presidential campaign)

Unlike the deer, the Tarahumara (a tribe) does not eat grass, but interposes between the grass and his animal hunger a complicated cultural cycle involving the care and use of domestic animals ... Nor like the coyote does the Tarahumara avail himself of meat torn from a scarcely dead animal and eaten raw. The Tarahumara interposes between his meat and hunger a cultural system of cooking.

(M. Zingg (1942) 'The genuine and spurious values in Tarahumara culture', in *American Anthropologist* 44 (1): 82. Quoted in Levi-Strauss, op. cit.: 336)

Man's ability to harness and use to his advantage the forces of nature.

(E. Peshine Smith, US economist, 1814–82)

Man's ability to use tools.

(Karl Marx, German economist, 1818–83)

Man's rational will and ideas.

(Christian Wolff, German philosopher and economist, 1679–1754)

Figure 27.2 What differentiates man's economic activity from that of beasts? [283]

The different answers to this question from Adam Smith and Abraham Lincoln typified two kinds of trade policies: protectionism in Germany and the USA until a necessary skill level in

production has been reached that enables the nation to compete fairly with England versus free trade under any [282] circumstances – regardless of skill level – in English theory. No doubt Adam Smith also saw the general tendency of things to improve but, we would argue, this was not at all at the core of his system. At the core of his system was the division of labour, which he saw as resulting from a propensity to barter (from matter), not from a propensity to discover and invent (from the mind). We shall see below that this counterpoint between matter and mind was the essence of an important economic controversy in England in 1622–3. We would argue that today’s mainstream economics carries the inherent weakness of an excessive focus on barter and matter – not on production and mind – from its founding father Adam Smith.

However, in the case of the repeal of the Corn Laws, both barter-centred and production-centred theories agreed. Friedrich List, who comes down in economic history as the incarnation of protectionism, fully agreed with free trader Richard Cobden that the repeal of the Corn Laws was in the interest of England. This seemingly curious agreement between protectionists and free traders indicates that the pre-twentieth-century protectionist debate **was** very much along the lines of ‘matter’ vs. ‘mind’ – ‘raw’ vs. ‘cooked’. The German and American economists insisted that free trade in ‘raw’ goods – Friedrich List’s *Urprodukte* – was something completely different from free trade in ‘cooked’ goods: goods where the human mind had added its skills. The industrial battle between nations is, in essence, the continual upgrading and adding of human skills to raw materials. Venetian glass blowers added value to sand, silicone chip producers add even more value per unit of sand. The nations which specialize in providing the ‘raw’ sand will inevitably lag behind in skills and, consequently, in the value of their manpower. As a result they will, as Marx put it, ‘increasingly have to give up more hours of labour in exchange for less hours of labour’.

In the next part of the chapter, we shall see that in the long tradition of production-based economics, wealth was seen as being created by adding knowledge and social organization to the raw produce of nature, much as in the myths of Lévi-Strauss. Adding knowledge to nature was not only a better paid economic activity, this ‘cooking’ of raw materials was seen as being the very essence of man, the activity which separated man from beast. Man added ‘mind’ to raw materials, which without his interference was only ‘matter’. Any economic theory that did not take man’s mind into consideration was, in the German tradition, *Entgeistet* – void of spirit.

ECONOMIC THEORY: FROM ‘PHYSICS ENVY’ TO ‘BIOLOGY ENVY’ AND FROM ‘MATTER’ TO ‘MIND’

Economic theory has, since its inception, carried with it an underlying counterpoint of ‘raw’ vs. ‘cooked’ – a counterpoint between the raw produce [284] of nature and the products where Man had added his ‘mind’ to the products of nature. In today’s economic theory we find this tension reflected in the movement of economic theory from ‘physics envy’ towards ‘biology envy’, and in the increasing importance of innovations – the creativity of man’s mind – added to the physical matter of the products being exchanged.

This way of thinking originates with the Renaissance, when man redefined his relationship with creation as we shall briefly discuss below. The distinction between ‘raw products of nature’

(what List 300 years later characteristically calls *Urprodukte* – giving them a connotation of something primitive and prehistoric as in *Urmensch*, prehistoric man) and the products which have had value added by human creativity shows up in the earliest non-scholastic economic literature, in Italy in the 1580s and in England in mercantilist tracts of the 1620s. This is clearly an issue in the prolonged nineteenth-century conflict between English economic theory, especially trade theory, on the one hand, and German and US economic theory on the other. We shall argue that this was the reason why Richard Cobden, the champion of free trade, and Friedrich List, the protectionist, agreed that protecting raw materials was not a good economic policy.

The Renaissance was essentially a period where man became conscious of the legitimacy of being creative. Mediaeval man was the caretaker in the world that God had created; creation was definitely complete and trying to understand it or to tinker with it was decidedly off-limits to man. To Aristotle, mining was one such violation of the creation. Oxford philosopher Roger Bacon was imprisoned for his experiments in 1271, standing accused of making ‘suspect innovations’. Starting with the influx of neo-Platonist ideas from the Byzantine empire to the Academy of Florence in the early fifteenth century, man came to see himself in a different light. The new argument went like this: man was created in the image of God. What characterizes God above anything else had to be his enormous creativity. But – if man was created in the image of God – then man should also be creative.

Out of this line of reasoning man’s duty to invent and to create new knowledge is born. But this duty was a pleasurable one. The argument seems to have gone like this: it is man’s duty to people the earth, therefore God made the duty of procreating a joyous one. Similarly, because it was man’s duty to create, to invent and to discover was also a joyous duty. In England, Francis Bacon – statesman under Elizabeth I – was the carrier of these ideas and wrote ‘An Essay on Innovations’ around 1605. In Germany the philosophers Leibniz and Wolff later represented the same philosophical tradition. ‘Some people collect knowledge like other people collect money’, says Christian Wolff. In a recent paper, ‘Exploring the genesis of economic innovations: the religious gestalt-switch and the duty to invent as preconditions for economic growth’, we explain this process in detail.²¹

Out of this changed attitude to knowledge, man’s activities moved further and further away from the ‘raw’ and into the realm of the ‘cooked’. Bartering [285] raw materials gave way to the production of manufactured goods, in a process where the value added to the raw materials was imputable to human knowledge – to ‘the soul of man’ which distinguished him from beasts. Importantly – to the observers of the day – these new and knowledge-based economic activities were seen as bringing more wealth, as being more profitable, than the old resource-based activities. Therefore, in a truly Schumpeterian move, Renaissance economic policy supported the manufacturing industries at the expense of resource-based industries – of encouraging and protecting new knowledge. These economic policies included the establishment of a patent system (in sixteenth-century Venice), of bounties paid to new manufacturers, of the prohibition of export of machinery (in force in England until the 1830s), of the prohibition of migration of skilled workers (in Venice under the penalty of death), on the export duty of raw materials (to increase the value to the producing nation of this inferior good, and to ensure foreign industry a higher price of raw materials than local industry).

²¹ Reinert, Erik and Daastøl, Arno, Norwegian Institute of International Affairs, Working Papers, no. 540, December 1995. Forthcoming in *European Journal of Law and Economics*.

One of the earliest bestselling books on economics was *Delle Cause del la Grandezza delle Citta*²² written by the Italian Giovanni Botero (1543–1617). The English translation, published in London in 1606, is entitled *The Cause of the Greatnesse of Cities*. What, Botero asks, is more important for making a nation wealthy, the fertility of its soil or industry? No doubt, industry, argues Botero, first of all ‘because the things produced by the able hands of man are many more, and have a much higher price, than the things produced by nature.’²³ Nature gives the material, but the object... is the work of man. Wool is a simple, coarse material of nature. How many beautiful objects, varied in form and shape, the Arts can produce from this.’ The best practical example showing the benefits of manufacturing industry over activities based on raw materials was Venice – a city where half of its inhabitants were engaged in manufacturing. A Venetian legislative poster from the eighteenth century fixed the punishment for bringing bread into the city as ‘a fine of fifty ducats to be paid immediately and every time and three lashes of the whip’.²⁴ At roughly the same time the imports of all types of corn into Venice were freed definitively in 1782. The ‘raw’ could enter freely, the ‘cooked’ was to be produced nationally. Friedrich List, in my view correctly, saw the repeal of the Corn Laws as just a continuation of this very old policy of protecting ‘the cooked’ (bread) and letting ‘the raw’ (corn) have free entry.

Following Venice, England presents the most spectacularly successful use of the strategy of turning a nation’s exports from ‘the raw’ to ‘the cooked’. Daniel Defoe describes the English strategy, and praises the Tudor monarchs who carried it out, in his *Plan of English Commerce* in 1728.²⁵ In the early fifteenth century England was a poor country, heavily indebted to its Italian bankers. The chief export was raw wool. Henry VII, who came to power in 1485, had lived in exile in wealthy Burgundy where English wool was being spun into cloth. The Tudor strategy which started with him was to bring [286] England into the wealth-creating downstream activities in wool manufacturing that Henry had observed abroad. The English strategy was gradual, starting with import substitution. In 1489 tariffs on cloth were increased and local cloth manufacturing was encouraged. The Crown paid for foreign workers to be brought in and businessmen were paid bounties for establishing textile manufacturing firms. When sufficient manufacturing capacity had been achieved, England prohibited all export of raw wool. As the wave of mechanization extended from wool to other areas of manufacturing, these new industries were in turn given the same preferential treatment initially given to the production of woollen cloth. Friedrich List later put it this way: ‘The principle *sell manufactures, buy raw material* was during centuries the English substitute for an (economic) theory.’²⁶

The logic of early economic policy seems to have worked by abduction – by a process similar to Kaldor’s ‘stylized facts’. Everybody could observe that the wool producers in England and the miners in Hungary were poor, just as they could observe that the manufacturers in Venice were rich, as were manufacturers everywhere. In fact, the establishment of the first textile industry in England under heavy protection was based on such a line of reasoning. The English economist

²² Roma, Vincenzo Pellagallo, 1590.

²³ Ibid., p. 362. All translations are the author's.

²⁴ ‘pena di Ducati cinquanta da esser toko subito ogni volta . . . oltre tre tratti di Corda’, Title: No; *sopra proveditore. . . alle Biaue*, Venice, no date, Stampato per Gio: Pietro Pinelli, Stampatore Ducale.

²⁵ London, C. Rivington, 1728. Palgrave regards Defoe as ‘an important authority for economic history’. Higgs, Henry (ed.), *Palgrave's Dictionary of Political Economy* (1926), New York, Kelley, 1963, vol. 1, p. 535.

²⁶ *Das Rationale System der politischen Oekonomie* (1844), Basel, Kyklos, 1959, p. 12. My translation.

Edward Misselden, in 1623, describes very well how economics passes from abductive and intuitive gut feelings to science: ‘Wee felt it before in sense, but now wee know it by science.’²⁷

In England the conflict between the ‘raw’ and the ‘cooked’ is clearly reflected in the main economic debate of the early seventeenth century, in 1622–3 between Gerard De Malynes²⁸ and Edward Misselden.²⁹ In the history of economic thought, this debate is interpreted as being about exchange controls and the balance of trade.³⁰ However, by going back to the sources one finds that the main line of attack by Misselden against Malynes is his ‘mechanical’ view of man – Malynes has left out man’s ‘art’ and ‘soul’. Misselden essentially accuses Malynes of not seeing the difference between ‘the raw’ and ‘the cooked’: the difference between stones and timber on the one hand and a house on the other. ‘An [sic] House is not an house in respect of the matter whereof it is made; for then all other stone & timber should be a house: but in respect to the *Forme* of it, whereby it is known to be a house’, states Misselden. This *Forme* was the ‘cooking process’ added by man to the natural ‘matter’ provided by nature. To Misselden, man creates value by, through his *Mind*, adding *Forme*, not by collecting *Matter*. According to Misselden, Malynes makes a crucial mistake by reducing commerce and economics only to its *matter*, merchandise and money. Without man’s art and soul ‘there would be no traffique amongst men, not withstanding the materials of trade’, states Misselden.³¹

The conflict between the two economists Malynes and Misselden thus anticipates by some 250 years the nineteenth-century German critique of the *Entgeistung* (‘the taking away of the human mind’) in English classical economics and by some 350 years the present debate on ‘physics envy’ of neo-[287]classical economics. Misselden argues for a place of *the mind* – what man’s creativity adds to the raw materials of nature – in economic theory. His equivalent of *Entgeistung* and ‘physics envy’ was – and he quotes Aristotle on this – *privation*: ‘Privation is not Ens or Bbeing, because it is not in the subiect which is made by it.’ To Misselden, economics is not in the ‘Commodities, Money and Exchange’, these are merely ‘matters thereof.

In the late seventeenth century William Petty (1623—87) invents both ‘the division of labour’ – using a clock factory rather than Adam Smith’s pin factory – and ‘political arithmetic’: ‘the art of reasoning by figures upon things "relating to government’.³² Petty, following the trend of virtually all pre-physiocratic and pre-Smithian economics, observes how the relationship between

²⁷ Misselden, Edward, *The Circle of Commerce*, London, Nicholas Bourne, 1623.

²⁸ Malynes, Gerard, *The Maintenance of Free Trade, According to the three essentiall [sic] Parts... Commodities, Moneys and Exchange of Moneys*, London William Sheffard, 1622. *The Center of the Circle of Commerce, or, A Refutation of a Treatise ... lately published by E.M.*, London, Nicholas Bourne, 1623.

²⁹ Misselden, Edward, *Free Trade and the Meanes [sic] to Make Trade Flourish*, London, Simon Waterson, 1622. *The Circle of Commerce or the Ballance [sic] of Trade*, London, Nicholas Bourne, 1623.

³⁰ Schumpeter discusses the controversy between the two men in his *History of Economic Analysis*, New York, Oxford University Press, 1954, pp. 344–5. See also their respective entries in *The New Palgrave*. In all cases these references are purely to the mechanics of money and exchange.

³¹ *Ibid*, p. 11.

³² *Political Arithmetick, or a Discourse concerning the Extent and Value of Lands, People, Buildings; Husbandry, Manufacture, Commerce, Fishery, Artizans, Seamen, Soldiers; Pub lick Revenues, Interests, Taxes, Superlucration, Registries, Banks; Valuation of Men, Increasing of Seamen, of Militia's, Harbours, Situation, Shipping, Power at Sea &c. As the same relates to every Country in general, but more particularly to the Territories of His Majesty of Great Britain, and his neighbours of Holland, Zealand, and France*, London, Robert Clavel, 1691.

primary production and manufacturing evolves over time: ‘There is much more to be gained by *Manufacture* than *Husbandry* . . . Now here we may take notice that as Trades and Curious Arts increase; so the Trade of Husbandry will decrease.’ As other English writers of his day, Petty was commenting on the high standards of living in Holland, which he saw as the natural effect of so many Dutchmen being engaged in manufacturing and trade. In a nation involved in manufacturing and trade, agriculture would lose out, since it was everywhere observable that agriculture paid lower wages than manufacturing and trade. He found proof of his thesis in Holland because ‘there is little Ploughing and Sowing of Corn in Holland and Zealand, or breeding of young Cattle’. The Dutch imported much of their food.

The ‘mechanical’ views of Malynes and Locke were soon to win the day through the barter-centred economic theory of Smith and Ricardo. Other than on the intuitive and philosophical level, the early economists contributed relatively little as to explaining why the production of raw materials was an ‘inferior’ or ‘bad’ economic activity. The honour of explaining this goes to Antonio Serra.³³ Serra was the first economist who showed the mechanisms through which the nations producing raw materials stayed poor and the nations producing manufactured goods were wealthy. Serra explains the wealth of Venice which had virtually no raw materials and the poverty of Naples which was extremely fertile. The key mechanisms at work in Serra’s system are increasing returns to scale in the manufacturing industry of Venice, and diminishing returns and price volatility in the raw materials production in Naples. Serra explains how the volume of manufacturing production in Venice brings costs down and serves to create barriers to entry for other producers. In Serra’s system, increasing returns to scale enable the Venetians to sell their products cheaper, while still paying higher wages to their workers than other nations. We shall return to Antonio Serra later in this chapter.

By generally grouping all mercantilists together in the history of economic thought and by reading them almost exclusively secondhand – invariably filtered through the lenses of a neo-classical *Weltanschauung* – we [288] have lost sight of both the process of historical policy formation and of a vast number of valuable insights into our own profession.

COBDEN AND LIST: THE REPEAL OF THE CORN LAWS IN KING’S TAXONOMY

In 1766 Carl von Linne, in the twelfth edition of his book on the natural system, completed his taxonomy of plants and animals by including man, *Homo sapiens*, in the binomial classification system. Linne’s taxonomy is still the standard taxonomy in use for the plant and animal kingdoms. Ten years later Adam Smith effectively brought the long-lasting taxonomy of economic activities – of which ones were good and which ones were bad for a nation – to an end in economic theory but not in economic practice. The old taxonomy was, in England, most clearly

³³ Serra, Antonio, *Breve trattato delle Cause che possono far abbondare It Regni d'Oro e Argento dove non sono miniere. Con applicazione al Regno di Napoli*, Napoli, Lazzaro Scoriggio, 1613. Serra’s remarkable dynamic ‘model’ shows how wealth is created without the benefit of natural resources (Venice) on the one hand, and poverty remains in the midst of great natural resources (Naples) on the other. The parallel to modern Japan is interesting.

stated by Charles King in his three-volume work from 1721.³⁴ Under King's Taxonomy importing raw materials and exporting manufactures was 'good trade' for a nation. Importing manufactured goods and exporting raw materials was 'bad trade', while, interestingly enough, trading by buying and selling manufactured goods with the same foreign nation was also good trade.

This system makes sense under certain assumptions:

- if we associate manufacturing with Schumpeterian historical increasing returns (continuous technical change coupled with increasing returns), that creates a dynamic national rent seeking where the rent is split between capital, labour (which continuously has to upgrade their skills) and government;
- if we associate raw materials with perfect information, perfect competition, diminishing returns and no demand for high levels of human skills.

The world today is still divided into an industrialized First World which, up to and including the Asian Tigers, has been through a successful period of economic policy based on King's Taxonomy, and the Third World, whose poverty is based on specialization in providing the world with raw materials. The support and protection given to innovations and to hi-tech industries in today's industrial countries – what the French call *neo-colbertisme* – is only a proof of the continuing validity of the pre-Smithian taxonomy: economic welfare is increasing only by adding more and more human skills to the 'raw' products of nature. The nations which capture the economic activities where the newest and most sophisticated skills can be profitably employed – at the frontier of human knowledge – become the world leaders.

The repeal of the Corn Laws, which today is generally seen as a victory of the 'new' ideology was, in fact, completely compatible with the old theory [289] based on Charles King's Taxonomy. The repeal of the Corn Laws in England was not the watershed in the history of free trade as we tend to see it today, and as it was sold to the rest of the world by the English of the period. There are two main aspects to this argument:

- 1 The repeal of the Corn Laws was fully consistent with the trade theory of the *ancien regime*, with Charles King's Taxonomy and the mercantilist tradition of what constituted good and bad trade. On the corn issue, pre-Ricardian trade theory and Ricardo's free trade theories were in complete agreement. One sign of this was that Friedrich List – who in the Anglo-Saxon world tends to be looked upon as a protectionist of the mercantilist school – had argued for many years already that free trade in corn would be in the interest of England.
- 2 The Corn Laws were seen at the time essentially to be a monopoly of the great landowners, and their repeal was much more a political victory of democracy over feudal privileges of the aristocracy than a victory of free trade. No doubt the repeal of the Corn Laws was used as an argument to open up foreign markets to British manufactures, and this was clearly an issue in the debate. However, French economist Leon Say seems to have pinpointed the essence of Cobden's movement to repeal the Corn Laws: 'Richard Cobden was, above all things, a thorough democrat and his followers trusted before everything else that he would establish democracy upon the ruins of aristocracy, and that he would destroy whatever was left to the great landowners of their feudal privileges.'³⁵ Say's essay was published exactly 100 years ago, in connection with the fiftieth anniversary of the repeal of the Corn Laws in 1896.

³⁴ King, Charles, *The British Merchant or Commerce Preserv'd*, London, John Darby, 1721, 3 vols.

³⁵ Léon Say in a speech on 'State socialism in England', 15 January 1884, quoted in *Richard Cobden and the Jubilee of Free Trade*, London, Fisher Unwin, 1896, pp. 131–2.

The repeal of the Corn Laws can be seen as representing the decisive confrontation in a Schumpeterian battle, where industrial entrepreneurs, eager to join the upper strata of society, as a byproduct of their own success, came to overturn the old social order.³⁶ After the repeal ‘industrial and commercial success [became] the nearest approach to medieval lordship possible to modern man’, in the words of Schumpeter.³⁷ We shall argue that the repeal of the Corn Laws was primarily a result of this economic and political power struggle, and that the trade theoretical issues were of secondary importance, other than as arguments used by England to make other nations stop protecting their manufacturing industry. In other words: the English used the fact that they no longer protected ‘the raw’ as an argument for other nations to stop protecting ‘the cooked’.

This was seen as a bluff and called such by the most influential German and American economists of the time, but it has convinced mainstream economics of today. We would argue that this represents a major issue behind the continuing poverty of most Third World nations. [290]

Almost forty years after the repeal of the Corn Laws, we find the same issue raised in the US tariff debate. Now King’s Taxonomy has achieved a higher level of sophistication: raw materials were, as in the old logic, to enter the country free of duty, but tariffs on manufactured goods were to be gradually increased with increasing skill level of the workers. A very clear statement of this principle is found in a resolution which was passed by the Democratic National Convention in Chicago in 1884:

First – the abolition of all duties on raw materials, such as wool, iron, and other ores, coal, jute, hemp, flax, dye stuffs, etc., in order that we may compete in home and foreign markets with other , manufacturing nations, not one of which taxes raw materials. Second – the adjustment of the tariff, so that manufactures approaching nearest to the crude state will pay a lower rate, and manufactures that are further advanced, requiring more skill and labour, will pay a higher rate of duties.³⁸

Eight years later, one author remarks that ‘these views . . . [now] form the credo of that party’.³⁹

Cobden: free trade in corn in order to achieve cheapness of manufactures

The article on Cobden in the *New Palgrave Dictionary of Economics* strongly emphasizes that ‘Cobden’s reason [for agitating against the Corn Laws] was peace.’ This is certainly one of the reasons, but the main reason was a powerful economic reasoning which is missed in the Palgrave entry.⁴⁰ Going through Cobden’s own writings, it is clear that his main economic argument is that free trade in corn would strengthen manufacturing in Britain. Cobden’s arguments are in many respects similar to those of Friedrich List. Although today we tend to see them as two op-

³⁶ For a description of this, see Schumpeter, Joseph Alois, *The Theory of Economic Development*, Cambridge, Harvard University Press, 1934, pp. 90–94, 156.

³⁷ Schumpeter, *ibid.*, p. 93.

³⁸ Quoted in Schoenhof, Jacob, *The Economy of High Wages. An Inquiry into the Cause of High Wages and their Effect on Methods and Costs of Production*, New York, Putnam’s, 1892, p. 5

³⁹ *Ibid.*, p. 5.

⁴⁰ Eatwell, John, Milgate, Murray and Newman, Peter, *The New Palgrave. A Dictionary of Economics*, London, Macmillan, 1987, vol. 1, p. 462.

posite extremes, they shared a common pre-Ricardian view on what created national wealth. Both to Cobden and to List, this was not agriculture, not ‘the raw’, but ‘the cooked’.

Cobden views the English economy essentially as a Ricardian corn economy or a Sraffian economy producing ‘commodities by means of commodities’. One basic input into English manufacturing was corn to feed the workers for their daily bread. The price of that corn heavily influenced the price of labour. By reducing the price of corn, one would reduce the subsistence cost of labour. For this reason, Cobden says, ‘to restrict the import of corn into a manufacturing nation, is to strike at the life of its foreign commerce’.⁴¹

Richard Cobden pays homage to free trade, not as a lofty human principle, but because were it not for the Corn Laws, the industrialization of the USA and Germany could have been avoided. Cobden sees the high price of corn as the basic reason why England has not been able to hold on to its [291] near-monopoly of world manufacturing: ‘The factory system would, in all probability, not have taken place in America and Germany; it most certainly could not have flourished, as it has done, both in these states, and in France, Belgium, and Switzerland, through the fostering bounties which the high-priced food of the British artisan has offered to the cheaper fed manufacturer of those countries.’⁴²

In line with Cobden’s pro-manufacturing stance for England and his anti-manufacturing stance for the rest of the world, he also favoured the South in the US Civil War. When evaluating any economic theory, we tend to forget the basic ethnocentric bias which I would claim, to varying degrees, underlies all economic theory. Lionel Robbins reminds us to keep in mind that English classical economists were in effect first of all Englishmen, and then economists: ‘We get our picture wrong if we suppose that the English Classical Economists would have recommended, because it was good for the world at large, a measure which they thought would be harmful to their own community.’⁴³

Today this bias lies in the assumptions of neoclassical theory. One example is that the economic theory of the nations which make their wealth under mass production and increasing returns excludes the possibility that only some economic activities are subject to increasing returns, while others are subject to diminishing returns. This kind of ethnocentrism is in some sense reflected when new trade theory only resurrects one half of Frank Graham’s 1923 article,⁴⁴ dealing with the effects of increasing and diminishing returns in international trade. Only the half which deals with problems of interest to the industrialized world – increasing returns – is brought back. Using the rather heroic assumption that all economic activities are equally subject to increasing returns, this factor of course becomes yet another argument for universal free trade. Graham, on the other hand, also specifically raises the problem of nations whose exportables are subject to diminishing returns and provides an important clue leading to the understanding of the ‘curse of the resources’. In a previous publication I have explained the gap between the First and Third Worlds as a result of increasing and diminishing returns, and of the cumulative effects of

⁴¹ *The Political Writings of Richard Cobden*, London, William Ridgway, 1868, vol. I, p. 140.

⁴² *Ibid.*, vol. I, p. 150.

⁴³ Robbins, Lionel, *The Theory of Economic Policy in English Classical Political Economy*, London, Macmillan, 1952, pp. 10–11.

⁴⁴ Graham, Frank, ‘Some aspects of protection further considered’, *Quarterly Journal of Economics* 37, 1923, pp. 199–227.

uneven learning potential and imperfect competition over time.⁴⁵

Cobden says that ‘if a wise modification of our corn laws had been affected at the close of the Napoleonic wars, the official value of our exports would have exceeded by one third its present amount’. And further: ‘Under such an assumed state of things, this country, we believe, by this time, would have acquired an increase to its present wealth, to the extent of 350 Millions – nearly one-half the amount of the national debt.’⁴⁶ The wealth of the nations clearly lies in manufacturing – in ‘the cooked’ – corn is only important in order to feed the workers and make their labour cheaper.

Throughout Cobden’s writings, he emphasizes the importance of cheapness. Here we find old-fashioned price competition, in contrast to Cobden’s [292] contemporary English writer on economics, Charles Babbage, who emphasized not the price of labour, but the role of the use of machinery and of science.⁴⁷

Both Cobden and List sensed the crucial importance of the industrial system. To both of them the industrial system, and the need for change of economic policy which it carried with it, were at the core of their theories: ‘The cardinal fact that struck his [Cobden’s] eye was the great population that was gathering in the new centres of industry in the North of England ... which the magic of steam had called into such sudden and marvellous being’, states Cobden’s biographer, John Morley.⁴⁸

Cobden also saw the evils of the manufacturing system, and he was decidedly a man of peace. To quote from his biography: “But the factory system, which sprang up from the discoveries in machinery, has been adopted by all the civilised nations in the world, and it is in vain for us to think of discountenancing its application to the necessities of this country; it only remains for us to mitigate, as far as possible, the evils which are perhaps not inseparably connected with this novel social element.” To this conception of the new problem Cobden always kept very close. This was always to him the foundation of the new order of things, which demanded a new kind of statesmanship and new ideas upon national policy.’⁴⁹ Richard Cobden saw, more clearly than most, the demands of the new techno-economic paradigm. By removing the last vestiges of the old feudal order – the duty on corn which subsidized the old nobility – Cobden decisively brought England into the age of industrialism.

At the time of his death there was little doubt that Cobden had achieved his goal of strengthening English manufacturing industry by lowering the price of provisions. On the day after his death, Monday 3 April 1865, his sometime foe, Lord Palmerston, rose in Parliament and ‘amidst breathless silence’ held a speech in the honour of Cobden. In his speech Lord Palmerston emphasized the great achievements of Mr Cobden: ‘in the first place, the abrogation of those laws

⁴⁵ Reinert, Erik, *International Trade and the Economic Mechanisms of Underdevelopment*, Ann Arbor, University microfilm, 1980.

⁴⁶ *The Political Writings of Richard Cobden*, London, William Ridgway, 1868, vol. 1, pp. 150–51.

⁴⁷ *On the Economy of Machinery and Manufactures*, London, Charles Knight, 4th edn, 1835. *Reflections on the Decline of Science in England and some of its Causes*, London, B. Fellowes, 1830. Babbage is best known for his ‘calculating machine’, celebrated as the first computer.

⁴⁸ Morley, John, *The Life of Richard Cobden*, London, Chapman and Hall, 1881, vol. 1, p. 96.

⁴⁹ *Ibid.*, vol. 1, p. 97.

which hindered the importation of corn, which gave a great development to the industry of the country'.⁵⁰

Both List and Cobden understood the superiority of the manufacturing industry over unindustrialized agricultural pursuits. List, like his US contemporaries, saw clearly that a nation which had reached the stage of manufacturing power of England could 'graduate' to a world of free trade. There was no doubt in List's mind that both Germany and the USA would one day reach a stage where free trade was to their benefit, but only after their level of knowledge and industrial strength were on equal footing with the English.

List's argument can be seen as one where children with the knowledge of second grade education cannot fairly compete with college graduates. Free trade would only be beneficial to both parties when the laggard nation had also received its college degree. The German counterpart of duties for 'infant [293] industry protection' is therefore, in line with this reasoning, *Erziehungszoll* – carrying the double meaning of educational and upbringing duties.

***List: why protecting agriculture is entirely different
from protecting industry***

In 1825 Friedrich List was banned from Germany and went to the USA. List tells us that one important event in his life, which converted him from being a free trader into an advocate of the protection of manufacturing, was the extreme poverty he witnessed in France with the collapse of French manufacturing that followed the fall of Napoleon. The second important event which influenced his view was no doubt his meeting with American political economy, particularly with the thoughts of Alexander Hamilton and, even more, of Daniel Raymond.⁵¹ There are indeed whole passages in List's *National System* which follow, argument by argument, the 1820 book of Raymond.

Two years after his arrival in the USA, on 24 April 1827 List published an article on the English Corn Laws, 'Die englische Kornbill' in the German-language American newspaper, *Readinger Adler*, of which he was editor. In the same year Frederick [sic] List's *Outline of American Political Economy* was published in Philadelphia.⁵² In this work List also raises the issue of the English Corn Laws, and asks what would happen to the American farmer if England should open up her corn trade. List foresees a rise in the price of US corn, but already in 1827 is fully in line with Richard Cobden on the main effect of the repeal of the Corn Laws: 'England would increase her manufacturing power immensely, and monopolise the Southern and all other markets.'

List clearly shows that a repeal of the Corn Laws, nineteen years before the event, would be a move which would benefit England, but could hurt American manufacturing. A US dependence on the export of raw materials to England would provide a 'destructive effect' on the USA. Eng-

⁵⁰ Quoted in McGilchrist, John, *Richard Cobden, The Apostle of Free Trade, His Political Career and Public Services. A Biography*, London, Lockwood, 1865, p. 259.

⁵¹ Raymond, Daniel, *Thoughts on Political Economy*, Baltimore, Fielding Lucas, 1820.

⁵² Printed by Samuel Parker. Reproduced in List's collected works in 10 volumes, 12 tomes, *Gesammelte Werke*, Berlin, Reimar Hobbing für die List-Gesellschaft, 1931, vol. II, pp. 96–156. All translations of German texts are mine.

land could easily again exclude grain from the USA: ‘by giving preference to the produce of Prussia, Poland, etc. etc. as it was the case last year respecting the English possessions in the West Indies. Certain is it that from the day of such an economical dependence the majority of the inhabitants of the United States would have to tremble before every new opening of the English Parliament, having more to fear and to expect from the proceedings and regulations in Westminster than from those in Washington, and that the independence of interest of the United States would be lost. . . Would it not be better if we had not sold a single grain of corn to England?’⁵³ In his articles on this issue List also made a point that the high transportation costs for corn gave the local English producers a big advantage over US farmers. List here presents himself as a forerunner of the *dependencia* school. In List’s analysis, however, terms of trade are not the key economic issue, but the inferior nature of depending on the ‘raw’ rather than the ‘cooked’. [294]

In 1830 Friedrich List received his US citizenship and – much to the dislike of some of the German states – President Jackson appointed him Consul General of the USA for Saxony, Bavaria, Hesse-Cassel and Alsace, with a seat first in Hamburg and then in Leipsic [Leipzig]. As a US Consul, List informed his Secretary of State, John Forsyth, about the future development of the English Corn Laws. In a long dispatch dated ‘Leipsic, May 15, 1835’, List foresees that ‘the repeal of the corn laws must become soon one of the principal objects of a reforming ministry, in which they will have to encounter powerful personal interests and prejudices’.⁵⁴

In 1839 List wrote an article on ‘The English Corn Laws and the German Protective System’ (*Die englische Kornbill und das deutsche Schutzsystem*).⁵⁵ List is often not clear about the mechanisms which cause the protection of manufactures to have such a different effect than the protection of raw material. He explains how ‘the olive growers will lose out to the machine producers’, but his message of why this is so does not always come across completely. Daniel Raymond is in some ways more explicit on how the mechanisms at work under the protection of manufactures raise real wages, in spite of an initial increase in the price of imports. But, in this article, List states his case clearly:

The Protective System, as we understand it, can only be applied to the cultivation (*Pflanzung*) of manufacturing power. Any limitation on the import of raw materials and agricultural (food) products will in the long run hamper the development of manufactures, and is therefore against the interests of the Protective System. This is the case even if such measures stimulate certain branches of agriculture and certain areas for some time. . . . The development of Manufacturing Power follows completely different laws than the development of Agricultural Power ... To make this clear, we shall for the moment only outline how differently import duties influence prices of the two branches [manufacturing and agriculture]. When manufacturing is being cultivated, the prices of manufactured goods will rise, but as a result of the growing national manufacturing power and the increased competition resulting from this, the prices will, in time, be lower than they would have been through foreign imports.

Daniel Raymond’s 1820 book strongly improves this argument by pointing to the fact that wages will rise considerably more than the prices of manufactured goods. It was an observable

⁵³ *Gesammelte Werke*, vol. II, pp. 146–7.

⁵⁴ Original in the files of the Department of State, Washington DC. Reproduced in *Gesammelte Werke*, vol. II, p. 326.

⁵⁵ Reproduced in *Gesammelte Werke*, vol. V, pp. 112–21.

fact already since William Petty in the seventeenth century that agricultural wages were everywhere much lower than manufacturing wages. ‘Applying import duties to agricultural products, on the other hand, does not have this invigorating power; such duties do not lead to lower prices later on. This flaw in their reasoning (*Denkfehler*), like the [295] mixing up of cosmopolitical with political economy, the [English] school has inherited from the physiocrats.’

The year of the repeal of the Corn Laws was the last year of Friedrich List’s life – he died on 30 November 1846. Since 1835 List had spent most of his time in Europe, losing all his US assets in 1837 and leaving the service of the USA. In connection with the repeal in 1846, List made his ‘Final Reckoning with the English Free Traders’ (*Letzte Abrechnung mit den englischen Freihandelspredigern*).⁵⁶ This powerful essay is indirectly directed at Richard Cobden, but more particularly against his *Knecht Freitag* (his slave Friday), that is, James Wilson, the founder of *The Economist*, who had started ‘a kind of a crusade’ against List: ‘Had Mr. Wilson read [our previous publications] he would have found that we have defended the complete freedom of trade with food and raw materials, before any Corn League existed, before one Sir Robert [Peel] was a minister, and before Richard Cobden started protesting against the Corn Laws.’⁵⁷ List’s frustration lies in the fact that *The Economist* used the repeal of the Corn Laws to convince other nations to give up their protection of manufactured goods.

Again List attacks the barter-based theories of Adam Smith, and their physiocratic nature: ‘Adam Smith claims that only work which produces exchangeable value is to be considered productive.’ In this system, says List, the person who raises pigs (*ein Schweineerzieher*) is considered productive, the person who raises the level of knowledge of human beings (*ein Menschen-erzieher*) is unproductive. In this essay we find the argument of ‘the raw’ and ‘the cooked’ again. Superior standards of living can only be achieved by adding productive power to nature. ‘Only a harmonious development of the powers of [art and science] can lead to a higher degree of power and civilisation.’⁵⁸

In England we find that List’s basic views on what caused human progress were expressed by Charles Babbage,⁵⁹ and followed there in practical policy. This made a member of the US Congress, Henry Baldwin, observe that English trade theory ‘like most English manufactured goods, is intended for export, not for consumption at home’.⁶⁰ A perusal of the works of Richard Cobden confirms that Baldwin’s point was well taken. Both Cobden and List argued for the superiority of manufacturing over agriculture – of the ‘cooked’ over the ‘raw’. The arguments behind the repeal of the Corn Laws were not concerning a lofty principle of free trade, but rather that England should get out of ‘inferior’ agriculture in order to lower the prices of a basic industrial input – corn for the daily bread of its working masses. However, England skilfully used the fact that it no longer protected ‘the raw’ as an argument for other nations to stop protecting ‘the cooked’.

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⁵⁶ Reproduced in *Gesammelte Werke*, vol. IX, pp. 160–64.

⁵⁷ *Ibid.*, p. 160.

⁵⁸ *Ibid.*, p. 163.

⁵⁹ *On the Economy of Machinery and Manufactures*, London, Charles Knight, 4th edn, 1835. *Reflections on the Decline of Science in England and some of its Causes*, London, B. Fellowes, 1830. Babbage is best known for his ‘calculating machine’, celebrated as the first computer.

⁶⁰ Quoted in List, *Gesammelte Werke*, vol V, p. 338.