

**Does economic growth ultimately lead to a “nobler life”? A comparative analysis
of the predictions of Mill, Marshall and Keynes**

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Abstract. The writings of Mill, Marshall and Keynes reviewed in this paper share the same conception of output growth as something whose value depends on the conditions of life that it allows: as time goes on, and capital and technical knowledge accumulates, material production (per capita of population) has a diminishing importance, whereas the conditions of work, the use of leisure, the quality of inter-personal relations, for potentially all members of society tend to become the real goal. Since there has been recently an increasing interest for “quality adjusted” growth accounting, for comprehensive evaluations of “human development” and more synthetically, for the relationships between wealth and happiness, it seems of some interest to look back at the authors who laid down the conceptual basis for an analysis of the complex relations between output growth and material, intellectual and moral conditions of life; and to examine on what grounds, precisely, they reached their conclusions and with what differences from one another.

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But in contemplating any progressive movement, not in its nature unlimited, the mind is not satisfied with merely tracing the laws of the movement; it cannot but ask the further question, to what goal? Towards what ultimate point is society tending by its industrial progress? (J.S. Mill, Principles of Political Economy)

1. Introduction.

Despite the recent interest in “Economics and happiness”¹, in a wide notion of “Human development”², and in “quality adjusted” growth accounting³, the questions concerning the ultimate social goal of an increasing production are largely avoided by the economists. Economic growth, especially if “sustainable”, is normally considered by them as a social goal in itself, requiring no further justification: the higher the sustainable rate, the better-off society is.

Yet what may now seem a distinct philosophical question, was taken very seriously by some eminent economists of the past. A very distinguished case is that of J. S. Mill. He posed the question of the “goal” towards which society was driven by progress in a market economy very explicitly; and he did so in terms of the manner of living of the members of society and of the working classes in particular, and expressing it by an objective standard of comfort and of intellectual and moral cultivation: in his eyes, the change in this standard, rather than the increase in production and consumption per se (not to speak of subjective perceptions) can

¹ E.g. Bruni, L. and P.L. Porta (eds.), 2005 and references therein quoted.

² E.g. Nussbaum M. and A. sen (eds.), 1993. The Human Development Report issued annually by a United Nations agency is of course a practical example.

³ E.g. G. Schwerdt and J. Turunen, 2006 and references therein quoted.

quality, for the good or for the bad, the performance of a capitalistic economy. After Mill, and partly under his influence, A. Marshall considered the standard of life and the social goals of economic growth as “the more important side” (Marshall, 1920, I, i, p. 1) of Political Economy (the other side being “the study of wealth”). He expanded some of Mill’s arguments and reduced or dropped some others: he, too, never lose sight of the fact that the increase in material output was merely a means for making fuller and nobler the life of population.

This paper presents a comparative analysis of the precise “goals” that Mill and Marshall considered proper for production in a market economy and how they can be fulfilled. Since such goals were for future times, many arguments took the form of predictions, if not prophecies, of probable or desirable outcomes. Our comparative analysis will then lead us quite naturally to briefly reconsider also Keynes’s famous one-century-ahead 1930 prophecy (Keynes, 1931 [1930]). We shall argue that Keynes’s piece is essentially “Millian” in spirit, but presents also some clear Marshallian elements.

It is far beyond the scope of this paper to attempt an assessment of the “realism” of all these prescriptions and predictions even though they may still offer a lively source of inspiration for (the few) economists who believe that economic growth has no clear value, except in relation to the quality of life it allows.

The aim of this paper is much narrower; we simply compare the views of three different authors and stress what is similar, and may possibly have been borrowed from one another, and what, instead, is specific of each. On the other hand, with reference to Mill and Marshall, we place their analyses of the “standard of life” in the framework of their respective theories of value and distribution. Some questions will lend themselves, at that point. How could Mill’s “stationary state”, characterised as it was by a Golden Age of society, be so different from that of Smith, Ricardo and Malthus, while their theories of value and distribution had so many elements in common? Conversely, how could Marshall share much of Mill’s views on the quality of life, and yet develop a completely different theory of

distribution? What relation there is, if any, between their theories of evolution and their theories of equilibrium?

Section 2 illustrates Mill's conception of the "stationary state" and how it will (or can) be reached. We shall argue that Mill's argument is precisely symmetrical to Ricardo's and that this symmetry is based on opposite interpretations of Malthus's population law. Mill's theory will be presented under three headings: his theory of wages in relation to population, his conceptions of a declining importance of production and of an increasing importance of education. In Section 3, we shall see that Marshall agreed on most of Mill's conclusions on the ultimate goals of production and growth. He did so, however, following a different path, in which a "nobler life" becomes the cause no less than the effect of economic progress. This change involved a new theory of wages, based on "efficiency" rather than on "population", and the abandonment of Mill's conception of the stationary state. Keynes's revival and reinterpretation of Mill's and Marshall's predictions are briefly discussed in Section 4. Section 5 concludes.

2. The ultimate goal of economic progress: Mill's "stationary state"

The Ricardian stationary state was characterised by very low, if not null, profits; low wages, which were merely sufficient for subsistence and reproduction; and high rents: such was the effect of past capital accumulation and population growth on the use of limited, privately owned, natural resources. From the point of view of human progress, it was therefore a rather miserable state. It is true that, according to Ricardo, technological improvements and the opening to free international trade tended to postpone the limit of accumulation and growth, but the ultimate effect of such a postponement would be that of making the world more and more densely populated and natural resources more and more intensively used, to the landlords' benefit. All the strength and the social value of a capitalistic, market economy was

therefore in the process of growth in itself, and not in the point towards which it drove society. During the process of growth, the conditions of life of the working classes could improve well above subsistence, without provoking any dramatic fall in profits; and capital accumulation allow for a higher and more efficient production. But, alas, this process was not unlimited, and when the limit had been approached, the only goal fulfilled would be that the natural resources and the capital of the planet could feed a much larger population; there would be no benefits, however, to the individual worker of the generations to come; nor there would be any further substantial technological improvements, since profits have fallen to zero and capital accumulation have stopped.

J. S. Mill could not conceive of such a prospect, so discouraging for human civilisation⁴. As we know⁵, he had a very wide and passionate view of history and institutions: the setting of society in a certain country at a certain time was but a phase in the historical evolution of mankind and its institutions were transitory. The history of mankind ought to be (and in part was), according to Mill, a process bringing the “human nature to its greatest perfection” (Mill, 1929 preface to the third edition, p. xxx), both from an intellectual and a moral point of view. Like his predecessors, he thought that the attainment of a stationary state was unavoidable, due to the limited natural resources of the earth, but he argued that it could be a happy, not a miserable state of society. Nineteenth century technical progress and the accumulation of capital offered an unprecedented opportunity in this respect. Not surprisingly, then, his “stationary state” was characterised by

a well-paid and affluent body of labourers; no enormous fortunes (...) but a much larger body of persons than at present, not only exempt from the coarser toils, but with sufficient leisure, both physical and mental, from mechanical details, to cultivate freely the graces of life (Mill, 1929, p. 780).

⁴ See in particular Mill, 1929 [1871⁷], Book IV, and Mill, 1989 [1873].

⁵ Among the many comprehensive studies on Mill we may mention P. Schwartz, 1972, and S. Hollander, 1985.

Conversely, the process of economic growth, driven by “the struggle for riches”, by “trampling, crushing, elbowing, and treading each other heels” (Mill, 1929, p. 748), was altogether disagreeable, and was a depreciable “false ideal of human society” (Mill, 1929, p. 752). It was a necessary phase, though: “while minds are coarse they require coarse stimuli, and let them have them” (Mill, 1929, p. 749). Mill’s stationary state is therefore the precise opposite of Ricardo’s (and for that matter also of Smith’s): the fulfilment of the fundamental goal in historical evolution, which required passing through more imperfect stages, the former; and the stop to a phase of progress and prosperity, the latter⁶. The common interpretation of Mill as a great expositor of Ricardo - or, at most, of a transition-theorist between the Classical and the Neo-classical systems – tended to obscure some important original aspects which are at the basis of his conception of the stationary state.

To our purposes, they can be grouped under three headings: his interpretation of Malthus’s theory of population, the diminishing importance he attached to production, and the fundamental role he attributed to education.

2.1 Population and the habitual standard of comfort.

Like Ricardo, Mill accepted Malthus population principle, but he drew completely different conclusions from it. Malthus’s theory by no means implied that the progress of society must necessarily end in shallows and in miseries, according to Mill; quite the contrary, he claimed that that supposed tendency “can only be successfully combated on [Malthus’s own] principles” (Mill, 1929, p. 747). Much of the weight of Mill’s innovative conception of the stationary state rests therefore in his interpretation of the theory of population.

⁶ Mill referred to Ricardo’s conception as to that of “the political economists of the last two generations”, including also Adam Smith. Mill, 1929, pp. 746-7.

At the very basis of Mill's contribution is Malthus's distinction between positive and preventive checks to population growth: the former concerned the increase in death rates, the latter concerned a voluntary restraint on birth rates. This distinction was referred to by Mill as a distinction between "mortality" and "prudence", and the choice of words immediately reveals his keen interest on the latter. The relative importance of the two was a question of stages in civilization. The former check was predominant "in a very backward state of society, like that of Europe in the Middle Ages, and many part of Asia at present [1848]", where "population [was] kept down by actual starvation" (Mill, 1929, p. 159); however, he maintained that "it cannot now be said that in any part of Europe, population is principally kept down by disease, still less by starvation, either in a direct or in an indirect way" (Prin: 352, emphasis added). Prudence was becoming a more effective restraint on an excessive population growth. This historical evolution fitted also Mill's general views on social philosophy:

the conduct of human creatures is more or less influenced by foresight of consequences, and by impulses superior to mere animal instincts: and they do not, therefore, propagate like swine, but are capable, though in very unequal degrees, of being withheld by prudence, or by social affections, from giving existence to beings born only to misery and premature death. In proportion as mankind rise above the condition of the beasts, population is restrained by the fear of want, rather than by want itself (Mill, 1929, pp. 158-9).

Restraint in population growth was then a question of human will, rather than of natural necessities. His argument was based on some examples which could reasonably be considered as representative of probable future developments –a procedure he reiterated over and over in matters concerning evolution. He considered first of all some countries which are "honourably distinguished" in this respect:

The countries in which, so far as is known, a great degree of voluntary prudence has been longest practiced (...) are [1848] Norway and parts of Switzerland. (...). In both

these countries the increase of population is very slow; and what checks it, is not multitude of deaths, but fewness of births. (...) The population contains fewer children, and a greater proportional number of persons in the vigour of life, than is known to be the case in any other part of the world (Mill, 1929, p. 160).

On the other hand, he considered the social classes, and their habits, which within a country exercised this “prudence” more effectively. With specific reference to England, the role of the advance-guard was played by many people among the middle classes and the skilled artisans: not only did they manage to transmit their own life standard to their children by avoiding over-multiplication, which was also done by “the great majority of the middle and the poorer classes” (Mill, 1929, p. 159), but also made “an additional restraint exercised from the desire of doing more than maintaining their circumstances – of improving them” (Ibid.; see also p. 353). On the other hand, he recognised that, in England, the common agricultural workers, which at his time accounted for no much more than the social group formed by the middle classes and the skilled artisans, “the checks to population may almost be considered as non-existent” (Mill, 1929, p. 357). Such a lack of individual prudence, however, can and should be filled by legal interventions or, to the same effects, by customs equivalent to it. Once again, Mill presented a series of examples and in particular, various sorts of legal and practical obstacles to improvident or premature marriages, taken mainly from the experience of the German States, as well as, once again, of Norway and Switzerland.

The precise mechanism through which “prudence” set a beneficial limit to population growth and may contribute to permanent improvements in the workers’ conditions of life is worth analysing in some detail.

Like Ricardo, Mill based his argument on a minimum conditions of life: below the minimum, population (or its rate of growth) tends to fall; above it, it rises. They differ, however, in the supposed nature of this minimum. For Ricardo, such minimum consists of the

comforts which, being customary, were perceived as “absolute necessities” (Works, I: 94); Mill, on the contrary, assumed that they were variable:

[Ricardo’s] assumption contain sufficient truth to render it admissible for the purposes of abstract science (...). But in the applications to practice, it is necessary to consider that the minimum of which he speaks, especially when it is not a physical, but what may be termed a moral minimum, is itself liable to vary (Mill, 1929, p. 347).

This of course reflects Mill’s greater emphasis on “prudence”, and his assumption that what he calls the “habitual standard of comfortable living” (Mill, 1929, p. 161) was higher than the hypothetical standard required by mere subsistence. Mill’s specific contribution consists therefore in his analysis of the complex relationships between the variations in the standard of comfort and the variation in birth rates. A certain style of life – defined by the quantity and quality of education, the quality of social life, by leisure time, and of course, by the physical comforts - becomes a “habitual standard” if it is very common among a certain social class, and, most importantly, if it can be passed on to future generations. The higher the number of children, the lower standard can be passed on. It follows that, at a given wage, there is a critical habit in respect to population which permits a labourer to pass on to his family a constant habit in respect to comfort. In the words of Mill,

it has been the practice of a great majority of the middle and the poorer classes (...) in most countries to have as many children, as was consistent with maintaining themselves in the condition of life which they were born to, or were accustomed to consider as theirs (Mill, 1929, p. 159).

Such a habitual standard of comfort, however, is not a rigid minimum, and the actual standard of individual families can be improved by an additional restraint, as noted above. This potential (and to some extent, actual) improvement, is central in Mill’s argument: if it was true, in the Ricardian world, that any excess of wages over subsistence tended to be reversed by a higher fertility, then it was no less true that the conditions of the labouring population can be permanently improved “through a voluntary restriction of the increase of their

numbers” (Mill, 1989, p. 94). With this in mind, it is very clear in what sense he says in his Autobiography that “Malthus’s population principle we [he and his Benthamic colleagues] took up with ardent zeal in the contrary sense” (Ibidem). Conversely, in cases of lack of prudence, the actual standard may be reduced, to some extent at least, due to an excess of “multiplication”.

For given wages, therefore, there was, in the individual family, a sort of trade off between fertility behaviour and the standard of comfort; in this trade off, there was (in the various social groups) a critical rate of population growth and a critical level of comfort which can be permanently transmitted to future generations, assuming no change in the real wage(s); any deviation, in individual families, in fertility provokes an opposite deviation concerning comfort, and such deviations may become permanent and spread through the same social group, as in the above mentioned case of the skilled artisans, thus establishing a new habitual standard. Market circumstances, however, may determine a change in real wages. One ought distinguish here between social groups: the best educated people, those belonging to the middle classes, the unionised labourers, tended to transfer any rise in the real wage into a higher standard of life, keeping fertility constant or even reducing it, whereas they compensated any fall in the real wage with a reduction of fertility, thus preserving their habitual standard of comfort. Quite the contrary, less educated and poorer people tended to take advantage of a wage rise in terms of a higher fertility and compensate a wage fall with a contraction of comfort, down to the limit of mere subsistence, where a check due to starvation and premature deaths would start to operate. Needless to say, the latter behaviour was common in an early stage of civilisation, and was being abandoned on the basis of the supplementary role played by public “prudence”, by public education, re-distributive policies, unionisation, etc. . In the “probable futurity of the working classes” the first attitude was to dominate.

The necessity of a transition from the backward to the progressive attitude was reinforced also by a “labour market” argument which Mill stressed very much. If a wage rise was to be followed by a higher fertility, then, after one generation, the cause making wages higher would be contrasted by another cause –the increased labour supply- which would tend to reverse the initial advantage: the wage rise would then be only temporary and the next generation would be unable to enjoy the same possibilities of comfort as their parents. A constant (or falling) fertility, on the contrary, would permit to transmit permanently to the future generation the higher standard allowed by the permanently higher wage. Similarly, if a fall in real wages was to be accompanied by a fall in fertility, in the attempt to preserve the ruling habitual standard of comfort, then after one generation the reduced labour supply would sustain wages and the initial drop would not be permanent.

2.2 A mathematical formulation

It may be useful to express this rather articulated argument with some formalisation. We do not claim that Mill’s thought can be better expressed using a mathematical language –for it certainly cannot – but perhaps some of its original aspects can be better understood if taken in isolation and in their abstract logic.

Assuming that all society behaves like Mill’s better educated people, let us denote by *HAS* their habitual standard of comfort⁷ at a certain time. Differently from Ricardo’s “absolute necessities” which each generation passively inherits from nature and from past generations, the *HAS* has been the result of combined habits concerning both fertility and comfort: coeteris paribus, the lower fertility, the higher *HAS* can be. At a given real wage (w),

⁷ Mill’s “*HAS*” is made up by objective, measurable, habits of life (and has nothing to do with “utility” or even “welfare”). He had no need for a cardinal measure and was content with saying that it may “increase” or “decrease”. Something more than an ordinal measure – like a weighted average of its component parts- is required here.

the trade off between the actual standard of comfort (S) and population growth (n), can be implicitly expressed by the equation

$$w = \alpha n + \beta S \quad (1)$$

, where α and β are positive parameters (not necessarily constant). (By contrast, Ricardo assumed that both the standard of comfort and population growth were uniquely determined by the excess of the actual wage over a fixed “natural” wage: there was no trade off at all!)

In order that a certain *HAS* can be established, population must grow at a rate which keeps the wage constant for a certain time. The dependence of wages on population growth is another point of contrast with Ricardo. We know that Mill’s adhered to the “wages fund doctrine” even though he subsequently changed his mind to some extent⁸. Denoting by g the rate of capital accumulation (whatever its determinants may be) and by \hat{w} the proportional rate of change of the real wage, we have⁹ :

$$n + \hat{w} = g \quad (2)$$

Thence the population growth which keeps the wage constant can be defined as

$$n^* = g \quad (3)$$

At that rate of growth, (and at the given wage) the *HAS* is therefore

$$HAS = \frac{1}{\beta} (w - \alpha n^*) \quad (4).$$

It must be stressed that equations (1) to (4) are not equilibrium conditions: they only constrain the values of the different variables to be consistent with one another. Let us assume then, that, at a certain stage of development of society, habits and general economic conditions are such that *HAS*, n^* , w and g satisfy equations (3) and (4). Mill basically considered two

⁸ His retraction is a relatively controversial story, which goes beyond the interests of this paper. It will suffice to note here that he remained always convinced that, *coeteris paribus*, a fall in population growth involved a wage rise.

⁹ Cf. Mill, 1929, Book IV, Ch. III, especially § 3.

sources of progress in the conditions of life: one consists in a further, autonomous, restraint in population growth prompted by the desire to transmit to fewer children a higher standard of life; the other consisted in a wage rise. In the first case, society moves on the trade off expressed by (1) in the direction of a higher S . Since n has diminished, the wage, *coeteris paribus*, must increase, by (2). The trade off would shift upwards, and this reinforces the establishment of the increased standard, which will become the new HAS . Whether population growth returns at its initial value or remains lower, depends on the effect of the higher wage on profits and on the accumulation of capital; if they fall, then also n^* permanently falls: a step towards Mill's stationary state. A wage rise, however, may be brought about also by other causes, such as an increase in capital accumulation, due to improved business conditions, or even some successful trade union negotiations, which force capitalists to devote more capital to the hiring of labour. Once again the trade off would now shift to the right and Mill's refined and educated people would not lose the opportunity of increasing its HAS permanently, without any increase in population growth.

If circumstances occasion a fall in wages, then the trade-off shifts inwards. But the current HAS is perceived as a minimum, so that (1) remains satisfied by an unchanged S and a lower n . By (2), however, the wage would rise, other conditions being equal, thus reverting the economy to initial conditions.

The establishment of a HAS below which population would stop growing, together with an autonomous effort to further restraints in population growth and an upward flexibility of HAS in response to improvements in labour market conditions, are therefore at the basis of a path characterised by a steadily increasing HAS and a steadily decreasing n^* , which eventually leads to Mill's stationary state.

2.3 The diminishing importance of production.

Mill's stationary state, as compared with Ricardo's, is characterised by a smaller population, and a higher standard of comfort. It may seem, then, that production might be the same, and diminishing returns in agriculture may operate in a like way. This is not the case, however: Mill could legitimately give them much less emphasis than Ricardo. We find here, in fact, a second fundamental ingredient of Mill's stationary state. Mill's *HAS*, differently from Ricardo's "necessaries", is not entirely based on material prosperity, nor does an increase of *HAS* involve, from a certain level, an increase in the production of material goods. Education and health care, leisure time, the enjoyment of the arts, short working hours, the opportunity of having social relations, etc. contributed to the *HAS*, and were the distinctive components of what makes the "graces of life" (Mill, 1929, p. 750) enjoyable. They could be expanded indefinitely by a constant population without encountering a limit in natural resources. The consumption of material goods, by contrast, concerned the physical rather than the moral sphere of human life and has a limit beyond which society should not go. "Only in the backward countries of the world" (Mill, 1929, p. 749), according to Mill, were the mere increase in production and accumulation "an important object"; but an "inordinate importance" (Mill, 1929, p. 752) was attached to them in more developed countries. If society was to tend to Mill's stationary state the raising productiveness of labour should gradually allow for shorter labour hours, rather than for an increased production:

Labour is unquestionably more productive on the system of large industrial enterprises; the produce, if not greater absolutely, is greater in proportion to the labour employed: the same number of persons can be supported equally well with less toil and greater leisure (Mill, 1929, p. 762).

Mill's stationary state, then, can be attained before an excessive pressure should be exerted on natural resources¹⁰, and thereon, population being constant, any improvement should be primarily directed to moral and social progress; also improvements in the "industrial arts", so widespread and important in the progressive phase, are still possible in a stationary state, and they, too, rather than serving the purpose of increasing the material wealth, "would produce their legitimate effect, that of abridging labour" (Mill, 1929, p. 751).

2.4 Education.

The attainment of the stationary state required adequate social institutions. Mill's plea for a reform of the property system and for re-distributive policies; his passionate support to profit sharing and the co-operative movement; his intellectual and political efforts against the privileges and the arbitrary exercise of power, and in favour to the legal protection and enforcement of the rights of powerless people; all this is so widely known¹¹ to require no further discussion here. Rather, we must briefly consider the fundamental social goal which was to be pursued with those institutions: namely, the mental and moral cultivation of all people at large. No voluntary restraint in population growth, nor any interest in anything but material comfort and the "coarser pleasures" would be possible without a sound education, primarily directed to the working people. Education is therefore a third indispensable ingredient of Mill's stationary state, without which the former two would remain at the stage of abstract normative prescriptions.

"Education" must be considered here in a very wide sense. School education was of course a fundamental institution supported by Mill. In particular, "publicly provided

¹⁰ According to Mill, there was no "much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature; with every rood of land brought into cultivation, which is capable of growing food for human beings" (Mill, 1929, p. 750).

¹¹ See, in particular, Schwartz, 1972 and R.B. Ekelund jr and R.D. Tollison, 1976.

education for the poor, not only of the technical type, but also leading to character formation” (Ekelund and Tollison, 1976, p. 222) was a necessary means for promoting self-dependence.

More generally, Mill found that

there is reason to hope that great improvements both in the quality and in the quantity of school education will be effected by the exertions either of government or of individuals, and that the progress of the mass of the people in mental cultivation, and in the virtues which are dependent on it, will take place more rapidly, and with fewer intermittences and aberrations, than if left to itself (Mill, 1929, p. 758).

But Mill relied very much also on what he called “spontaneous education” (Mill, 1929, p. 757), resulting from the possibility of social relations and from their quality: a necessary premise was that workers were free from the coarser toils and have sufficient leisure, but also relationships in labour-managed co-operatives played an important role in this respect. Such spontaneous education “may be greatly accelerated and improved by artificial aids” (Mill, 1929, p. 757), like the newspapers, lectures and discussions, collective deliberations on questions of common interest, trade union and even to political agitations.

3. Intellectual work and a “nobler life”: Marshall’s fancied society

When A. Marshall read at the conversazione of the Cambridge “Reform Club”, on 25 November 1873, his paper on “The future of the working classes”, J.S. Mill’s Autobiography had just been published, and its author had died a few months earlier. It is certainly much more than a coincidence that, on that occasion, Marshall accepted to speak on the topic of Mill’s celebrated chapter “On the Probable Futurity of the Labouring Classes”. Mill’s Principles had in fact an “enormous influence” (Groenewegen, 1995, p. 145) in Marshall’s economic apprenticeship and he certainly borrowed from him, and thereafter held all his life long, a conception of economics as a science whose main practical aim was to contribute an

amelioration in the conditions of life of the working classes and of mankind in general¹². At the very beginning of his conference, then, Marshall mentions Mill's Autobiography and the relevant chapter of his Principles, and very explicitly says that

The course of inquiry which I propose for to-night will never lie far apart from that pursued by Mr and Mrs Mill, but it seldom exactly coincide with it. (Marshall, 1925 [1873], pp. 101-2; as well known, Mrs Mill informally contributed to Mill's Principles and to the above mentioned chapter in particular).

Marshall's Principles, almost twenty years later, included a chapter –actually the last chapter of the last book, that concerning distribution - on “Progress in relation to standards of life”, which is closely related with his earlier conference paper. Not surprisingly, this title resembles of that of Mill's entire Book IV, on the “Influence of the progress of society on production and distribution”. Also of this chapter we can say, then, that Marshall did not depart very much from Mill's course of inquiry and that, at the same time, he did not exactly follow it: some aspects have been eliminated, others contracted; still other arguments have been expanded or newly added by Marshall. In what follows, we propose an assessment of the variations that Marshall introduced.

3.1 The Stationary state

A first remarkable change consists in the fact that the classical notion of an unavoidable stationary state does not play in Marshall any significant role. As we have seen, Mill's interpretation of Malthus's population law “in the opposite sense” changed radically that notion. At that point, the check to population growth, being voluntary, was more an assumption, or an empirical observation, or even a normative prescription, than the necessary

¹² According to Groenewegen, “The problem which guided Marshall's work throughout the whole of his life [was that of] raising the standards of life of the working class until they had reached those of “gentlemen” (Groenewegen, 1994, p. 278).

outcome of economic processes. Marshall's insistence on the necessity of a check to population growth has always been along these lines (e.g. Marshall, 1925, p. 114; Marshall, 1920, p. 691) and had no special bearing to his theory of wages¹³. There was, then, no need of the typical ingredients of the Classical theory of the stationary state, such as the law of a falling rate of profit or the existence of a "habitual standard" below which population stops growing. Not only they were unnecessary; they were also in some contrast with the theory of distribution Marshall was developing at that time. Moreover, Mill's stationary state had also a Saint-Simonian favour, and in general, the flavour of a socialist-utopian Golden Age, which Marshall may not have liked. Finally, Marshall did use in the Principles a conception of a "stationary state", but it did so in a completely new and modern meaning: that is, a fiction, a hypothetical state, relevant only as a first analytical step¹⁴, and not a final state of society. Marshall's Stationary state was essentially an application of the "Coeteris Paribus" method – nothing to do with Ricardo's or Mill's Stationary state!

In the conference paper, Marshall presented most of his argument in terms of a "fancied country", as he called it, in which "everyone who is not a gentleman will have himself alone to blame for it" (Marshall, 1925, pp. 110-11). It cannot be denied that the individuals in Marshall's fancied country have a standard of life similar to that of the individuals in Mill's stationary state and that Marshall's imagination has certainly been inspired by Mill's prediction about the probable state of society in the "next" stage of human civilisation. Nevertheless the economic analysis in support to these conditions made no reference to the Classical notion of the stationary state: Marshall did not pay tribute to the

¹³ "Wages in Britain are now but very little affected by the rate of growth of population and the pressure on the means of subsistence" (Marshall, 1925, p. 326)

¹⁴ "Our first step towards studying the influences exerted by the element of time on the relations between cost of production and value may well be to consider the famous fiction of the "Stationary state" in which those influences would be but little felt; and to contrast the results which would be found there with those of the modern world" (Marshall, 1920, p. 366).

Classical tradition in this aspect, nor did he set himself to explain (contrary to Mill) why his predictions were so different from those of Smith or Ricardo or Malthus.

Later, in the Principles, Marshall gave a privileged position to the question of “whether it is necessary that there should be any so-called “lower class” at all” (Marshall, 1920, p. 3), which is simply a re-phrasing of the central aspect of his 1873 prediction; yet a “fancied country” is no longer mentioned, and his argument is focused on the possible characteristics of a slow but steady progress rather than on a “final” stage of society.

3.2 The aims of economic progress

By contrast, Marshall agreed almost completely with Mill on the goals at which economic progress should aim. These goals were intellectual and moral, and should concern the generality of the population. In fact, he was convinced that “the growth of a man’s mind [and] his spiritual cultivation [was] the end of life” (Marshall, 1925, p. 117); only fulfilling this end, can man have “true self-respect” (Marshall, 1920, p. 703; see also p. 689 and p. 720) and his life can be made “fuller”, “nobler and truly happier”. The problem Marshall posed both in the conference paper and in the Principles, then, was whether the impossibility of such a cultivation by a large part of the population was an economic necessity (Cf. Marshall, 1925, p. 102; Marshall, 1920, p. 3 and pp. 713-14), and argued that it was not. In fact, he maintained that, at his time, “material wealth” had grown sufficiently in order that, potentially, the standard of life of people belonging to all social classes be coherent with such a “cultivation”; the problem was how these social material means were to be used.

Like Mill, Marshall favoured a re-distributive policy. To be sure, he was much less “radical” than Mill and thought that “existing inequalities of wealth were often exaggerated” (Marshall, 1920, p. 713). Nonetheless re-distribution is a central aspect in his view of social and economic progress

The inequalities of wealth (...) are a serious flaw in our economic organisation. Any diminution of them which can be attained by means that would not sap the springs of free initiative and strength of character (...) would seem to be a clear social gain. Though arithmetic warns us that it is impossible to raise all earnings beyond the level already reached by specially well-to-do artisan families, it is certainly desirable that those who are below that level should be raised, even at the expense of lowering in some degree those who are above it (Marsha., 1920, p. 714; emphasis added).

Taxation was of course the main instrument, which potentially turns “the resources of the rich to high account in the service of the poor” (Marshall, 1920, p. 719).

But re-distribution was not enough: also some restraint from excessive material comforts were necessary. Not only, in fact, did “luxuries” of the few, waste resources which could be devoted to the “necessaries and conveniences” of the many; but also and perhaps more importantly, an excessive liking of material comforts, both by the rich and by the relatively poor, was detrimental to the formation of a “deep full character” (Marshall, 1925, p. 345) and to a man’s “inner life”. To the purpose of making this very clear, Marshall distinguished between the “standard of comfort” and the “standard of life”. The former is the means, the latter is the end. The former consists in material goods and must be kept within limits, the latter consists in human activities and can be boundlessly expanded. This distinction, which is also very “Millian” in spirit, is so important in Marshall that we may quote at length:

A rise in the standard of life implies an increase of intelligence and energy and self-respect; leading to more care and judgment in expenditure, and to an avoidance of food and drink that gratify the appetite but afford no strength, and of ways of living that are unwholesome physically and morally. A rise in the standard of life for the whole population will much increase the national dividend, and the share of it which accrues to each grade and to each trade. A rise in the standard of life for any trade or grade will raise their efficiency and therefore their own real wages(...)

But many writers have spoken of the influence exerted on wages by a rise, not in the standard of life, but in that of comfort; - a term that may suggest a mere increase of

artificial wants, among which perhaps the grosser wants may predominate. It is true that every broad improvement in the standard of comfort is likely to bring with it a better manner of living, and to open the way to new and higher activities (...). But the only direct effect of an increase of wants is to make people more miserable than before (Marshall, 1920, pp. 689-90; emphasis in original; a similar contrast is very vivid on p. 700).

In this long passage, Marshall introduces the leit-motiv of his chapter on “Progress in relation to the standards of life”: that a nobler life, a better intellectual and moral cultivation of “the whole population” is an engine of economic growth and is at the basis of a true, lasting economic progress. We shall turn to this in the next section. Now we must see in more detail what characteristics define an adequate “standard of life”, in Marshall’s understanding. In fact Mill’s definition of the ultimate aims of economic activity in terms of “mental and moral cultivation”, “intellect and virtue”, “higher aspirations”, enjoyment of the “graces of life”, “heroic virtues”, “greatest perfection of human nature”, or, more simply “happiness” were too abstract for Marshall’s purposes.

In the conference paper, Marshall simply considered an existing “type”, the gentleman of the Victorian age, whose characteristics were widely known to the audience. Later he dropped the explicit reference to the “gentleman”, which in the Principles is sometimes replaced by the phrase “well-to-do people”; the kind of life he had in mind, however, remained the same, and was based on two fundamental premises.

A “careful and long continued education” (Marshall, 1925, p. 104) was the first. The need for a sound education received the same passionate emphasis in the Conference as in the Principles. In both occasions, he advocated a compulsory public school, which should be very liberally funded: “what temporary pecuniary loss can be set against the education of the nation?” (Marshall, 1925, p. 117); “To this end public money must flow freely”(Marshall, 1920, p. 718). By observation, Marshall held that an adequate education was the rule among wealthy families (e.g. Marshall, 1925, p. 104), so that his plea for a more thorough system of

public education was aimed at educating the children of the lower classes. It is of some interest to note, in this respect, that school should have a special care for those fundamental and wide aspects of education, other than codified knowledge, which parents may neglect:

The schoolmaster must learn that his main duty is not to impart knowledge, for a few shillings will buy more printed knowledge than a man's brain can hold. It is to educate character, faculties and activities; so that the children even of those parents who are not thoughtful themselves, may have a better chance of being trained up to become thoughtful parents of the next generation. (Marshall, 1920, p. 718)

A second fundamental premise for a child to become a "gentleman" concerned the characteristics of the occupations in the after-life. There were, in fact, occupations conducive of "culture and refinement of character" (Marshall, 1925, p. 103), and others conducive of "a character rude and coarse" (p. 103); broadly speaking, this distinction coincided with the distinction between skilled and unskilled labour (e.g. Marshall, 1925, p. 105; Marshall, 1920, pp. 716-18, 720). In the conference paper, Marshall's tones were certainly over-emphatic. Nonetheless, it may be useful here to set his early argument on the background of the more mature version of the Principles.

The former kind of occupations "demand powers and activities of mind" such as the "faculty of maintaining social intercourse with a large number of persons" or "the kindly habit of promptly anticipating the feelings of others on minor points"(Marshall, 1925, p. 103). Such faculties, prepared in youth by education, were "fostered and improved by exercise and by contact with persons who have similar qualities and require them as their associates" (p. 104). A man with such occupations would have

a wide range of pleasures; each intellectual energy, each artistic perception, each fellow-feeling with men far off and near, gives him a new capacity of enjoyment, removes from him more and more the desire for coarse delights (p. 104).

Turning to the "darker scene which the lot of unskilled labour presents" (p. 105), Marshall hit the audience's imagination speaking of "violent and sustained physical exertion" (p. 106),

“lads and maidens toiled in the brickfields from five o’clock in the morning till eight o’clock at night” (p. 107), “bodies exhausted” (p. 105), and “minds dull and sluggish” (p. 105); even long sustained light but unskilled work produced similar results: to illustrate this, Marshall cited the “sad old picture of the needle-woman”: “...the heart is sick and the brain benumbed... No blessed leisure for love or hope,/But only time for grief...” (p. 108). There was then

a terrible truth by the term working man, when applied to the unskilled labourer – a man whose occupation tends in a greater or less degree to make him live for little save for that work that is a burden to bear (Marshall, 1925, p. 108).

In the conference paper, Marshall characterised his “fancied country” by short hours of manual work: “No one is to do in the day so much manual work as will leave him little time or little aptitude for intellectual and artistic enjoyment in the evening”. He thought that “in our new society (...) a man would not in general perform manual work for more than six hours a day. (...) In heavy work three sets of men might each work a shift of four hours” (Marshall, 1925, p. 113). Since, according to S & B Webb (1965) [1897], “the nine hours movement (...) [was not] fully successful until 1871” (p. 352, n. 1), Marshall’s prescription would have implied, more or less, halving the daily hours of unskilled labour. To be sure, he did not specify how gradually this outcome was to be obtained; whatever graduation he was implying, however, the economic motivations he gave are independent of it. The first motivation consists in technical progress, which “has multiplied enormously” labour productivity in the 19th century (Marshall, 1925, p. 111): it is interesting to note that, according to Marshall, society should take this opportunity not so much for increasing the national product and not even for having a mere increase in wages (cf. Marshall, 1925, p. 105); technical progress was rather an opportunity for reducing the working hours and increasing leisure time, especially for unskilled labour. The second motivation consists in the fact that more leisure, more intellectual and moral cultivation, a better social intercourse

would be an independent source of productivity increase. At a given state of technical knowledge, then, a reduction of working hours would have diminished the national product only temporarily; but workers would have more intelligence, energy and self respect and they would gradually learn to perform their labour more and more productively and would apply inventions more readily, thus making the same work as before, in less time. In other words, a higher standard of life would be a source no less than an effect of economic progress. This point was to be developed at full length in the last chapter of the Principles, as we shall see. There is, finally, a third interesting economic motivation which Marshall gave in support for “halving” the hours of manual labour: in his view, technological and industrial developments would drastically reduce the need for unskilled labour and increase very much the need for highly skilled labour:

The total work done per head of population would be greater than now. Less of it would be devoted directly to the increase of material wealth, but far more would be indirectly efficient for this end. Knowledge is power; and man would have knowledge. Inventions would increase, and they would be readily applied. All labour would be skilled, and there would be no premium on setting men to tasks that required no skill. The work which man directs the forces of nature to perform for him, would thus be incomparably greater than now (Marshall, 1925, p. 112).

“Halving” the hours of manual labour would then have no great immediate effect on production, so long as machinery is constantly kept employed by labour shifts, because manual, unskilled labour would lose weight¹⁵. On the other hand, also the highly skilled

¹⁵ Marshall’s estimate of the share of unskilled labour as to the end of the 19th century was one fourth of the population (Marshall, 1920, p. 716). Half a century before, Mill had estimated that the “common labourers” were about one half of the population (Mill, 1929, p. 353). Marshall estimated that one century backwards, “more than a half would have been found unfit for any skilled labour at all”.

worker will have a shorter working-day, or a higher wage, without provoking any dramatic loss, in view of his high and rising productivity¹⁶.

3.3 The standard of life, wages and economic growth

We know that Marshall's theory of wages emphasised "efficiency" much more than "population", and this marked an important difference with respect to Mill, who remained convinced that a fall in population growth was the fundamental source (if not the only source) of any permanent rise in wages, quite independently of the validity of the wages-fund doctrine. Mill thought that a higher habitual standard of comfort would lead to a check to population growth, and by that way to a rise in wages. Not so for Marshall, who argued that there was a direct relation between the standard of life and wages:

A rise in the standard of life for any one trade or grade will raise their efficiency and therefore their own real wages (Marshall 1920, p. 689; emphasis added).

Only when "the wheat-fields of the world are worked at their full power", does it follow that "a rise in the standard of comfort may rise wages merely by stinting the growth of numbers" (Marshall, 1920, p. 692; emphasis added). That was not the relevant case, however. In fact, "while the present good fortune of abundant imported food attends on the English people, a rise in their standard of comfort could not increase their wages, merely by its action on their numbers"(Marshall, 1920, p. 692; see also p. 691 and p. 697). There is here a clear change in direction with respect to Mill: Population was no longer the relevant aspect; nor was it relevant the habitual standard of comfort as such: what mainly mattered for wages was the

¹⁶ In the very emphatic words of the conference paper: "The history of manufactures in England and throughout the world proves that, if the number of hours' work per day be given, the capitalist can afford to pay almost any rate of wages in order to secure highly skilled labour. But such labour, partly as a cause and partly as a consequence of its skill, has in general not very many hours in its working day; and for every hour, during which untiring machinery is lying idle, the capitalist suffers loss. In our society the hours of labour are to be very short, but it does not follow that the hours of work of the machinery would be short too" (Marshall, 1925, p. 113).

standard of life, and material comfort mattered only in so far as it affected the “manner of living”, described in terms of such characteristics as education level, working hours, leisure time, extension and quality of social relations.

A better, fuller, nobler life was at the same time the cause and the effect of economic progress, according to Marshall, and therefore there was a double-sided relationship between the manner of living and wages; the concluding chapter of the Principles is built precisely around the question of “how far is either to be regarded as the cause of the other, and how far as the effect” (689).

Having get rid of the Ricardian and Millian idea that wages were kept down by the increasing difficulty of obtaining food –for this “was in fact the case in England a hundred years ago” – Marshall could concentrate on the new idea that, by competition, wages permanently rise only when the efficiency of labour, ideally measured by its “net product”, increases:

When the net product due to the labour of additional workers was largely in excess of the wages that were being paid to them, a pushing employer would brave the indignation of his peers, and attract workers to him by the offer of higher wages: and (...) in progressive industrial districts this competition was sufficient to secure that no considerable body of workers should remain for long with wages much below the equivalent of their net product (Marshall, 1920, p. 705).

The quoted passage explicitly refers to the progressiveness of industrial districts as to the main “independent” source of wage rises; in this case, a better manner of living will be the effect of a wage rise, rather than the other way round. We do not need, of course, to insist on this effect. There are however some further, subtler effects of automation, which did not pass unnoticed by Marshall, and should be mentioned here. In fact, complex machinery not only tends to reduce the need for unskilled labour; at the same time it “increases the demand for judgement and general intelligence” (p. 257) and therefore “takes over sooner or later all

monotonous work in manufacture” (p. 262). This has therefore a direct effect on the life standard of factory workers in general:

The social surroundings of factory life stimulate mental activity in and out of working hours; and many of those factory workers, whose occupations are seemingly the most monotonous, have considerable intelligence and mental resource (Marshall, 1920, p. 263)

At this point, when considering the technological innovations and industrial relations from the point of view of the life standard of workers, there is a gradual shift towards a consideration of the life standard itself as a cause of higher wages.

A first relevant aspect concerns the hours of labour. The bold opinions expressed in the conference paper are much moderated in the Principles, but the basic idea he developed is the same: shorter hours of labour would increase efficiency, by increasing energy, intelligence and force of character and therefore any diminution would not, except temporarily, reduce output (Cf. Book VI, Ch. XIII, § 3 and § 4). But in the Principles the possibility of “halving” them is no longer mentioned, nor were shifts of six or four hours: Marshall advocates now a “moderate diminution of the hours of labour” (Marshall, 1920, p. 694; emphasis added), which would generally exert a positive effect on the efficiency of workers. Such an effect would be reinforced in the case of expensive, complex machinery which called for shifts¹⁷ in order that labour of full energy and intelligence could always keep the “untiring iron and steel” (p. 695) employed. By contrast, in more mature sectors, like mining or railways, there was no much gain in efficiency from a reduction in working hours and in that case shorter hours (at the same wage) would imply some losses (Cf. Marshall, 1920, p. 696) in terms of output and of profits. Finally, Marshall stressed that a reduction of working hours was

¹⁷ “Anglo-Saxon artisans, unsurpassed in accuracy of touch, and surpassing all in sustained energy, would more than any others increase their net produce if they would keep their machinery going at its full speed for sixteen hours a day, even though they themselves worked only eight” (694).

“specially suitable to industries in which piece-work prevails” (p. 693). The relationship between working hours and efficiency is presented in the Principle, not surprisingly, as complex and multifaceted and a quantitative evaluation is considered very difficult (cf. p. 701). On the whole, however, his judgement about the positive qualitative effect of short hours on efficiency and wages remained the same.

A second specific aspect of the relationship between the life standard and wages concerns trade unions. Also in this case Marshall had carefully balanced opinions. On the one hand, especially at an early stage, trade unions rendered a valuable service in widening the workers’ horizons and in raising their standard of social duty. This helped workers to “obtain conditions of life consistent with true self-respect and broad social interests” (Marshall, 1920, p. 703) and was conducive of higher efficiency. Likewise, he welcomed the “true standardisation of work and wages” (p. 706), such as a sound application of the so called “Common rule”, for its positive effects on the general conditions of life; and on this account wage rises may be come along with an output growth. On the other hand, however, he feared that the Common Rule may lead to a “false standardisation” “which tend[s] to force employers to put relatively inefficient workers in the same class of payment as more efficient workers; or which prevent[s] anyone from doing work for which he is capable, on the ground that it does not technically belong to him” (Marshall, 1920, p. 706-7). By so doing, “obstacles were put in the way of the use of improved methods and machinery” (p. 707). Marshall severely criticised, then, trade unions when they promoted such a “false standardisation” and praised them when they condemned it¹⁸: such a behaviour he considered “anti-social”, because it raised wages, so to speak, artificially, without determining any increase in efficiency; quite the contrary, by reducing efficiency, and depressing profits and capital

¹⁸ “The service which the leading trade unionists rendered to the country by condemning anti-social conduct are never to be forgotten”(Marshall, 1920, p. 707).

accumulation, they tended to reduce output: the increased standard of comfort that workers may obtain in such a way had indeed, for Marshall, a very high social cost and should by all means be avoided.

There is a final, wider aspect which deserves consideration here. According to Marshall, the life standard did not depend solely on the conditions of work, even though they are a fundamental ingredient¹⁹. It also depends on the use of material wealth and of leisure, which in turn has close relationships with other elements making up the life standard, like education, health and housing. Making a good use of wealth and leisure was perhaps the most challenging aspect of the complex relationships between the standard of life, efficiency and wages. An unequal income distribution, conspicuous consumption by the rich, and lack of mental cultivation of the poor, made private expenditure quite inefficient :

There still remains a vast expenditure which contributes very little towards social progress, and which does not confer any large and solid benefits on the spenders beyond the honour, the position, and the influence which it buys for them in society (Marshall, 1925 [1907], p. 325).

Perhaps £100,000,000 annually are spent even by the working classes, and 400,000,000 by the rest of the population in England, in ways that do little or nothing towards making life nobler and truly happier (Marshall, 1920, p. 720)

On the other hand, learning to use leisure well was a “hard task” (Marshall, 1920, p. 720), much harder than working well. Marshall seemed to be rather more optimistic in this respect, and relied on a “learning by doing” process (cf. Marshall, 1920, p. 720).

Any spontaneous progress, however, should be aided by adequate policies. Marshall distinctly refers here to what we now call “externalities”. Like Mill, he placed much

¹⁹ “Man ought to work in order to live: his life, physical, moral and mental, should be strengthened and made full by his work” (Marshall, 1925, p. 108).

emphasis on the role of public education. It is very interesting to note that as early as in 1873 Marshall clearly envisaged some “positive externalities” from educations:

The difference between the value of the labour of the educated man and that of the uneducated is, as a rule, many times greater than the difference between the costs of their education (Marshall, 1925, p. 118).

It is for this reason that, in the *Principles*, he prescribed with an unusually bold expression that for education “public money must flow freely”. A similar concept concerning the positive externalities from education is also expressed in the *Principles* with reference to the many informal frameworks in which education can take place:

It is a vast and wholly unmixed gain when the children of any class press with the relatively small charmed circle of those who create new ideas, and who embody those new ideas in solid constructions. Their profits are sometimes large: but taking one with another they have probably earned for the world a hundred times or more as much as they have earned for themselves (Marshall, 1920, p. 719).

The reduction of working hours has an obvious bearing to leisure. In turn, the increase of leisure time has positive externalities, mainly because a better family life gives to the young more opportunities to develop “their higher nature”, and this called for adequate policies:

Society as a whole has a direct interest in the curtailment of extravagantly long hours of duty away from home, even for mineral-train-guards and others, whose work is not in itself very hard (Marshall, 1920, p. 721).

Marshall’s keen interest in the conditions of life of the youth partly explains also his interest in fighting poverty. Once again, he did not fail to stress that the social indirect gains of any policies directed to lessen extreme poverty were far more important than their immediate costs. (Cf. Marshall, 1920, p. 714).

4. Beyond the “money-motive”: Keynes’s grandchildren

Mill's and Marshall's writings on the aims of economic growth naturally lead us to the short pamphlet that Keynes –another great British economist!- wrote on the same topic 40 years after the publication (first edition) of Marshall's Principles. Not only did Keynes adopt the same “prophetic” style of his predecessors, but also, in his “Economic Possibilities for our Grandchildren”, he borrowed and expanded some of their ideas.

Keynes's short essay is of course too widely known to require a detailed account here. It will suffice to remind the reader that he looked into the economic conditions “one hundred years hence” (Keynes, 1931, p. 364 and p. 365) –thence about one generation ahead now – and in particular at the standard of life which economic conditions may allow in progressive countries at that time, assuming a continuing technical progress and capital accumulation (“the power of compound interest”!) and assuming “no important wars and no important increase in population” (pp. 365-6)²⁰. His basic prediction was that “in the long run (...) mankind is solving its economic problem” (p. 364; emphasis added). There is here a fundamental common ground with Mill and Marshall, which makes them very different from most contemporary economists: the test of progress is not output in itself, but the standard of life that it makes possible; moreover, there is a limited per capita output which can be taken to satisfy the material needs of mankind. It should be stressed that this has nothing to do with the subjective perception of “satiation”; all of them, Mill, Marshall and Keynes, referred to an objective standard of comfort, which was not an end in itself, but a means (otherwise it should rightly be assumed to be unbounded, except for satiation). This means may simply be “adequate” in order to remove the economic obstacle in the fulfilment of the “true” end of human life.

²⁰ Actually, a very “important” war was round the corner; but population was not to increase very much in progressive countries, nor was the pace of technological progress and accumulation to be reduced on average.

Keynes's piece clearly borrows from Mill a secular view of the progress in civilisation, and especially a sequence of "ages", characterised by qualitatively different economic conditions, political and social institutions, and different codes of private and public morals:

The modern age opened, I think, with the accumulation of capital, which began in the sixteenth century (...). From that time until to-day the power of accumulation by compound interest, which seems to have been sleeping for many generations, was re-born and renewed its strength (...). From the sixteenth century, with a cumulative crescendo after the eighteenth, the great age of science and technical innovation began, which since the beginning of the nineteenth century has been in full flood. (Keynes, 1931, pp. 361-365).

An even more specific similarity with Mill is Keynes's assessment of the historical role of the "money-motive" in the current age of market economies. Both of them had mixed opinions. On the one hand, in fact, the "money-makers" render an invaluable service to society, in so far as they speed up the rate of material production. As we saw, Mill thought that, in the (then) current stage of civilisation, "while minds are coarse they require coarse stimuli, and let them have them"; likewise Keynes recognised that

The strenuous purposeful money-makers may carry all of us along with them into the lap of economic abundance (Keynes, 1931, p. 368).

On the other hand, however, they recognised the moral drawbacks of the money-motive, which will be made more transparent as soon as the "economic problem" was on the way to be solved. Even more emphatically than Mill²¹, Keynes asserted that

The love of money as a possession –as distinguished from the love of money as a means to the enjoyments and realities of life – will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which

²¹ Keynes's passage to follow may be paralleled with this of Mill: "The idea is essentially repulsive of a society only held together by the relations and feelings arising out of pecuniary interest" (Mill, 1929, p. 754).

one hands over with a shudder to the specialists in mental disease (Keynes, 1931, p. 369).

The money-motive was then a force to be welcomed only conditionally and temporarily, until time was ripe for man to attend to his real permanent problem:

How to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well (Keynes, 1931, p. 367).

At that time,

It will be those peoples, who can keep alive, and cultivate into a fuller perfection, the art of life itself and do not sell themselves for the means of life, who will be able to enjoy the abundance when it comes (Keynes, 1931, p. 368).

Keynes's wise "peoples" are Mill's "better minds" who are not involved in the struggle for riches and gradually will "succeed in educating the others into better things" (Mill, 1929, p. 749); and his age of material "abundance", in which "the accumulation of wealth is no longer of high social importance" (Keynes, 1931, p. 369) is clearly Mill's "stationary state".

There are, however, in Keynes's piece, also some themes which are perhaps more Marshallian than Millian. A common passionate assessment and enthusiastic predictions about the effect of science and technology advances on economic growth is very transparent. Symmetrically, however, both of them cast some doubts on the capacity of man to take due advantage of his economic possibilities and of leisure:

To judge from the behaviour and the achievements of the wealthy classes to-day in any quarter of the world, the outlook is very depressing! For these are, so to speak, our advance guard –those who are spying out the promised land for the rest of us and pitching their camp there. For they have most of them failed disastrously, so it seems to me –those who have an independent income but no associations or duties or ties – to solve the problem which has been set them (Keynes, 1931, p. 368).

A similar assessment of the life of the rich, with special reference to expenditure, had been made by Marshall in his 1907 E.J. article on the “Social Possibilities of Economic Chivalry”, where he complained that “much expenditure has no touch of nobility” (Marshall, 1925, p. 342) and that the “well-to-do classes expend vast sums on things that add little to their happiness and very little to their well-being, but which they regard as necessary for their social position” (p. 324).

The situation was not much different, for opposite reasons, with the (present) “lower classes”, who had not, so far, the possibility of learning to use leisure well. It may not be coincidental that Keynes considers by way of illustration the epitaph written for herself by the old charwoman, whose heaven was “to do nothing for ever and ever”, and which distinctly parallels the above mentioned Marshall’s “sad old picture of the needle-woman”.

5. Concluding remarks

The writings of Mill, Marshall and Keynes reviewed in this paper share the same conception of output growth as something whose value depends on the conditions of life that it allows: as time goes on, and capital and technical knowledge accumulates, material production has a diminishing importance, whereas the conditions of work, the use of leisure, the quality of inter-personal relations, for potentially all members of society tend to become more and more important. Since there has been recently an increasing interest for “quality adjusted” growth accounting, for comprehensive evaluations of “human development” and more synthetically, for the relationships between wealth and happiness, it seems of some interest to look back at the authors who laid down the conceptual basis for an analysis of the complex relations between output growth and material, intellectual and moral conditions of life; and to examine on what grounds, precisely, they reached their conclusions and with what differences from one another.

We have argued in this paper that much weight of Mill's argument rests on his interpretation of Malthus population principle in a sense which was opposite to Ricardo's. There is in Mill's theory a trade-off between habits in respect to population and habits in respect to comfort: a voluntary restraint in the former allows a widening of the latter; this gives rise to a complex dynamics of wages, conditions of life, population growth and accumulation which ultimately leads to a "stationary state" which is completely different from that of the Classical economists and is characterised by a "high" habitual standard of comfort. We have presented in the paper a sketch of a possible mathematical formulation of this dynamics.

Also Marshall predicted that output growth would soon allow for standards of life conducive of a full and noble life for all the population, but he did so on the strength of different arguments. The "stationary state" is replaced by a steady, slow progress; a low rate of population growth is an important condition, but it plays no decisive role; the key concept became "efficiency" and the core of the argument became a mutual relationship between economic efficiency and the workers' conditions of life. A "nobler life" was an engine no less than an effect of economic growth.

It has been finally argued in this paper that Keynes's "Economic Possibilities", far from being an isolated piece, is firmly grounded on the tradition of Mill and Marshall. In particular, it borrowed from Mill a secular vision of succeeding economic and social "ages", in which the age of output growth, dominated by the money-motive, was disagreeable yet necessary, and the next age could witness a full development of the mental and moral attitudes of mankind. On the other hand, however, it borrowed from Marshall a negative evaluation of the way in which the rich, that advance-guard of the society to come, makes use of his income and of his leisure.

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