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3. The competition-of-capitals doctrine and the wage–profit relationship

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3.1. INTRODUCTION

It is widely recognized that the development of Ricardo's theory of profit stems from Ricardo's 'dissatisfaction' with Smith's alternative theory running in terms of the 'competition of capitals'.[1] This theory is generally known as the 'competition-of-capitals doctrine'. Much research has been done in recent years both on Ricardo's 'struggle of escape' from this doctrine and on the consistency of the analytical results of this escape. The focus of attention, however, has been mostly centred on Ricardo's alternative theory. This was developed first in his *Essay on Profits* (1815), where it took the elementary form of a 'corn-ratio theory of profits',[2] and later on in the *Principles* (1821), where it took the more advanced form of the 'labour-embodied theory of profits'.[3]

The purpose of this chapter is to reconstruct Smith's (1776 [1976]) competition-of-capitals doctrine. This reconstruction, however, is not intended to provide a faithful assembly of what Smith actually wrote or a 'rational' view of what he must have thought in this connection. Rather, it is to extract from his faulty exposition and with the benefit of hindsight what is necessary to make Smith's doctrine consistent with his system of thought and vision of the future in order to determine whether, or to what extent, Ricardo's dissatisfaction is justified. This reconstruction will be based on the fragmentary statements by which the doctrine is presented in the *Wealth of Nations* and will try to highlight not only some of the ambiguities incorporated in these statements but also the links between these statements and other crucial parts of Smith's system of thought. These links, it will be argued, involve the wage–profit relationship.

This relationship is commonly traced to Ricardo's *Principles* where it is used in support of Ricardo's theory of distribution. But the wage–profit relationship was first recognized and is extensively used in the *Wealth of Nations*. The role it plays in Smith's work, however, differs greatly from that

in Ricardo's. Not only is Smith's relationship put forward in the context of that competition-of-capitals doctrine from which Ricardo endeavoured to escape, but this doctrine is also coherent with that part of Smith's theory of value which was rejected by Ricardo. Smith's theory of value, however, is not the only framework in which the competition-of-capitals doctrine finds its proper place. Another framework is Smith's theory of capital. This theory was never rejected and, indeed, was instead defended by Ricardo on many controversial points.

Our reconstruction of the doctrine will run as follows. Section 3.2 presents the main fragments of the doctrine to be found in the *Wealth of Nations*. Section 3.3 examines the main ambiguities incorporated in these fragments. Section 3.4 locates the analytical foundations of the doctrine in Smith's theory of value and, particularly, in the principle of demand and supply in so far as it is part of this theory. These foundations are discussed in Sections 3.5 and 3.6 in the light of some clarifications introduced by Malthus and Senior. Section 3.7 shifts the focus of attention to the theory of capital and to the role played by the accumulation of capital in making the wage–profit relationship work in practice. This relationship, it will be argued in this section, is the link by which the competition-of-capitals doctrine interacts with Smith's theory of value as labour commanded, on the one hand, and with Smith's theory of capital as command of productive labour, on the other. Section 3.8 is concerned with the sustainability of this link as the accumulation of capital proceeds in time. Some conclusions are drawn in Section 3.9.

3.2. THREE FRAGMENTS OF THE DOCTRINE

Of the two theories which support Smith's competition-of-capitals doctrine one (the theory of value) eventually deals with the question concerning the commodity in which a variation in the 'exchangeable value' (from now onwards: e-value) originates while the other (the theory of capital) culminates in the analysis of the forces that account for a rise in the natural e-value of labour (natural wages). We will see below how these questions are instrumental to the conclusion of the doctrine. For now it is enough to note that Smith, while failing to argue how these questions relate to the doctrine, presents this doctrine in some passages so unconnected with, or so distant from, each other that it is either hard to take it as a doctrine or it is nearly impossible to discern the crucial role it plays in Smith's system of thought.

One of these fragments is found in Smith's chapter on wages and is focused on the 'natural collusion' of masters to prevent a rise of wages:

> When in any country the demand for those who live by wages, labourers, journeymen, servants of every kind, is continually increasing; when every year furnishes employment for a greater number than had been employed the year before, the workmen have no occasion to combine in order to raise their wages. The scarcity of hands occasions a competition among masters, who bid against one another, in order to get work and thus voluntarily break through the natural combination of masters not to raise wages. (*Wealth*, Book I, Chapter VIII, p. 86)

Another fragment is found right at the beginning of Smith's chapter on profits and focuses on the 'increasing or declining state of the wealth of the society':

> The rise and fall in the profits of stock depend upon the same causes with the rise and fall in the wages of labour, the increasing or declining state of the wealth of the society; but those causes affect the one and the other very differently.
> The increase of stock, which raises wages, tends to lower profit. When the stocks of many rich merchants are turned into the same trade, their mutual competition naturally tends to lower its profit; and when there is a like increase of stock in all the different trades carried on in the same society, the same competition must produce the same effect in them all. (*Wealth*, Book I, Chapter IX, p. 105)

Finally, a third fragment qualifies the fall of profits in particular sectors ('into the same trade') and in the economy as a whole ('in any country') by focusing on what happens 'at both ends' of the subtraction by which profits are calculated:

> As capitals increase in any country, the profits which can be made by employing them necessarily diminish. It becomes gradually more and more difficult to find within the country a profitable method of employing any new capital. There arises in consequence a competition between different capitals, the owner of one endeavouring to get possession of that employment which is occupied by another. But upon most occasions he can hope to justle that other out of this employment, by no other means but by dealing upon more reasonable terms. He must not only sell what he deals in somewhat cheaper, but in order to get it to sell, he must sometimes too buy it dearer. The demand for productive labour, by the increase of the funds which are destined for maintaining it, grows every day greater and greater. Labourers easily find employment, but the owners of capitals find it difficult to get labourers to employ. Their competition raises the wages of labour, and sinks the profits of stock. (*Wealth*, Book II, Chapter IV, pp. 352–3)

3.3. SOME INITIAL CLARIFICATIONS

The passages quoted above are worded in such a manner that some clarifications are needed before moving on to the systematic structure of the doctrine.

First, the terms 'profits' and 'wages' are used by Smith in the twofold sense of classical economics, that is both as the *amounts* of profits and wages and as their *rates*. It is understood that, when it comes to Smith's wage–profit relationship as implied in the passages above, what is liable to change in the opposite direction is neither the *amounts* nor the *shares* of profits and wages. Rather, as will be argued below with regard to Ricardo's different version of the same relation, it is the *rates* of profits and wages or, to put it in Cannan's terms (1917), *profits per cent* and *wages per head*. The terms 'profits' and 'wages' will be used throughout this chapter in this sense.

Second, the three fragments make it clear that the rates of profits and wages that are liable to change in the opposite direction are *natural* rates. They are, that is, the 'ordinary or average' rates that prevail in a particular time and place and that are in turn liable to change with the 'increasing or declining state of the wealth of the society'. They are not, therefore, the *market* rates which oscillate around their natural levels once the 'state of the wealth of society' is given. This qualification is adopted throughout this chapter and will be further developed in the sections to come.

Third, the difference between market and natural rates of profits and, therefore, between a fall (or rise) of market rates towards their natural level and a fall (or rise) of the natural level itself is missing in Smith's treatment of the wage–profit relationship. Nonetheless, this difference is related to the other difference, which Smith does discuss though not as thoroughly as he should, between the competition of capitals within particular sectors ('into the same trade') and within the economy as a whole ('in any country' or 'within the country').

Fourth, the two differences just indicated relate to each other in the sense that changes in market rates of profit are usually confined to particular sectors while changes in natural rates are usually common to all sectors. Granted the condition of 'perfect liberty' and the 'whole of the advantages and disadvantages of the different employments of labour and stock' (*Wealth*, Book I, Chapter X), this implies that at any moment there is a single 'ordinary or average' rate of profit in the economy as a whole. This was to be called the 'uniform' or 'general' rate of profit.[4]

Some further observations, however, are needed with regard to the third clarification. Leaving aside monopoly profits (a special form of market profits), the markets to be affected by the two forms of competition mentioned in that clarification are the market for *labour*, when it comes to

the whole economy, and the market for the *products* of labour, when it comes to particular sectors. On the other hand, the competition at issue is a competition between *buyers*, when it comes to the market for labour, and a competition between *sellers*, when it comes to the market for the products of labour. Thus profits fall for different *reasons* in the two cases: they fall, in the former case, because the price of the labour to be employed (in any sector) rises in terms of the wage-goods exchanged for it (in the economy as a whole) while they fall, in the latter case, because the prices of the commodities produced in some sectors fall in terms of the commodities produced in other sectors. Moreover, profits may diverge owing to the different *consequences* of competition in the two cases: these consequences are, in the case of the market for the products of labour, a fall in the profits earned from selling some products *and* an increase in the profits earned from selling the products given in exchange for them; by contrast, in the case of the market for labour, the rise in the price of labour being in terms of its products, competition 'must produce the same effect' in all sectors and must accordingly cut the uniform or general rate of profit in the economy as a whole (that is the profit earned by turning labour into any of its products).

Finally, it should be noted that, however different these forms of competition may be, their outcome is the same when it comes to the standpoint of an individual capitalist. For they equally bring about a reduction in the difference between the two extremes within which this individual is used to calculating *his* profit: the extreme of the e-values advanced (costs) and the extreme of the e-values returned (revenues). When it comes to the standpoint of society, however, the two extremes have a different relevance. For, labour being the only commodity that the 'friends of humanity' (Ricardo, 1821, p. 100) wish to see rising in price, the competition of capitals in which they (the economists) are most interested is the competition between *buyers* in the market for labour. This is the market where labour is exchanged in view of the production of any of its products.

3.4. THE COMPETITION-OF-CAPITALS DOCTRINE AND THE PRINCIPLE OF DEMAND AND SUPPLY

Whether the market focused upon is the market for labour or the market for the products of labour, any variation in the e-value of labour or of any of its products is determined in Smith's system by the principle of demand and supply. This principle is the key for linking the two questions that lie at the roots of the competition-of-capitals doctrine. As anticipated above, these are the question concerning the commodity in which the variation of e-value originates and the question concerning the forces that account for a rise in the

e-value of labour (and consequently for a fall in the rate of profit). This key is developed here in two steps. One is tackled in this section and is focused on Smith's contributions; the other is dealt with in the section to follow and focuses on Malthus's and Senior's clarifications.

The phrase 'principle of demand and supply' is not part of Smith's language. But it was introduced by Malthus in order to unveil an essential part of Smith's reasoning. This part is centred on the distinction between the natural/market prices of commodities and the natural/market compensations of the persons who contribute to their production as outlined in Chapter VII, Book I, of the *Wealth of Nations*. In spite of Ricardo's saying that this chapter is 'very well written' (1821, p. 91) and of Schumpeter's assertion that this is 'the best piece of economic theory turned out by A. Smith' (1954, p. 189), it remains nonetheless one of the three chapters (V–VII) that Smith himself says are 'in some degree obscure' (*Wealth*, p. 46). One aspect of this obscurity is that the treatment of the natural/market price of commodities as *products* of labour is mixed up with the treatment of the natural/market price of *labour* as the special commodity owned by *labourers*.[5] The obscurity, however, diminishes if the three chapters in question are considered in conjunction with the four chapters that follow (chapters VIII–XI). Chapters VIII–XI deal with the forces that determine the 'natural rates' of wages, profits and rents (that is their 'ordinary or average' rates at a given place and time) and chapters V–VII with how these natural rates determine the 'natural prices' of the products of labour. The two groups of chapters provide two different applications of the principle of demand and supply: while one application is concerned with the determination of the prices of the products of labour, the other is concerned with the determination of the incomes (wages, profits and rents) received by the individuals (workers, capitalists, landlords) involved in the production of these products.

Concerning the first application of the principle of demand and supply. The principle of demand and supply lies behind Smith's notions of 'effectual demand' (the quantity of a commodity demanded by those who are willing to pay its natural price) and 'quantity brought to market' (the quantity supplied to satisfy this demand) to the extent that natural prices are determined, like market prices, according to this principle (Malthus, 1836 [1986], Book I, Chapter II, Section III). Natural prices, however, differ from market prices in that, if the price of a commodity is at its 'natural' level, the individuals who have contributed to its production desire to *reproduce* it in the following period. So natural prices are a 'centre of repose and continuance' not only in the static sense of equalizing quantity demanded and quantity supplied ('repose') but also, given the principle of self-interest that governs the exchange of commodities, in the dynamic sense of guaranteeing the

reproduction of commodities in the course of time ('continuance'). Hence the importance of distinguishing not only variations in market prices (above or below their natural levels) from variations in natural prices but also the different consequences of the latter variations on the quantities to be 'brought to market' in the periods to come.

Concerning the second application of the principle of demand and supply. It should be noted that the phrase 'to bring to market' means, in the case of the products of labour, 'to reproduce' as well as 'to supply' whereas, in the case of the individuals who own the means necessary for their production (land, labour and capital), it signifies 'to supply' rather than 'to reproduce'. This is especially true for the owners of land (landlords) since land can indeed be supplied or re-supplied but cannot be produced or re-produced. And this also holds for the owners of labour (labourers) in so far as the laws of reproduction of *labourers* are different from the laws of reproduction of commodities as *products* of their labour. Finally, concerning the owners of capital (capitalists), it is true that the object of their property is re-produced (unlike land and labour) and re-supplied (like land and labour) according to the income (profit) earned by these individuals. But the size of this income is determined according to the inverse wage–profit relationship: this works in practice according to the rule, stated by De Quincey (1844, p. 205) and shared by Marx (1969–72, Part II, Chapter XV, §B4), that 'any change that can disturb the existing relations between wages and profits must originate in wages'. Hence, leaving rent aside, everything boils down to understanding what determines the natural e-value of labour (natural wage) in a particular period and in a particular country (*Wealth*, Book I, Chapter VIII); and to identifying the forces that increase this rate from period to period (in the same country) and from country to country (in the same period) (ibid., Book II, Chapter III).

3.5. CAUSES, MAGNITUDES AND VARIATIONS OF E-VALUES

Now let us move on to the link between the principle of demand and supply and the competition-of-capitals doctrine. This link can be brought to light by means of the distinctions between the *causes* and the *magnitudes* of e-values and between the *intrinsic* and *extrinsic* causes of variations in these magnitudes (Malthus, 1836 [1986], Book I, Chapter II; Senior, 1836 [1965], pp. 116–20).

Concerning the causes and magnitudes of e-values. This distinction casts new light on the difference between the question of 'why commodities have value' and the question of 'what determines the magnitude of this value'. According to Smith and Malthus, these questions deserve two diverging answers and a common clarification depending on whether they refer to the 'early and rude state of society' or to the capitalist state. These answers and clarification may be summarized as follows: 1) labour embodied is the *cause* of e-values in the early as well as in the capitalist state although it is not *sufficient* to determine their magnitudes in the latter state; 2) labour commanded is *necessary* for measuring these magnitudes in the capitalist state for profits must be *added* in determining these magnitudes in the latter state; 3) the principle of demand and supply is meant to explain not so much the *cause* of e-values but only the determination of their (natural or market) *magnitudes* in the early as well as in the capitalist state.

Concerning the intrinsic and extrinsic causes of variations in the magnitudes of e-values. This distinction relates to, and casts new light on, the question concerning the commodity in which the variations take place. While the *intrinsic* causes affect 'demand' (Senior) or the 'desire to possess' (Malthus) and 'supply' (Senior) or 'the difficulty to obtain possession' (Malthus) of a particular commodity, the *extrinsic* causes affect 'demand' or the 'desire to possess' and 'supply' or 'the difficulty to obtain possession' of any other commodity for which the former is exchanged.[6] However, the cause of e-values must be distinguished from the forces that determine the variations in their magnitudes if only because the former affects *both* commodities exchanged while the latter may affect only *one* of them.[7]

The importance of this distinction is best noticed if it is applied to labour as a commodity substantially different from any of its products. While, concerning the determination of the (magnitude of the) e-value of labour, the demand for it requires a corresponding supply of wage goods (demand being 'the will combined with the power to purchase' as argued in note 8 below), concerning the variations in the magnitude of this e-value one should first determine whether these variations stem from changes in the demand for labour (that is from the will) or from *autonomous* changes in the supply of wage-goods (that is from the power): changes of the first kind are the 'intrinsic' while those of the second are the 'extrinsic' causes of the variations. Thus extrinsic causes, such as a bumper crop or a fall in the coefficients of production of wage-goods, may indeed result in an increase in wages. But, lacking a rise in the will to purchase labour, such an increase can only be *temporary*. Hence the importance of the Malthus–Senior clarification of Smith's doctrine: if the 'friends of humanity' want to trace the origin of (permanent) increases in the (natural) e-value of labour, they must first

distinguish between the intrinsic and the extrinsic causes of its variations and, once Smith's view of the accumulation of capital is accepted, they must accordingly regard it as the only intrinsic cause of these increases.

3.6. INTENSITY AND EXTENT OF THE DEMAND FOR LABOUR

The distinction between intrinsic and extrinsic causes is best understood if it is combined with the distinction between the *intensity* and the *extent* of demand; and in particular if the variations in the e-value of commodities (labour and the products of labour) are traced to the variations in the intensity, rather than in the extent, of the demand for them: while the intensity of demand reflects the sacrifice that buyers are willing to make (the price they are willing to pay) to procure the commodity, the extent of demand refers to the quantity purchased by the buyers who are able to pay the price for it (Malthus, 1836 [1986], Book I, Chapter II, Section II). Thus any rise in price is due to an increase in the intensity of demand, it being understood that this increase is always *in relation* to the state of supply and that its long-period impact on the price (at which the commodity is exchanged) and the quantity (which is exchanged at this price) is determined by the conditions of reproduction. If goods are *not reproducible* (that is if they are not commodities), the impact is a rise in price but not in quantity; if goods are reproducible *without limits*, the impact is a rise in quantity but not in price; if goods are reproducible *with some limits*, the impact is a rise both in price and in quantity. The result of these clarifications is that labour should be consistently understood by Smith as a commodity reproducible *with* some limits (*Wealth*, Book I, Chapter VIII, and *passim*) and should be accordingly contrasted with how it is actually understood by Ricardo, that is as a commodity reproducible *without* limits (*Principles*, Chapters XXI, XXXII and *passim*). Likewise, a long-period increase in the demand for labour should be consistently understood by Smith as an increase in its *intensity* while it is actually understood by Ricardo as an increase in its *extent*.[8]

3.7. POSITIVE PROFIT, RELATIVE PROFIT AND THE WAGE–PROFIT RELATIONSHIP

We have examined above the links between the competition-of-capitals doctrine and Smith's theory of value. Let us now turn to the links between this doctrine and Smith's theory of capital. This theory provides the foundations for a theory of *profit*, on the one hand, and for a theory of the *rate of profit*, on the other. Although the links between these two theories are left in the dark by Smith, they are implicit in his unconfessed use of James Steuart's distinction between 'positive' and 'relative' profit[9] (Meacci, 2003).

The point of departure for tracing these links is Smith's discussion of dwelling-houses as distinct from profitable buildings.[10] If we focus on the chapter that contains this discussion (*Wealth*, Book II Chapter I, *Of the Division of Stock*) rather than on Smith's chapter on profits, we are more likely to identify these links. For the chapter on the division of stock deals with the differences and similarities between capital from the point of view of an *individual* (that is that part of the 'stock which a man possesses' which is to yield a profit to this individual) and capital from the point of view of *society* (that is that part of the 'general stock of any country or society' which is to yield a profit to the whole society). As is well known, these similarities and differences are developed in this chapter along two lines: one is concerned with the two different 'ways' in which the capital of an individual may be employed; the other with the two 'portions' in which the capital of society is divided once that employment has been determined. The issue, however, as to how (relative) profit accrues to (the capital of) an individual and how (positive) profit accrues to (the capital of) society is never tackled explicitly by Smith. He comes closest to this issue when he contrasts the manufacturer's 'consideration of his own *private* profit' with the fact that 'the different quantities of productive labour which it may put into motion and the different values which it may *add* to the annual produce of the land and labour of the society ... never enter into his thoughts' (*Wealth*, Book II, Chapter V, p. 374, italics added). What is here called 'private profit' is Steuart's 'relative profit' while the increase in the 'annual produce', which is clumsily identified by Smith as an addition of 'different values', is Steuart's 'positive profit' and coincides with what is otherwise called 'surplus', 'surplus produce' or 'social surplus'. Leaving aside the obscurities incorporated in Smith's notion of 'annual produce',[11] it can be concluded that the profit of the wage–profit relationship in Smith's sense is 'private' or 'relative' profit while the increase in the 'annual produce' from which the opposite variations of wages and (relative) profits are drawn is the (positive) profit accruing to the whole society from the employment of capital and (productive) labour.

There is more, however, to the connection between these two forms of profit and the wage–profit relationship. For not only is the expectation of relative profit necessary for the realization of positive profit, but the former is also a partial or total appropriation of the latter. Furthermore, one thing is the *fact*, another is the *extent*, of this appropriation: while it is the task of the theory of profit to explain this fact, it is the task of the theory of the rate of

profit to explain its extent. The latter theory was developed by the classics in two directions: one results in Ricardo's rent–profit relationship, the other in Smith's and Ricardo's wage–profit relationship. It should be noted, however, that this relationship represents two different sets of variations and assumes two different meanings depending on whether the variation in wages is intended in Smith's sense (that is as a variation in the *quantity* of 'necessaries, conveniences and amusements' given in exchange for labour) or in Ricardo's (that is as a variation in the *proportion* of the value of total product appropriated by labour). But whether the variation in wages be understood in one sense or in the other, both views regard this variation as temporary unless it results from a continuous process of accumulation. In Smith's view, however, the accumulation of capital is not only the main source of positive profit; it is also, via the principle of demand and supply, the intrinsic cause of variations in the (natural) e-value of labour (natural wages).

3.8. ACCUMULATION, TECHNICAL PROGRESS AND CAPITAL DEEPENING

After tackling the two main issues of Smith's theory of value and theory of capital (that is in which commodity the variation in e-value originates and which forces account for the variation in the natural e-value of labour), we turn to the problem that comes at the end of the latter theory. This problem concerns the *sustainability* of the process of accumulation in the presence of a continuous rise in the e-value of labour (and consequent fall in the rate of profit). This problem can be put in the following manner: how can the accumulation of capital continue if its outcome is the rise of (natural) wages and consequent fall of (natural) profits? Concerning the rise of wages, capitalists would be pleased if only they agreed with Smith's argument on the beneficial effects of the 'liberal reward of labour' (*Wealth*, Book I, Chapter VIII, p. 91ff). But what about the resulting fall of profits?[12]

Smith does not raise this question either in his chapter on profits or anywhere in Book II and even less in the brief passage on the invisible hand in Book IV of the *Wealth*. Where he comes closest to an adequate answer is at the end of Chapter VIII of Book I when he regards the rise of wages as compatible with a decrease in the cost of labour per unit of output. Unfortunately, when he reaches this point, he has not yet developed the notion of the wage–profit relationship although he has already begun to argue (while finishing the argument that a rise of wages need not be harmful to society) that this rise is a consequence of the competition of capitals. So the answer Smith begins to give to that question is unconnected with the

notion of the wage–profit relationship and, accordingly, with the competition-of-capitals doctrine. This answer focuses first on the ambiguous assertion that the rise in wages increases the 'price of many commodities' and soon after on the clear-cut recognition of a further effect of this rise:

> The same cause, however, which raises the wages of labour, the increase of stock, tends to increase its productive powers, and to make a smaller quantity of labour produce a greater quantity of work ... There are many commodities, therefore, which, in consequence of these improvements, come to be produced by so much less labour than before, that the increase of its price is more than compensated by the diminution of its quantity. (*Wealth*, Book I, Chapter VIII, p. 104)

This clear-cut recognition helps to solve the issue of the sustainability of the process of accumulation raised above. This issue can be addressed by noting that the accumulation of capital ('the increase of stock') may be intended in two senses and brings about two consequences.

Concerning the two senses. The accumulation of capital may be intended as an increase in *free* capital and/or as an increase in *invested* capital (Jevons, 1879): if intended in the first sense, it presents itself (immediately) as an increase in the demand for labour (that is as an increase in the competition between the buyers of labour); if intended in the second sense, it presents itself (with lags) either as an increase in output with constant coefficients (*capital widening*) or as an increase in labour productivity (*capital deepening*) with or without an upgrading of the products of labour (*product deepening*). This upgrading, it should be noted in passing, is what is needed for the e-value of labour in Smith's sense to increase in the course of time. For the continuous rise of wages calls for an increase in the number and quality of the wage-goods produced by, and given in exchange for, labour. This increase is the outward form of increasing natural wages in Smith's sense. This increase should be contrasted with an increase both in Ricardo's 'proportional wages' and in the natural e-value of labour intended as the amount of labour embodied in wage-goods.

Concerning the two consequences. While an increase in free capital entails (the supply of labour remaining constant) an increase in wages in Smith's sense, the resulting increase in invested capital, in so far as it results in an increase in labour productivity, leads to a decrease in the cost of labour per unit of output (wages remaining constant) (*Wealth*, Book I, Chapter VIII, p. 104–57, partly quoted above). The role of this process is to shift out the wage–profit frontier, that is, to bring the rate of profit back to the level from which it had fallen owing to the increasing demand for labour and the resulting increase in wages. Hence Smith's notion of the 'progressive state'

as 'the cheerful and the hearty state to all the different orders of the society'; that is, not only to labourers but also, in spite of the wage–profit trade-off, to their counterparts in the market for labour. Hence the importance, for the sustainability of the process of accumulation, that inventions be made and new techniques and products be periodically introduced. This phenomenon is inevitable as the accumulation of capital advances and is indeed the result of the associated advance in the *vertical* division of labour.[13]

3.9. CONCLUDING REMARKS: THE LAW OF INCREASING WAGES

If cleared of the ambiguity by which the variations in the e-value of commodities in terms of each other are mixed with the variations in the e-value of labour in terms of wage-goods, and if strengthened by the distinction between intrinsic and extrinsic causes of variations in the magnitudes of e-values, the competition-of-capitals doctrine presents itself as a link between Smith's theories of value and capital, on the one hand, and his views of the wage–profit relationship in relation to the sustainability of the process of accumulation (the main source of technical progress and further advances in the division of labour: *Wealth*, Book II and, particularly, Chapter III, pp. 343–32), on the other. Smith's explicit and implicit argument may be developed and summarized by the following sequence of connections: accumulation of free capital (increasing funds for the maintenance of productive labour) → increasing demand for labour as an intrinsic cause of increases in its e-value → competition between capitalists in the market for labour → increasing natural wages in Smith's sense→ decreasing relative profits across sectors→ labour-saving technical progress → increasing relative profits at constant wages in Smith's sense → resumption of the process of accumulation (free capital → invested capital → technical progress → division of labour).

This argument underlies Smith's most general but poorly highlighted conclusion: if capital continues to be accumulated in conditions of 'perfect liberty', the demand for labour (the competition between the *buyers* of labour) is destined to surpass the supply (the competition between the *sellers* of labour) – however stimulated the latter may be by the former – so that the (natural) e-value of labour in Smith's sense grows over time through consecutive appropriations of positive profit. This e-value goes up more easily in an economy (such as 'our American colonies' in Smith's time) in which accumulation is intense (so that the supply of labour does increase but not as much as the demand for it) than in an economy (such as China in Smith's time) where, the accumulation of capital being weak or non-existent,

the supply of labour tends to exceed the annual demand. All this is reflected in Smith's famous aphorism that it is not the actual greatness of the wealth of a country but its continual increase 'which occasions a rise in the wages of labour'. This rise, it should be noted, is made effective by a multiplication in the number, and an improvement in the quality, of the wage-goods produced by, and given in exchange for, labour. This thesis brings the competition-of-capitals doctrine to a close and might be called the 'law of increasing wages'. This is prepared in Book I, is brought to conclusion in Book II, and permeates the whole system of thought of the *Wealth of Nations*.

NOTES

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1. See for instance Hollander (1973a, 1983), Eatwell (1975), Garegnani (1982) and Peach (1993, Chapters 2 and 3).
2. The 'rational foundation' of this theory is that 'in agriculture the same commodity, namely corn, forms both the capital (conceived as composed of the subsistence necessary for workers) and the product; so that the determination of profit by the difference between total product and capital advanced, and also the determination of the ratio of this profit to the capital, is done directly between quantities of corn without any question of valuation' (Sraffa, 1951, p. xxxi).
3. The 'rational foundation' (to use Sraffa's expression again) of this later theory is that 'the rate of profits was no longer determined by the ratio of the corn produced to the corn used up in production, but, instead, by the ratio of the total labour of the country to the labour required to produce the necessaries for that labour' (Sraffa, 1951, p. xxxii).
4. The central argument of Chapter X, *Of Wages and Profit in the Different Employments of Labour and Stock*, Book I of the *Wealth* seems to be that 'in a society where things were left to follow their natural course' the differences between the 'ordinary or average' rates of wages and profits across sectors are not only compatible with the idea of a single natural rate in the economy as a whole; they also have nothing to do with *changes* in natural rates, let alone with *differences* between market rates and natural rates in particular sectors. As for a society where things are *not* left 'to follow their natural course', see the part of the same chapter devoted to the 'policy of Europe' and the equally thoughtful Chapter VII, *Of Colonies*, Book IV of the *Wealth*.
5. The main obscurity, however, lies in the argument of this chapter known today as the 'adding-up theorem'. This is no place to go into the problems of analysis and interpretation raised by this argument if only because we are here concerned with the (natural) *rates* of wages and profits rather than with the (natural) *prices* of the commodities produced by means of capital and (productive) labour.
6. 'The causes which affect the desire to possess, and the difficulty of obtaining possession of, any one commodity may with propriety be denominated the *intrinsic* causes of its power of purchasing; because the more these causes increase, the greater power will the commodity possess of purchasing all those objects which continue to be obtained with the same facility. The causes which affect the desire to possess, and the difficulty of obtaining possession of, all the different commodities with which the first commodity might be exchanged may with

propriety be denominated the *extrinsic* causes of its power of purchasing' (Malthus, 1836 [1986, p. 48]).

7. This is explained by Bailey as follows: 'The value of *A* and *B* is the effect of causes acting on *both*, but a change in their mutual value may arise from causes acting on *either*: as the distance of two objects is to be referred to the circumstances which have fixed both of them in their particular situation, while an alteration of the distance between them might originate in circumstances acting on one alone' (Bailey, 1825 [1931, p. 184]; italics added).
8. The lag between changes in demand and changes in supply and the different consequences that this lag exerts on the supply of different commodities have been examined by Ricardo in connection with his criticisms of the principle of demand and supply (1821, Chapters XIII and XXX). Here it is impossible to go into these criticisms and the related disputes between Ricardo and Malthus. But it must at least be noted that the principle of demand and supply underlying the competition-of-capitals doctrine has nothing to do (*contra* Hollander, 1973b) with the 'curves of demand and supply' of the neoclassical theory. The most that can be said when one 'has in mind' these curves is that Malthus's demand is nothing but 'total purchasing power directed towards a commodity' (O'Brien, 1975, p. 105) or, more briefly, the quantity demanded at a particular price (Garegnani, 1983, 2003, §§14–15), a change in the intensity of demand depending on changes in the relation between the quantity supplied and the quantity demanded at this very price. It should however be noted that the modern habit of collapsing the neoclassical theory into the so-called 'demand-and-supply approach' and of contrasting this with the 'surplus approach' is dangerous in that, by obfuscating the role played by demand and supply in classical theory, it prevents a better understanding of the theory being defended or challenged. It should indeed be noted that Malthus's principle of demand and supply belongs so fully to the classical theory that it was introduced and developed by Malthus in order 1) to reject Ricardo's *version* of the classical theory of *value* and, within this version, Ricardo's *doctrine* of the variations in the natural e-value of labour (and consequently in the natural rate of profit); and 2) to defend Smith's *different* version of this theory along with Smith's *different* doctrine of these variations. It should also be noted that Ricardo did share Malthus's notion of demand as 'the will combined with the power to purchase' (to the extent that 'the greater is the degree of this will and power with regard to any particular commodity, the greater or the more intense may be fairly said to be the demand for it') (see, for instance, Ricardo, 1820 in *Works*, II, pp. 38–9; see also *Works*, VII, pp. 56–8) even when he takes issue with him on the possibility of gluts (see, for instance, *Works*, VI, pp. 130–35).
9. 'Positive profit implies no loss to anybody; it results from an augmentation of labour, industry, or ingenuity, and has the effect of swelling or augmenting the public good. Relative profit is what implies a loss to somebody; it marks a vibration of the balance of wealth between parties, but implies no addition to the general stock' (J. Steuart, 1767 [1966], Book II, Chapter VIII).
10. While a dwelling house may yield a 'revenue or profit' to its proprietor (the tenant paying 'the rent out of some other revenue which he derives either from labour, or stock, or land' so that 'the revenue of the whole body of the people can never be in the smallest degree increased by it'), profitable buildings are to procure a 'revenue or profit' not only 'to their proprietor who lets them for rent' but also 'to the person who possesses them and pays that rent' (*Wealth*, Book II, Chapter I, p.281).
11. See, for instance, O'Donnell (1990, Chapter 3) and Vianello (1999).
12. The problem of the sustainability of the process of accumulation is addressed by Smith only implicitly and indirectly. It was brought to the fore at a later stage by authors such as Ricardo, J.S. Mill and Marx who made use of different terminology, developed diverging arguments and eventually reached conclusions in disagreement either with Smith or with one another. See, to begin with, Malthus (1836 [1986], Book II, *On the Progress of Wealth*).
13. The notion of vertical division of labour comes from the Austrians but is implied in Smith's treatment of the accumulation of capital (*Wealth*, Book II) if not of the division of labour as such (*Wealth*, Book I, Chapter I). As for the ambiguity of the phrase 'accumulation of capital' (which makes it unclear whether the capital accumulated is *free* or *invested* and whether accumulation itself is of the *deepening* or the *widening* kind), it should be noted not only that the wage–profit relationship implies a constant productivity of labour (cf. Bailey, 1825 [1931], Chapter IV; McCulloch, 1864 [1965]; Marx, 1969–72, Part II, p. 187) but also that it is only through 'invested' capital and through the 'deepening' of capital that the productivity of labour normally rises (and the wage–profit frontier shifts out). This ambiguity, however, is justified by the fact that both forms of capital and both forms of accumulation are needed for (natural) wages to increase in time with undiminishing (natural) profits. This interlacing of forms and consequences is needed, along with Smith's principle of 'perfect liberty' and call for changes in (China's) 'laws and institutions', to understand how an economy can avoid that 'full complement of riches' where, besides being 'fully peopled' (*Wealth*, Book I, Chapter VIII, pp. 89–90), it is also 'fully stocked' (ibid., Chapter IX, pp. 111–12). This is also what lies behind Malthus's argument on the superior strength of the 'regulating' (Smith's) principle of profits over the 'limiting' (Ricardo's) principle (1836 [1986], Book I, Chapter V).

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