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## The early stages in the evolution of Economic Man Millian and marginal approaches

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### Abstract

The *homo economicus* (Economic Man) concept is one of the best-known components of economic theorising frequently recognised as a part of the “hard core” of the mainstream 20<sup>th</sup>-century economics. This model gained such a high status in times of the marginal revolution, although it was coined in the 1830s by the classical economist John S. Mill. Nowadays, *homo economicus* is commonly perceived as a model of rational economic agent maximising utility or preferences. The article aims to show that both the Millian approach and the marginal approach were more complex than the contemporary incarnation of Economic Man. One of the key differences between the early stages in the evolution of *homo oeconomicus* and the modern version of it refers to the notion of rationality. Whereas it is the constitutive element of the 20<sup>th</sup>-century *homo oeconomicus*, the requirement of full rationality was never explicitly articulated by Mill and marginal economists. Therefore, at the early stages of its evolution, the *homo economicus* model would have been much more resistant to the objections formulated against it by the 20<sup>th</sup>-century critics.

**Keywords:** *homo economicus*, Economic Man, rationality, marginal economics, John Stuart Mill, Alfred Marshall

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## 1. Introduction

The *homo economicus* (Economic Man) concept is one of the best-known components of economic theories. Its significance for neoclassical economics is so fundamental that many authors considered it an element of the “hard-core” of the mainstream 20<sup>th</sup>-century economics (cf. Becker, 1976, pp. 5–14; Lazear, 2000). The Economic Man model gained such a high status during the period of the marginal revolution, even though the creator of the concept was the classical economist John S. Mill.<sup>1</sup>

Nowadays, the *homo economicus* model is understood as a model of an economic agent<sup>2</sup> perceived as a rational utility or preferences maximiser. The latter wording means that the agent chooses the one of the available options which is the highest on the scale of her preferences. As rightly pointed out by Nicola Giocoli (2005), in contemporary economic thought we have, therefore, two images: one based on utility and the other—on preferences. However, despite the differences in the perception of what constitutes the object of maximisation—utility or preferences—in both cases rationality remains the constitutive element of these approaches.

The article aims to show that both the Millian approach and the marginal approach were more complex than the contemporary incarnations of the *homo economicus* model. One of the key differences between the 19<sup>th</sup>-century’s and the modern version of Economic Man is a lack of the explicitly articulated requirement of full rationality characteristic of the approaches proposed by Mill and marginal economists. Due to this fact, at the early stages of its evolution, the *homo economicus* model would have been much more resistant to the objections formulated against it in the 20<sup>th</sup> century by representatives of behavioural economics.

## 2. Millian Economic Man

The *homo economicus* model was delineated by J.S. Mill in one of his earliest texts dealing with economic issues—the essay: *On the Definition of Political Economy; and on the Method of Philosophical Investigation in that Science*.<sup>3</sup> As

<sup>1</sup> Adam Smith is also (incorrectly) pointed out as the designer of the *homo economicus* model, which seems to be a result of the manner in which the achievements of the “father of economics” were read by the representatives of the German historical school.

<sup>2</sup> The economic agent is not necessarily a human being. It may be, for example, a household or an enterprise.

<sup>3</sup> The text was written in the autumn of 1831 and was initially not intended for publication. Five years later, Mill decided to publish it in the pages of “The London and Westminster Review”. The content of the essay was presented to a larger group of readers in 1844, after the publication of the collection entitled *Essays on Some Unsettled Questions of Political Economy*, which included that text. The version from *Essays on Some Unsettled Questions...*, considered today as “canonical”, differed from the one published earlier in “The Westminster and London Review” to a slight extent. The only noteworthy change was the modification of the second part of the title, i.e. the replacement of the words:

the title of the essay suggested, Mill proposed the idea of Economic Man to confirm the status of political economy<sup>4</sup> as an independent science, and at the same time to present the most appropriate, in his opinion, approach to conducting economic research.

Recognising that economics is a science that must use deductive reasoning, Mill said that the best way to determine its subject matter would be to identify some of the most fundamental regularities related to human economic behaviour (“the laws of human nature”) which would act as *a priori* assumptions of economic theories. As such he acknowledged the assumption on the aspiration of economic agents to maximise their wealth and considered it as an essential element to define economics. According to Mill, economics would, therefore, be a science that treats “mankind as occupied solely in acquiring and consuming wealth,” and that “makes entire abstraction of every other human passion or motive, except those which may be regarded as perpetually antagonising principles to the desire of wealth”. Such motives included (Mill, 1836/1967, pp. 321–322):

(1) “aversion to labour,”

(2) and “desire of the present enjoyment of costly indulgences.”

In other words, economics would be a science that

aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive except in a degree in which it is checked by the two perpetual counter-motives above adverted to, were absolute ruler of their all actions. (Mill, 1836/1967, p. 322)

Mill’s construction of this model is a perfect example of theoretical isolation<sup>5</sup> method (cf. Mäki, 2004, p. 321). Since we are unable to observe human economic activity without the social context in which it takes place, we separate it from this context, adopting isolating assumptions. Mill clearly stated that all phenomena and processes occurring in economic life—the production, consumption and distribution of wealth indicated in the definitions of other classical economists, the implementation of rules regulating economic activities, the introduction of innovations, etc.—“[a]ll these operations, though many of them are really the result of a plurality of motives, are considered by Political Economy, as flowing solely from the desire of wealth” (1836/1967, p. 322).

What is somewhat surprising, though consistent with the Millian general vision of practising social sciences, the desire to maximise wealth, to “prefer a greater portion of wealth to a smaller”, was treated by Mill as a psychological law describing a certain property of human nature (1836/1967, p. 322). It must be noted, however, that he never claimed that that was the only law. On the contrary,

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*and on the Method of Philosophical Investigation in that Science with: and on the Method of Investigation Proper to It* (J.S. Mill, 1836/1967). An extensive fragment of this text was included by Mill in the second volume of his monumental *A System of Logic* (1844/1974, Vol. 8, pp. 633–636), published a year before the publication of *Essays on Some Unsettled Questions...*

<sup>4</sup> “Political Economy” was used as the name of Economics until 1890s.

<sup>5</sup> In the case of natural or laboratory experiments, when the influence of other factors is actually eliminated, we are dealing with material isolation.

he emphasised that “[t]here is, perhaps, no action of a man’s life in which he is neither under the immediate nor under the remote influences of any impulse but the mere desire of wealth” (1836/1967, p. 322). And again, pointing to the hypothetical nature of economics and referring to the unrealistic assumption that the only motive of economic activity was to maximise wealth, he added that “[n]ot that any political economist was ever so absurd as to suppose that mankind are really thus constituted” (1836/1967, p. 322). At the same time, however, he was convinced that adopting as a basis in economic considerations the attribute of human nature would give an approximation of the one “which, of all the hypotheses equally simple, is the nearest to the truth” (1836/1967, p. 323).

Economics based on the above-indicated set of assumptions would not be able to provide adequate explanations of the processes taking place on those dimensions of human social activity on which the motive of maximising wealth (along with the two counter-motives) would not play a dominant role. Also, in this respect, Mill emphatically stated that “Political Economy does not pretend that its conclusions are applicable” (1836/1967, p. 323). Moreover, he also pointed out that even in those cases where the desire to maximise wealth seemed to be the most important motive affecting the actions of individuals, the image obtained on the basis of the treatment of that motive as the only one must be supplemented or corrected “by making proper allowance for the effects of any impulses of a different description, which can be shown to interfere with the result in any particular case” (1836/1967, p. 323).

It is also worth mentioning that Mill did not exclude the possibility of modifying that fundamental set of assumptions as long as the institutions regulating social life would change in such a way as to strengthen the other basic “properties of human nature” in economic life, weakening the significance of preferring “a greater portion of wealth to a smaller”. Remaining in this respect surprisingly close to the utopian socialists’ position of Robert Owen, Henri de Saint-Simon, and even Karl Marx, Mill stated that “the deep rooted selfishness which forms the general character of the existing state of society, is *so* deeply rooted, only because the whole course of existing institutions tends to foster it” (1873/1981, p. 241). On the other hand, when assessing the chances of making institutional changes that could lead to such profound changes in people’s behaviour that the *homo economicus* model would cease to be a good starting point for economic theories, Mill was very sceptical,<sup>6</sup> though he often declared that he considered them highly desirable (1873/1981; 1965, Vol. 2, Book 4, in particular chapter 7).

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<sup>6</sup> A special testimony to J.S. Mill’s conviction that the pursuit of wealth maximisation (or more generally—maximisation of individual benefits) is in fact the most important motive of economic activity in his times can be found in fragments from his *Autobiography*, in which he presented views on the chances of social reforms. On the one hand, presenting the views he shared with Harriet Taylor, he said that “while we repudiated with the greatest energy that tyranny of society over the individual which most Socialistic systems are supposed to involve; we yet looked forward to a time when society will no longer be divided [...] and when it will no longer either be, or thought to be, impossible for human beings to exert themselves strenuously in procuring benefits which are not to be exclusively their own but to be shared with the society they belong to”. At the same time, he stated that “these considerations did not make us overlook the folly of premature attempts to dispense with the inducements of private

Considering the subsequent stages of the evolution of the model of Economic Man, especially the rational choice theory version of it, it should also be emphasised that Mill did not take the explicitly stated assumption about the rationality of actions or choices of economic agents as a part of this model. The opinion of Daniel Hausman (2013, 1.1) that “Mill takes it for granted that individuals act rationally in their pursuit of wealth and luxury and avoidance of labour, rather than in a disjointed or erratic way” should be considered too categorical. Polish author, Katarzyna Szarzec approaches this issue even more categorically claiming that the Millian *homo economicus* model “explicitly grants rationality to economic agents” (2006, p. 242). While we may discuss if the assumption of rationality is a component of the *homo economicus* model, there is no reason to consider this characteristic as explicitly included in the construction of the model. One can only assume that basing the Millian *homo economicus* model on the assumption of maximising wealth as the main motive of economic agents included the tacit assumption that when choosing directions of their actions, those agents would be able to assess which of the possible directions would allow them to achieve the highest level of wealth, i.e. to achieve best the set goal. Their actions would then be rational in an instrumental sense.

### 3. The *homo economicus* model according to marginal economists

The vision of economics proposed by John Stuart Mill, based on a simplified model of the activities of economic agents, to a significant extent deviated from the approach characteristic of other classical economists. Its implementation was a problem for Mill himself.

A much more fertile “ground” for its implementation was found in the period of intensified search for new ways of analysing problems of economic life in the first two decades of the second half of the 19<sup>th</sup> century which eventually resulted in the marginal revolution initiated in the 1870s. Laying the foundations of the new, marginal paradigm was accompanied by an intensive methodological discussion, culminating in the famous *Methodenstreit*—“battle over methods”. However, long before the escalation of that dispute, there were attempts to answer to the questions regarding the subject and scope of economic research as well as to identify the most appropriate methods of conducting economic research. The most important issues addressed at that time included also the manner of regarding man in economic theories.

One of the frequently emphasised elements characteristic of the genesis of marginalism was that it developed independently in three different centres. The publication of *Principles of Economics* (1871) by Carl Menger gave rise to the

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interest in social affairs, while no substitute for them has been or can be provided” (1873/1981, pp. 238, 241).

Austrian School, *Theory of Political Economy* (1871) by William Stanley Jevons initiated the marginal revolution in the UK, while the publication of *Elements of Theoretical Economics* (1874–1877) by Léon Walras became the starting point for the development of the Lausanne (Mathematical) School. Despite the geographic dispersion of the centres from which those theoreticians came, there was a large convergence between the approaches of the schools that it became a common practice to analyse their achievements within the framework of a single broader trend. It should be emphasised, however, that both in the very approach to economics and in the content developed within the marginal schools, there were significant differences.<sup>7</sup> Importantly, those differences also existed in relation to the postulated and accepted way of capturing human economic activity in economic theories.

Pointing to the elements linking the positions of the marginal schools, three main issues should be mentioned:

- (1) the acceptance of the postulate of J.S. Mill on the need to distinguish the economic aspect of human social activity as a dimension on the analysis of which the efforts of economists should focus (Jevons, 1965, pp. 5–7, 16–22, 1866/1965, p. 304; Menger, 1985, pp. 36–40, 85–89; 2007, pp. 46–47, 125; Walras, 2014, p. 27);
- (2) the acceptance (in a tacit or implied way) that there are certain rules of behaviour of economic agents that allow for the formulation of economic laws regarding such actions (Jevons, 1965, pp. xvii–xviii; Menger, 2007, p. 48);
- (3) the replacement of maximisation of wealth indicated by J.S. Mill as the main goal of economic activity by maximisation of much more general categories, such as: *pleasure, satisfaction, benefit*, or—recognised as a convenient representation of all of them—*utility*, which eventually became a key concept of microeconomic analysis of the behaviour of economic agents (Jevons, 1965, pp. 12–16, 26–27, 32–33; Menger, 2007, pp. 77, 116–117, 151–152; Walras, 2014, pp. viii, x, 77–95).

The approach adopted by marginal economists and in particular the replacement of wealth with utility, made it possible to generalise the *homo economicus* model significantly, and at the same time, it enabled its simplification. Adopting utility maximisation as the basic goal of economic activity provided the opportunity to take into account a much broader catalogue of actions than those that could be said to be aimed at maximising wealth. Utility was understood as a certain abstract property of goods and services thanks to which they could satisfy certain human needs. The utility of a good or a service resulted, according to marginal

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<sup>7</sup> Analysing those discrepancies, William Jaffé (1976) even went so far as to say that “those differences between them which the passage of time has revealed [proved to be] more important than anything they may have had in common”. This kind of opinion, however, seems exaggerated, especially if we compare the achievements of marginal economists with the approach of classical economists or with publications of representatives of the historical school or the works of socialists.

economists, from the fact that those goods or services would be a source of pleasure, benefit or happiness or would allow their consumers to be protected from pain, evil or misfortune (cf. Jevons, 1965, pp. 37–39; Menger, 2007, p. 119; Walras, 2014, pp. 14, 29, 77–79).

This change also showed another significant difference between J.S. Mill and the marginal economists. The author of the *homo economicus* model intentionally excluded from the research area of economics the analysis of consumption, claiming that political economy “has nothing to do with the consumption of wealth, further than as the consideration of it is inseparable from that of production, or from that of distribution” (J.S. Mill, 1836/1967, p. 318f). However, for marginal economists, this area was among of the most important ones to be included in the economic research. Jevons, in particular, strongly emphasised this fact stating that “the theory of economics must begin with a correct theory of consumption” (1965, pp. 39–40).

Making a change in the definition of the basic goal of economic activity has fundamentally influenced the shape of the Economic Man model. J.S. Mill’s indication of the desire to maximise wealth as the dominant goal of economic activity resulted in the need to include the second counter-motive he mentioned, i.e. “the desire of the present enjoyment of costly indulgences”. The inevitable consequence of incurring expenses related to the financing of “costly indulgences” was the depletion of the wealth accumulated by a given individual, without—as can be inferred from Mill’s deliberations—translating that type of consumption into creating the potential for a further increase of wealth. In the marginal approach, there was no need to introduce such a counter-motive. The assumption that the purpose of an economic activity was to maximise the satisfaction that would flow from consuming goods or services at the disposal of an individual did not require determining whether the satisfaction would arise because of buying expensive goods or cheap ones, allowing for increasing the chance of maximising wealth or not providing such opportunities. Mary Morgan, writing about Jevons’s concept, understood that change as “replacing the constant positive motive found in Mill’s *homo economicus* with one of his negative motives” (2006, p. 11). Marginal economists adopted a much more general solution than Mill. According to them, the basic goal of an economic activity was to maximise utility and satisfy all the needs, not just to enjoy costly indulgences.

Returning to the classical economists for a moment, it should be said that some of them clearly stressed that the assumption on the desires of economic agents to maximise wealth was not really about the accumulation of wealth but about the ability to meet the needs gained thanks to the possession of that wealth (Senior, 1836/1956, pp. 27–29). Nevertheless, a decisive shift of the emphasis in the *homo economicus* model from the domain of production and accumulation of wealth to the domain of consumption occurred during the period of the marginal revolution.

It is worth mentioning here that even J.S. Mill assessed the belief that people are not guided in their economic activities by anything else than seeking to maximise wealth as unrealistic, i.e. so radical that it was very rarely encountered in

practice (if ever). On the other hand, the realistic nature of the assumption that people strive not to maximise wealth but rather to satisfy their needs as completely as possible was much more difficult to challenge. It was even characteristic of marginal economists to present it as “the inevitable tendency of human nature” (Jevons, 1965, p. 59) or a truth so obvious that it did not require any particular proof, as it was constantly confirmed by everyday experience. However, it should be clearly emphasised that the motive behind the replacement of wealth was not the negation of the legitimacy of using abstract assumptions in economic theory, as both Menger and Jevons as well as Walras, shared the view that in the development of scientific theories *sensu largo* and economic ones in particular, researchers not only can but even must use hypotheses that are not fully reflected in reality (Jevons, 1965, pp. 5–6, 16–17, 18; Walras, 2014, pp. 27–28, 43).<sup>8</sup>

On the other hand, the second of Millian counter-motives that were the components of the *homo economicus* model, i.e. “aversion to labour”, was replaced by marginal economists with the assumption of striving to avoid effort, pain or distress. W.S. Jevons eventually proposed to use the disutility category, the application of which would allow for obtaining a commensurate value with respect to the (positive) utility, which was assumed to be maximised by economic entities (1965, 58; cf. 1866/1965, p. 305; 1965, pp. xiv, 32–33). Thanks to that operation, a kind of “common denominator” appeared, allowing researchers to capture both the satisfaction resulting from the consumption of goods or services purchased by a given entity (positive utility) and the effort put in obtaining the funds to purchase those goods and services (negative utility). As a result, the *homo economicus* model became significantly simplified. Instead of the three assumptions on which J.S. Mill’s construction was based, it was possible to base it on just one: the assumption that when undertaking economic activity, people always strive to maximise their utility.

An additional element present both in the Millian and the marginal view of *homo economicus* model was the conviction that people were able to maximise wealth or utility. It is characteristic, however, that that element was not particularly emphasised, and sometimes such an assumption was not explicitly articulated at all. Using the notion of rationality, one could express that idea simply by considering that the component of the *homo economicus* model was the adoption (in this case, in a tacit manner) of the assumption that the activities of economic entities were rational. It is worth emphasising strongly, however, that at this stage of the evolution of the *homo economicus* model, it was not claimed that people were characterised by full rationality. On the contrary, both Mill and marginal economists (especially Menger and Jevons) pointed to a number of limitations in people’s ability to maximise utility. Therefore, when formulating the opinion that the

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<sup>8</sup> That issue was one of the main threads of the *Methodenstreit*. Menger devoted a great deal of space to it in the first chapters of *Investigations into the Method...* (1985, pp. 35–53), i.e. the work that constituted his main statement in the context of that dispute. Jevons’s position was also presented in more detail in his work on logic and methodology (1874, pp. 451–470).

*homo economicus* model in the Millian and marginal approaches was based on the assumption of the rationality of actions taken by economic agents, it must be noted that

- (1) the category of rationality, so important for the subsequent development of the *homo economicus* model, was not used to delineate more precisely the model of the economic agent by Mill or by marginal economists,
- (2) the assumption about the purposefulness and intentionality of actions of economic entities played a complementary role in those approaches.

The discussed stage of the evolution of the *homo economicus* concept can be illustrated by the following diagram (Fig. 1):

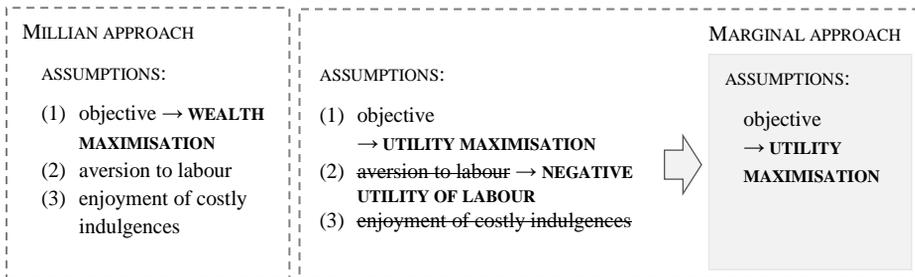


Fig. 1. Evolution of the *homo economicus* model: comparison of the Millian and marginal approaches

The change made by marginal economists could be described as re-idealisation—the replacement of some elements of *explanans* with others (cf. Mäki 2004, 323).

An indispensable complement to the presented way of delineating the *homo economicus* model by marginal economists is the indication of some discrepancies between the approaches of Menger, Jevons, and Walras. That—as described by William Jaffé (1974)—“dehomogenisation” of the positions of leaders of the marginal schools is needed even more so due to the fact that the discrepancies in the approach to the inclusion of man in the economic analysis of the school leaders largely translated into the specificity of the further development of the schools originated from marginalism.

The least typical and at the same time the most difficult to understand is the approach of Léon Walras.<sup>9</sup> The problem is that in his most important work, which

<sup>9</sup> In addition to this statement, it is worth mentioning that the deliberations aimed at indicating which of the three “fathers” of marginalism was the most different from the others have been the subject of research by historians of economics for years. Most often Carl Menger is pointed out as the most “odd-one-out”. Unlike Jevons and Walras, Menger did not use algebraic notation in his analysis, and he was not enthusiastic about the mathematization of economics of which the other two were ardent advocates (cf. Alter, 1982; Jaffé, 1974; Peart, 1998; Fontaine, 1998; Hébert, 1998).

It seems that the conclusions from analysing the differences and similarities between the content and form of economics by Jevons, Walras and Menger are basically a derivative of what aspects of their achievements are brought to the fore.

had the greatest impact on the development of economic theory, Walras did not present any model of man *expressis verbis*. One could even get the impression that man is absent from this treatise. Moreover, this approach did not result from an oversight. The point is that *Elements...* by Walras represented only one part of the much more general project which encompassed (1) the pure theory of economics, (2) applied economics, and (3) social economics (2014, pp. iii–iv). The first one was to focus on analysing the economic relations between things. Walras identified thus understood the pure theory of economics with the exchange and general equilibrium theory, whereas the applied economics was to investigate the dependencies between things and people, and the most important dimension of economic research would be the theory of production. However, the study of economic relations between people was to be the domain of social economics. In its case, the most important role would be played by developing the distribution theory. Considering that Walrus's *opus magnum* was a treatise on only the first of those planes—the analysis of the relations between the goods exchanged in the market—the lack of a clear presentation in that work of assumptions regarding human economic activity becomes a little more understandable. As rightly emphasised by Jaffé (1974; cf. Peart, 1988), the main difference between Walras, Jevons and Menger was based on the fact that Walras was primarily interested in the process of price determination as a method leading to the achievement of the state of general equilibrium, while Jevons and Menger focused on analysing the process itself or even the acts of exchange (cf. Peart, 1988, pp. 309, 320–321f).<sup>10</sup> One can ask the question about the validity of the approach adopted by Walras, especially considering the fact that the formation of these exchange relations is, after all, a derivative of human economic activity and people's preferences. However, from the point of view of the evolution of the *homo economicus* model and the specificity of the Walrasian approach, it is important that his position regarding the economic man model can at most be reconstructed indirectly, which, in turn, opens it to different interpretations. Even so, it would be difficult to deny that Walras's reasoning in *Elements...*, ultimately leading to the presentation of the general equilibrium model, is based on the tacit assumption that an entity that is involved in market exchange must do it in such a way as to maximise the level of satisfaction of the needs possible to fulfil at a given level of resources it holds. In other words, the aspiration of individuals to best meet their needs based on available resources is necessary for the market to be in the equilibrium position.

On the other hand, in the case of the other two leaders of the marginal schools, the situation is simpler as they presented their positions on the manner of capturing man in the economic theory in an explicit way. In both cases, when analysing economic activity, they used the economic man model, and in contrast

<sup>10</sup>An illustration of this difference in approach is the approach to prices: for Walras prices were dependent variables whose level was to be determined in the model, while Jevons and Menger, analysing the process of purchasing goods by consumers, assumed that their level was given (the consumer acquires a certain number of units of good at a given price). The indicated difference can also be expressed by comparing the approach based on general equilibrium (characteristic of Walras) with the approach based on partial equilibrium (characteristic of Menger and Jevons, and then further developed by Alfred Marshall). Cf. Hébert, 1998, p. 330; Peart, 1998, p. 310.

to *Elements...* by Walras, the reading of the main works in the field of economic theory written by Menger and Jevons leave no doubt that it was man and his economic activity that constituted the main subject of their reflections. What is worth emphasising is that both authors assumed that the main goal of human economic activity was utility maximisation understood as the fullest possible fulfilment of one's needs (Jevons, 1965, pp. 23, 37; Menger, 2007, pp. 125, 128), and on the basis of economic theory, no other goals or motives were included (Menger 1985, pp. 86–88). However, both authors pointed to some important limitations related to the use of such an approach. In the literature devoted to the analysis of the development of economic thought, the kind of remarks formulated by Menger are most often emphasised, which is also a contributing factor to contrasting his approach with the position of the other two “fathers” of the marginal revolution (Alter, 1982; Godłów-Legiędź, 2005, p. 551; Szarzec, 2005, p. 19f).<sup>11</sup> However, the analysis of *Theory...* by Jevons allows us to note that he was also aware of the limitations of the *homo economicus* model. First of all, he pointed to the consequences of uncertainty. At the same time, he proposed that the increases in utility resulting from the acquisition of goods that the consumer was not sure about obtaining should be estimated taking into account the likelihood of their acquisition (Jevons, 1965, pp. 33–36). Taking into consideration the distinction of uncertainty and risk made by Frank Knight (1921/1964, pp. 197 et seqq.), thus understood uncertainty would mean in fact an estimable risk.

Moreover, Jevons, even though he presented his work as an analysis of “the mechanics of utility and self-interest”, which could be read as an expression of the mechanistic approach, treating man as a fully rational being (almost a robot or a machine; cf. Morgan, 2006, pp. 11–12), pointed out that

[i]t is true that the mind often hesitates and is perplexed in making a choice of great importance: this indicated either varying estimates of the motives, or a feeling of incapacity to grasp the quantities concerned. (Jevons, 1965, p. 13)

Jevons pointed out, however, not so much to the irrationality of decisions as to the limited ability to form assessments and process information. Referring to this passage, Morgan (2006) found it to be a premise to conclude that Jevons had tacitly assumed that man actually carried out such calculations of utility, and “his brain uses such mathematics to determine his economic decisions as part of his weighing up, comparing, and deciding how to maximize his utility from consuming” (2006, p. 11). Due to this fact, Morgan proposed to call the Economic Man

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<sup>11</sup> Although it must be mentioned that the text of Max Alter can lead to some misunderstanding: The author contrasts Menger's approach with the approach to human perception which would be characteristic of the “contemporary (neoclassical) theory of values”. The problem is that the origins of this “contemporary (neoclassical) approach” can be found in the works of Jevons and Walras. Meanwhile, Jevons's position was much closer to Menger's position than to the “contemporary (neoclassical) approach”, while Walras's position on the Economic Man model was not explicitly articulated by him, which undermines the legitimacy of drawing any radical conclusions on the subject, and in particular makes ascribing to him the construction described by Alter as a “contemporary (neoclassical) approach” very doubtful.

model adopted by Jevons the *calculating man* to contrast it with Menger's model of the *choosing man*. Such a distinction is justified because Menger did not really support the mathematisation of economics, did not use the algebraic notation to present his theory and did not refer to the metaphor of the human mind as a calculating machine used by Jevons. On the other hand, it should be noted that Menger, similarly to Jevons, also assumed that people made comparisons of the significance of their needs and satisfied those whose satisfaction would bring them the greatest (expected) benefit.

Compared with Jevons's comments, Menger's considerations regarding the discrepancy between the model and the actual way of making economic decisions were wider and deeper. Focusing on the most important elements of his analysis, it can be said that he was pointing to three kinds of difficulties (2007, pp. 148–149, 215–216):

- (1) human fallibility,
- (2) the incompleteness of possessed knowledge, and
- (3) external coercion, which may cause the behaviour of a given individual to be different from the way the person would act if the only criterion adopted was to pursue his or her own needs.

Considering these limitations, and especially taking into account the consequences of not having access to full information, can be considered as one of the most characteristic features of the approach to typical of representatives of the Austrian school.<sup>12</sup>

Menger's considerations on the influence of the factors mentioned above were mainly part of the methodological work, but even in his *Principles...* closing the discussion on the gradation of needs which headed to the introduction of the famous "Menger's triangle," he said that

what has been said by no means excludes the possibility that stupid men may, as a result of their defective knowledge, sometimes estimate the importance of various satisfactions in a manner contrary to their real importance. Even individuals whose economic activity is conducted rationally, and who therefore certainly endeavor to recognize the true importance of satisfactions in order to gain an accurate foundation for their economic activity, are subject to error. Error is inseparable from all human knowledge. (2007, p. 148)

He proposed, however, to consider fallibility and the two other sources limiting the ability of people to achieve the ideal of perfect rationality only as disruptive factors. This means that economic theorists should be aware of their impact, but the economic approach was, in Menger's opinion, based on the assumption of "the free play of human self-interest uninfluenced by secondary considerations, by error, or ignorance" (1985, p. 88).

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<sup>12</sup> The issue of the limitations of human knowledge can be regarded as a leitmotif of all the work by Friedrich von Hayek. Consequences resulting from this fact for the shape of economic life (the inability to accumulate dispersed knowledge that would be necessary to rationally allocate resources in the centrally planned economies) were the main argument of the Austrians in the famous interwar dispute over the socialist calculation debate (Hayek, 1945; 1988; cf. Godłówn-Legiędź, 1992, pp. 205–241; Kostro, 2001; Morgan, 2006, p. 8).

#### 4. Dualism in Alfred Marshall's approach to the model of Economic Man

Against the background of such widespread acceptance by both marginal economists and the first generation of neoclassical economists of Mill's postulate to base the theory of economics on the abstract model of Economic Man, the approach of Alfred Marshall appears unusual. Marshall definitely rejected that idea. His stance may seem surprising and unusual, especially since this theoretician is often regarded as the "father" of neoclassical economics.<sup>13</sup> Nevertheless, and despite sharing the Millian view on the complexity and interdependence of economic phenomena, Marshall clearly negated the benefits of the procedure that Mill recommended. In *Principles of Economics*, he emphatically stated that

economists study the actions of individuals, but study them in relation to social rather than individual life. [...] In all this they deal with man as he is: not with an abstract or "economic" man; but a man of flesh and blood. They deal with a man who is largely influenced by egoistic motives in his business life to a great extent with reference to them; but who is also neither above vanity and recklessness, nor below delight in doing his work well for its own sake, or in sacrificing himself for the good of his family, his neighbours, or his country. (1920, I.II.33, own emphasis)

Marshall returned to this thought many times, expressing it in many other presentations and publications (1896/1897, p. 299; 1925; 1996, pp. 305–306). Indirectly, though quite bluntly, he emphasised his position also in two definitions of economics (out of three) presented on the pages of *Principles...* (on Marshall's definitions of economics, see more in Dzionek-Kozłowska, 2007, pp. 26–43). Not only did he not base his deliberations on the *homo economicus* model but he also stated that "Political Economy or Economics is a study of mankind in the ordinary business of life" and "is a study of men as they live and move and think in the ordinary business of life" (Marshall, 1920, I.I.1, I.II.1). Based on these opinions, one cannot avoid asking whether the "father" of neoclassical economics indeed postulated that economists should deal with the whole of human nature. And also: how to narrow down the area of economic research outlined so widely?

Marshall, who—contrary to what could seem from the above presented approach—was not a proponent of conducting the economic research within the framework of a unified social science, proposed to distinguish the scope of economics by limiting it to analysing this part of "individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing" (1920, I.I.1, I.II.1). Proposing such a solution, Marshall, in a sense, returned to the classical tradition, as pointing to a relationship with "the

<sup>13</sup> The second pretender to "fatherhood" is the leader of the Mathematical School, Léon Walras. However, it should be noted that Thorstein Veblen, who coined the term "neo-classical economics", used it to mark Marshall's economic system (Veblen, 1900/1919, pp. 170–179).

material requisites of wellbeing”, appearing here as a criterion deciding whether certain activities should be the subject of interest in economics or not, in fact, led to indicating the connection between these activities and the acquisition of wealth. Additionally, in the third definition of economics included in *Principles...*, Marshall modified this approach, assuming that not striving for the acquisition and use of wealth as such would be important but rather the possibility of measuring indirectly both the needs and the efforts made to satisfy them “in so far as the efforts and wants are capable of being measured in terms of wealth, or its general representative, i.e., money” (1920, II.I.1). Thanks to such an approach, the field of economic research could encompass, among others, such actions that would be difficult to treat as motivated by narrowly perceived self-interest, yet still possible to be measured in monetary terms, such as donations for charitable causes, costs of life insurance policies or expenditures on children’s education (1920, II.I.1; 1925, pp. 160–161). Marshall, who himself saw a number of weaknesses associated with attempts to assign numerical values to efforts and needs based on the amounts that a person would be willing to spend on acquiring goods and services that would meet those needs (1920, pp. 28, 780; 1879/1930, p. 22; 1896/1897, pp. 301–302), was also of the opinion that the adoption of such a criterion would be enough to delineate the scope of economics. Apparently, despite realising some shortcomings of that solution, he was so adamantly against defining economics by the *homo economicus* model.

Nevertheless, it is also true that the content of his economic theory in many places remained consistent with the concepts of the other marginal and neoclassical economists, who defined economics as a science using an abstract, much simplified model of human economic activity. It is visible, among other things, in Marshall’s theory of consumer’s behaviour, especially in his analysis of the Gossen’s Second Law, and—to some extent—in his theory of the enterprise. Like the marginal economists, Marshall also assumed that “if a person has a thing which he can put to several uses, he will distribute it among these uses in such a way that it has the same marginal utility in all” (1920, p. 95). Reading this principle in relation to money led to the formulation of the condition of consumer’s equilibrium (i.e. Gossen’s Second Law). This, in turn, meant that consumer would distribute her income so as to maximise utility. The convergence between Marshall’s approach and the marginal approach was especially evident when comparing this principle expressed in the algebraic version.<sup>14</sup> Stopping at this, one would get the impression that, despite his criticism of Economic Man, Marshall actually based his arguments on it. However, following his comments on Gossen’s Second Law, the complexity of his position can be seen. Marshall stated that consumers did not apply that rule in an automatic way, that it was at most a principle according to which one should proceed, while in practice, instead of comparing marginal utilities, people were more often guided by habits and routines. Changes in the structure of expenditures were made not at every change in the structure of prices, but once in a while only (1920, p. 119).

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<sup>14</sup> Although it must be pointed out once again that Menger did not present the algebraic version.

In the case of the theory of enterprise, Marshall avoided commenting on the motives of individual entrepreneurs, introducing the concept of a representative firm, thanks to which he gained an analytical tool that allowed him to talk about the condition of the entire industry.<sup>15</sup> On the other hand, however, it is possible to find in *Principles...* statements referring to the motives of action of individual entrepreneurs. And here, too, it turns out that Marshall's position did not differ in fact much from the position taken by the marginal economists. He claimed that every "alert business man" would act in accordance with "the principle of substitution" (i.e. the principle of rational allocation of scarce resources). Similarly to Menger, Jevons and Maffeo Pantaleoni, Marshall also indicated factors that could be included in the category of Menger's "external coercion"—legal norms, customs, as well as union regulations, or professional ethics requirements. Similarly to the above-mentioned economists, he also pointed to the limitations resulting from insufficient knowledge and a lack of "energy and ability" (1920, pp. 355, 404–405, 406).

Marshall also adopted a similar position when speaking about the rationality of human actions. On the one hand, he emphasised that he did not assume "every action to be deliberate, and the outcome of calculation". On the other hand, he said that "the side of life with which economics is especially concerned is that in which man's conduct is most deliberate, and in which he most often reckons up the advantages and disadvantages of any particular action before he enters on it" (1920, pp. 20–21). Moreover, Marshall also expressed the opinion that even in the cases when the activity of individuals is dictated by customary norms, those customs or habits were "most nearly sure to have arisen from a close and careful watching the advantages and disadvantages of different courses of conduct" (1920, p. 21).

Summing up, it can be concluded that Marshall was not an advocate of the model of Economic Man, although it is easy to see that he observed in human economic activities a number of components that made up this model. He was not ready, however, to accept the assumption that the motives included in the model were the only motives that were important in economic activity.

Considering of all his scientific achievements, it can also be presumed that the rejection of the *homo economicus* model was a consequence of the overriding methodological principle which he tried to put into practice almost from the beginning of his academic career. Such was the claim that all economic theories should be constantly confronted with reality so that they would deviate from the real economic life only as much as it was absolutely necessary. An additional premise for rejecting economics based on the *homo economicus* model was probably his conviction (articulated even in the treaties, seemingly purely theoretical) that people could and should constantly work on their character, improve and strive for "higher values" (Marshall, 1907, pp. 9, 12–13, 18; 1920, pp. 2–4, 17, 47–48, 136, 265, 530, 680, 690, 694, 720, 724, 740–741, 743, 748, 751; 1925, pp. 172–173). The concept of economic chivalry, according to which entrepre-

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<sup>15</sup> Marshall's "representative firm" was an abstract concept designed to be an "extract" of typical features of enterprises operating in a given sector (especially as regards the external and internal economies of scale) (1920, pp. 34–35, 314–317).

neurs should aspire to achieve the ideal of “economic knights” who in their activity should be guided by honour, generosity and courtesy rather than just by maximising profits, was proposed by him as a result of this conviction (1907; cf. Dzionek-Kozłowska, 2007, pp. 313–316; Dzionek-Kozłowska & Matera, 2015, pp. 33–48).

## 5. Conclusions

Studies on the evolution of the *homo economicus* model lead to the conclusion that the 19<sup>th</sup>-century Economic Man was far more complex than his 20<sup>th</sup>-century counterpart. In the Millian approach, this concept was based on the category of wealth and contained two additional conditions—aversion to making efforts and willingness to spend money on luxuries—included in the model as significant counter-motives limiting a person’s ability to maximise wealth.

The model was simplified by the marginalists, however, according to Menger and Jevons, the ability of people to maximise utility was undermined by their (1) fallibility, (2) incompleteness of knowledge and (3) social coercion limiting the freedom to dispose of resources to maximise utility. The 20<sup>th</sup>-century ideal of full rationality was, therefore, beyond reach for the marginal Economic Man. On the other hand, the fact the marginalists considered the three characteristics made their version of *homo oeconomicus* much more resistant to the objections formulated against Economic Man by the 20<sup>th</sup>-century critics (cf. Simon, 1955, 1956; North, 1990; Giegerenzer, 2008; Kahneman, 2003, 2011; Thaler & Sunstein, 2008).

The Marshallian approach to the model was untypical, as he did not modify this model but undermined the legitimacy of using it in economics. It must be noted, however, that the Marshallian influence on this particular aspect of conducting economic research was small. In this particular respect, his approach would be much closer to many representatives of institutional economics (*sensu largo*) or evolutionary economics than to the stance of neoclassical theorists. Marshall’s doubts about the benefits of using the model of Economic Man prevented neither the development of the rational choice theory based on the axioms regarding human preferences nor the formalisation of microeconomics in the 20<sup>th</sup> century.

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