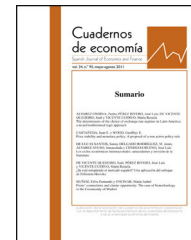




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## ARTICLE

# A New View on Robbins's Definition of Economics: the Notions of *Real* and *Formal* Scarcity



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**Abstract** This article analyses Robbins's famous definition of economics. It shows that this definition was introduced by the author to solve long-standing problems regarding the subject-matter of the science that were associated with some of the existing definitions. The article also draws attention to some confusion that surrounds the way Robbins understood the (new) subject-matter and which also slid into his definition. To escape the ambiguities caused by Robbins's confusion, we propose a more precise way of understanding the subject-matter of economics. The insight gained reveals that Robbins's definition really contains two sub-definitions: one that describes the subject-matter (*real scarcity*) and another that describes the method of the science (*formal scarcity*). This finding sheds light on some analyses and interpretations of this definition in the literature.

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**Una nueva interpretación de la definición de Economía de Robbins: los conceptos de escasez real y formal**

**Resumen** Este artículo estudia la conocida definición de Economía propuesta por Robbins. En él se muestra, primero, que este autor propone su definición en un intento de resolver algunos problemas inveterados relacionados con la noción de esta ciencia. Seguidamente, el artículo destaca algunas confusiones contenidas en los textos en que Robbins alude a dicha definición. Para resolverlas, se propone aquí un modo más preciso de entender el tema de la ciencia económica. El estudio realizado revela que la definición de Robbins contiene, en verdad, dos sub-definiciones: una que describe el tema de la ciencia (o escasez real) y otra que

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describe el método de la ciencia (o escasez formal). Este hallazgo permite entender las distintas interpretaciones (a veces contradictorias) de esta definición que existen en la literatura.

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## 1. Introduction

Robbins's *An Essay on the Nature and Significance of Economic Science* (denoted hereafter as *Essay*)<sup>2</sup> is probably the best known and most widely quoted work on the methodology and philosophy of economics of the last century, as Corry (1987: 207) and Backhouse (1985: 268) point out. As the latter author explained, one of the major themes of this book was the subject matter of the science. When Robbins dealt with this issue, he provided a definition of economics which, according to Backhouse and Medema (2008; 2009b: 225), is still the most currently accepted definition of the science – perhaps due in part to the lack of interest that economists have recently exhibited regarding the task of defining their science (Backhouse and Medema, 2008).

Nevertheless, the fact of its general acceptance should not mask the fact that there are certain aspects of Robbins's definition that still need to be clarified, despite a vast literature on the subject. To the possible surprise of the reader, the first and most important question to be elucidated is what this definition refers to. Although it is obvious – and therefore, undisputed – that Robbins was defining economic science, it is still an open question which aspect of the science he was defining. This difficulty has passed unnoticed up to the present, possibly because the content of the definition seems to be evident from the way in which Robbins informally referred to it, i.e. “the definition of the subject matter of the science”.<sup>3</sup> This is definitely the way some contemporary authors have interpreted Robbins's definition, e.g. Lawson (1997: 95–97; 2003: 143, 151). However, the literature on Robbins definition also more or less implicitly advances the view that it describes the method of the science.<sup>4</sup> The question of which of the two former inter-

pretations is correct cannot be dismissed by simply stating that the latter authors misread Robbins, because this second reading of his definition can be derived from the message and the ideas explained in the *Essay*.<sup>5</sup>

The popularity and the approval gained by Robbins's definition are also indirect signs that it has played and continues to play a key role in shaping the modern conception of economics. Stronger evidence of this influence can be found in the writings of authors who explicitly defend the view that this definition dismissed the conception of the science implied by the old designation of “political economy” and instituted a new one under the label of “economics”.<sup>6</sup> The controversies this definition immediately raised – which have been documented by Backhouse and Medema (2009a) – bear testimony to the change in the conception of the science it induced. In particular, some of the negative reactions to Robbins's definition are evidence of the influence it exerted on the subsequent conception of the science: Backhouse and Medema (2009b: 225) highlighted that this definition was simultaneously accused of being too broad (because it failed to divide economics from other social sciences) and too narrow (because it favoured theory against empirical analysis). Several decades later, it was Kirzner (1976: 119–124) who, distanced from these passionate debates, pointed out in a more disinterested and objective way the two main implications of Robbins's definition: its “breadth”, i.e. the widening of the scope

that economic theorists were then doing at the time when they did economic science (...) the ‘it’ being defined was not inclusive of all that economists did in their role as economists (...) [but] included only the economic science portion of what economists did” (438). A few pages later, Colander concluded: “(...) in his definition of economics Robbins focused on constrained optimization” (441).

<sup>5</sup> In some passages of the *Essay* Robbins's assertions seem to imply that the main subject of the *Essay* is the method of economics. To quote only three: “[this essay] seeks to arrive at precise notions concerning the subject matter of Economic Science and the nature of the generalisations of which Economic Science consist” (xiv); “(...) in the main, my object has been to state, as simply as I could, propositions which are the common property of most modern economists” (xv); “It is the object of this essay to arrive at conclusions which are based on the inspection of economic science as it is” (72).

<sup>6</sup> See Groenewegen (1991: 556) or Milonakis and Fine (2009, especially pages 224–228). This view is more explicitly stated by Harcourt (1979: 243) who wrote “the great leap forward occurred, evidently, when the discipline ceased to be political economy and became economics (...) which was favoured by Wicksteed and Robbins”. A similar idea is expressed in Hodgson (2001: 23, 33, 183, 207ss, 233) or Berstein (2003: 157).

<sup>2</sup> The specific version of the *Essay* I have used is Robbins (1962). In the following, references to this work will be made by writing the abbreviation of this work followed by the number of the page in brackets.

<sup>3</sup> Robbins described his definitions in these terms at least in *Essay* (24), Robbins (1938: 344), Robbins (1953: 105), Robbins (1971: 147) as well as Robbins (1981: 1).

<sup>4</sup> For example, Parsons (1934) critique of Robbins's *Essay* completely revolves around methodological issues, to the extent that Milonakis and Fine (2009: 218) suggested that Parsons “(...) perceived Robbins as defining a *method* and not a *subject matter*” (italics in the original). In a similar line, Backhouse (1985: 268) explained that, in his *Essay*, Robbins was simply “(...) making precise the nature of the already firmly established generalizations of which economics consisted”. Finally, Colander (2009) explicitly argued that Robbins's definition “(...) reflected what he believed

of the science it entails, which results from its ability to embrace issues that had not been considered to be economic on the basis of any previous definition of the science; and its "formalism", i.e. Robbins's emphasis in his *Essay* (30, 38) that economics has an exclusive interest in the *relation* between means and ends and not in these elements in themselves.

Note that the two implications described by Kirzner generated two opposite trends in the development of the science. On the one hand, by failing to divide economics from the other social sciences, the breadth of Robbins's definition favoured an enlargement of economists' interests in the study of other topics. In fact, various authors advance this view, either by arguing that Robbins's definition made the subject-matter of the science essentially unlimited – see, [Marciano \(2009: 128\)](#) – or by arguing that it directly stimulated interest among economists in studying new types of (human and social) phenomena not previously considered to be "economic" – see [Scoon \(1943: 311\)](#).<sup>7</sup> On the other hand, the formalism of Robbins's definition, by narrowing interest in the economic method, resulted in economics becoming compartmentalized<sup>8</sup> which, in turn, isolated economists from intellectual interchange with other social scientists and in practice promoted a reduction in the range of questions that economists *qua* economists were able to answer, as [Deane \(1978: 147\)](#) points out.

However, if the subsequent evolution of the science is examined, the particular impact that these two contradictory trends have had on it can be easily recognized: economists have increased the range of topics studied<sup>9</sup> but have simultaneously reduced the interest in the methods used to analyze them. In fact, these were the working forces in economics that [Coase \(1978: 207\)](#) detected:

<sup>7</sup> See also [Harcourt \(1979: 243\)](#) or [Siegers \(1992\)](#), who suggested that Robbins's definition at least favoured the expansion of economics into other areas of research. [Backhouse and Medema \(2009a: 813\)](#) provided indirect evidence in favour of this view, since they detected an association between the acceptance (or lack of discussion) of Robbins's definition among economists and the process of expansion of the science beyond its traditional boundaries.

<sup>8</sup> The literature also contains examples of writers who suggested that Robbins's definition isolates economics from proper intercourse with other social sciences. For example, reading [Souter's \(1933: 378–379\)](#) early critique of Robbins's *Essay*, the reader is left with the impression that the definition isolates economics from the other social sciences. Similarly, [Klappholz and Agassi \(1959: 60–61\)](#) wrote that Robbins was suggesting "(...) that there should be an a priori, water-tight, separation between economics and other sciences". These assessments are akin to [Hodgson's \(2001: 210\)](#) conclusion that Robbins "(...) attempt[ed] to define economics in terms of the autonomous, deductive investigation of the relation between scarce means and given ends". A similar view that Robbins intended to separate economics from history and psychology can be found in [Maas \(2009\)](#), or [Sánchez-Robles \(1994\)](#).

<sup>9</sup> In this sense, it is easy to show that much of the work currently done in modern (especially micro) economic theory deals with topics that thirty or forty years ago would have been considered to be outside the field and, consequently, inaccessible to the tools and the methods used by this science. These topics include the family, suicide, religion, politics, law, and biology. See, for example, [Ierulli and Tommasi \(1995, 1\)](#).

"There are, at present, two tendencies in operation in economics which seem to be inconsistent but which, in fact, are not. The first consists of the enlargement of the scope of economists' interests so far as subject matter is concerned. The second is a narrowing of professional interest to formal, technical, commonly mathematical, analysis."

By simply juxtaposing Coase's texts with Kirzner's analysis, it is possible to trace back the roots of the two tendencies identified by the former author to the influence of Robbins – for they closely resemble the characteristics depicted by the latter author. More recently, [Backhouse and Medema \(2009a: 805, 816\)](#) explicitly confirmed this peculiar influence, for they recognized that Robbins's definition both narrowed and broadened the scope of economics: it narrowed its scope by suggesting that deduction could achieve more than many economists believed it could; and it broadened its range by freeing economists from being constrained to analysing specific subject-matter. Thus, Robbins's definition may have favoured a very special type of interrelationship between economics and the other (social) sciences: one that positioned economics at the top of the social sciences, subordinating them to the methods employed by the former – e.g. [Hirshleifer \(1985\)](#), [Demsetz \(1997: 1\)](#).<sup>10</sup>

This brief review of the influence of Robbins's definition on economic science provides us with two additional themes that deserve exploration: firstly, the reasons why this definition has had these two different effects – to the best of my knowledge these reasons remain unexplored, despite it being well-accepted that the two effects of Robbins's definition moulded economic science; secondly, the reason why these two effects led to the particular configuration of the science explained in the preceding paragraph.

To provide the answers to the three questions posed in the introduction, this article only discusses one of the three themes that Robbins considered in his *Essay* – namely, the question of the subject-matter of the science – not only because it is central to the *Essay*<sup>11</sup> but also because the solutions to the questions are closely related to this theme, as shown in the following. In order to make the exposition as clear as possible, the article is organized as follows. The next section describes some long-standing problems related to understanding the subject-matter of the science that were

<sup>10</sup> Obviously, this is a very particular way of being interested in (or interacting with) neighbouring disciplines, and it is clearly not the only possible one – see, for example, [Stillman \(1955\)](#) or [Ruttan \(2007\)](#) on some possible alternative ways in which scientists or disciplines can interact.

<sup>11</sup> It is widely acknowledged that Robbins had at least three different aims in mind when writing his *Essay*: one was related to the definition of the object of the science and the other two were related to methodological issues – see [Corry \(1987: 297\)](#), [O'Brien \(1988: 23\)](#) or [Hands \(2009\)](#). Although the question of the elucidation of the subject-matter received comparatively less space in the *Essay* than the other methodological issues, it occupied a central position in his reasoning, since the resolution of these methodological issues follows from the correct identification of the subject-matter of economics, as can be inferred from what [Robbins \(1971: 146–147\)](#) wrote. Furthermore, this theme has received comparatively less attention in the literature.

still extant when Robbins wrote his *Essay*. It also shows that these were the problems that puzzled Robbins with regard to the subject-matter of the science. Section three deals with Robbins's solution, which involved substituting a new conception of the subject-matter for the previous one. This section also describes some confusion that surrounds the way Robbins understood the new subject-matter and which also slid into his definition. To escape from the problems generated by Robbins's confusion, this section concludes by proposing a more precise way of understanding the subject-matter of economics which, in turn, results in a new way of understanding his definition of the science. The following two sections present arguments that support the solution advanced at the end of section three by showing that (i) it constitutes the correct way of understanding the Robbinsian subject-matter of the science, (ii) it is compatible with the ideas that Robbins explained in his writings, and (iii) more importantly, it makes his writings more intelligible because it clarifies the problems he had introduced into the science. Section six concludes by rounding off the argument and showing that my suggested interpretation of Robbins's definition provides the answers to the three main questions posed in this article.

## 2. The longstanding problems of the definition and subject-matter of economics

At the beginning of the opening chapter of his *Essay*, Robbins cited some (Anglo-Saxon) definitions of the science, which can be grouped into two different categories: definitions which located the distinguishing characteristic of the subject-matter in the materiality of the means used in economic activities<sup>12</sup>; and those which located it in other aspects of these activities, such as the presence of prices, money or exchange.<sup>13</sup> Although Robbins disagreed with the two types of definitions, the point that has passed unnoticed up to now is that his objections to each group are of a very different nature. In particular, Robbins did not consider that the second set of definitions completely misrepresented the subject-matter, but that they simply did not throw the maximum light on the ultimate nature of economics – see *Essay* (21n).<sup>14</sup> Robbins considered this to be a minor point of disagreement, as shown by the following well-known passage:

<sup>12</sup> The fact that Robbins did not consider the definitions he quoted to be equivalent to each other is shown by the following: “(...) the sequel will show how widely the implications of these definitions diverge from one another” [Essay (1n)]. Moreover, in his previous research, Robbins had classified the existing definitions of the science into four categories, two of them being those described in the text and a third being a category corresponding to his own definition – see Howson (2004: 423–424). The definitions quoted in the *Essay* which fall within the first category are Marshall's, Cannan's and Beveridge – see Essay (1n). Subsequently, Robbins also referred to the definitions of Pareto and Clark Howson (2004: 4).

<sup>13</sup> These are the definitions of Davenport and Pigou Howson (2004: 1n). Subsequently, he also considered the definitions of Annon, Lasky and Schumpeter Howson (2004: 17–21 and 21 n1).

<sup>14</sup> Also see Robbins (1953: 104) where he even more clearly downplayed the differences between his definition and those which belong to the second group: “(...) I should find it very hard to accept

“The difference between this and other definitions *now current is not a very serious matter*. It is probable that those who do not find this definition acceptable would prefer some such definition as that of Professor Pigou (...) As I have explained elsewhere, I myself feel that this suggest an unnecessary restriction of the subject matter of economics to a certain institutional setting. But this is a *very minor point indeed*. (...) Whether we define the actual subject matter of study in terms which cover all institutional settings (the “scarcity” definition) or limit it to those settings which are most preoccupied (the “exchange” definition), is not a matter about which sensible people will waste many precious moments” [Robbins (1938: 344), emphasis added].

Therefore, if Robbins saw no serious discrepancy between his own definition and those belonging to the second group, it is only the first type of definitions – the so-called materialistic – which he regarded as completely failing to describe the ultimate subject-matter of the main generalizations of economics (*Essay*: 4–5). Thus, it is only these materialistic definitions which Robbins entirely rejected in his *Essay*.

Looking more closely at the group of definitions that Robbins rejected, it is clear that they can be put under the same heading only if material welfare is made equivalent to wealth, which Robbins implicitly did.<sup>15</sup> This is a consequence of the influence exerted by Cannan (1928: 1ss),<sup>16</sup> who began his book on the elements of economics by assuming in the first instance that wealth was the subject matter of the science<sup>17</sup> and, in the process of defining this term, equated wealth with material welfare – see Cannan (1928: 4–5). This association is not surprising for, as Kirzner (1976: 45) pointed out, the definitions that promoted the view that economics deals with economic welfare can be considered the natural successors of the definitions of economics

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Sir Dennis's attempted rehabilitation of the ‘more material side of human happiness’ as the best definition of the subject matter of economics; and I am very surprised to find it taking the place of the Pigovian ‘accessibility to the measuring rod of money’, which, *if not the same thing as the definition in terms of scarcity* which I favour, differs from it only in a certain implied institutional restriction. I hasten to add that *I do not regard this as a major doctrinal difference*” (emphasis added). This example clearly suggests that Colander (2009: 438) has not correctly understood Robbins's position: he was not downplaying his definition, as Colander suggests, but only downplaying the differences between his definition and some type of the existing definitions of the science. Consequently, Colander also misses the point when stating that the definition was not Robbins's central concern of the *Essay* – nevertheless, his position is not completely incorrect, as will become clear at the end of this article.

<sup>15</sup> This extreme can be verified by looking at the texts quoted by Howson (2004: 423) or pages 9–11 in Robbins's *Essay*.

<sup>16</sup> It is well known that Cannan was Robbins's professor during a 2-year course he took on the Principles of Economics in the LSE, see Howson (2011: 81–82). Robbins (1971: 146) noted that Cannan's book was the main textbook for this course and expressed his great admiration for this teacher – see Robbins (1953: 105).

<sup>17</sup> As shown in the following, although this was an old-fashioned practice in economics, other authors of the same epoch as Cannan still proceeded in a similar way – see, for example, Keynes (1917/1986: 2).

in terms of wealth. In particular, where economic welfare is understood as material welfare, the notion of welfare evinced a strong body of continuity with that of material wealth [Kirzner \(1976: 46\)](#). Consequently, by accepting this association, Robbins became involved in a set of long-standing disputes on the subject-matter of economics which revolved around the problems he detected regarding these materialistic definitions and which he wanted to eradicate. In this sense, the rest of this section is devoted to providing details of this extreme, that is, that the roots of the problems detected by Robbins in the materialistic definitions of the science can be traced back to the classical definitions – and, therefore, he was (intentionally or unintentionally) trying to solve longstanding problems in economics.

## 2.1. Wealth as the subject-matter of the science

As [Kirzner \(1976: 22–29\)](#) clearly explained, the existence of distinct subject-matter ripe for independent investigation was accepted by economists with little discussion from the very beginning of the science. Consequently, the definitions proposed by Adam Smith onwards followed a similar strategy: the science was defined as the study of (or knowledge about) subject-matter which was taken as something given and in most cases was synonymous with the concept of wealth.<sup>18</sup>

Note that this way of defining the science has an indirect classificatory effect on human action: if economic science studies wealth, and since some human pursuits do not produce it, only those activities that are directed towards the production (or distribution) of wealth fall under the scope of economics. To put it differently, following this deeply-rooted practice of defining the science, human behaviour could be easily divided into two separate domains (economic and non-economic), according to whether the actions considered were conducive to the production (or distribution) of wealth – see [Kirzner \(1976: 21, 118–119\)](#).

Although Robbins soon started to question whether wealth was the subject-matter of the science – see [Howson \(2004: 419, 422, 423\)](#) or [Howson \(2011: 130, 143\)](#) – it was not until he had taught a course on the economics of war that he became completely perplexed. The reasons for his perplexity are obvious: how can economics have anything to say about war, when it is obvious that making war is exactly the opposite of creating wealth? If the subject-matter of economics is wealth then war should fall outside the scope of the science.<sup>19</sup> Robbins made his perplexity clear in his *Essay*, where he wrote:

“(…) No less an economist than Professor Cannan has urged that the political economy of war is ‘a contradiction in terms’, apparently on the ground that, since Economics is concerned with the causes of material welfare and since war is not a cause of material welfare, war cannot be a part of the subject-matter of economics. (….) It is a curious paradox that Professor Cannan’s pronouncement on this matter should occur in a work which, more than any other published in our language, uses the apparatus of economic analysis to illuminate many of the most urgent and the most intricate problems of a community organized for war (….)” (*Essay*, 7).

The obvious conclusion is that wealth misrepresents the subject-matter of the science and another defining feature must be searched for. In addition, note that this example highlights the fact that the general failure of these wealth-type definitions is precisely that they classify a certain set of activities under the label “economic” – see [Howson \(2004: 426\)](#). Furthermore, the example indirectly suggests how the definition of the science could be improved: it should indicate those aspects of human activity which are in general significant to the economist ([Howson, 2004: 426](#)).

## 2.2. What does wealth consist of? The inclusion of material and nonmaterial utilities

The strategy adopted by classical economists to define the science was problematic, because the resulting definition provided very little insight into its subject-matter and only indicated how the term economics had been used: to denote studies whose main object of interest is “wealth”. To put it differently, this kind of definition is similar to what logicians call a nominal, “word-thing”, lexical definition, that is, a definition that explains “the actual way in which some actual word has been used by some actual person” – see [Robinson \(1965: 35\)](#).<sup>20</sup>

According to the foregoing explanations, the definitions under consideration have the major shortcoming that the characterization of the science has to be postponed until the subject-matter is understood. Until this is correctly done it remains unclear what the science addresses and the definition remains incomplete. Thus, this kind of definition requires the nature of “wealth” to be investigated. It should be emphasized that to complete the definition of the science, such research should not aim at defining what the word “wealth” means – to provide a nominal “word-thing” definition of the term – but to ascertain what the true nature of “wealth” is, what constitutes “wealth” in reality, which, as Robinson explained, is a very different activity from making definitions.<sup>21</sup>

<sup>18</sup> For example, [Smith \(1776/1994: 736\)](#) defined political economy as the study “of the nature and causes of the wealth of nations”. Many other classical economists directly or indirectly hold that “wealth” is the subject-matter of economics – see [Malthus \(1836/1986: 21\)](#), [Stuart-Mill \(1848/1987: 1–2\)](#), [Cairness \(1873/1965:240–41\)](#), [Say \(1880/1964: 1\)](#), [Senior \(1836/1965:2\)](#), and [Clark \(1894: vii–viii\)](#).

<sup>19</sup> See [Howson \(2004: 425\)](#), [Howson \(2011: 143\)](#) or [Robbins \(1971: 146\)](#).

<sup>20</sup> Note that I am not claiming that they tried to produce a “word-thing” lexical definition. In fact, they might have tried to produce a “thing-thing” definition (see note 21) of economics. The key issue is that they actually failed to produce it because their definitions were limited to reporting what had been understood by economics up to that time.

<sup>21</sup> Using [Robinson’s \(1965: 149\)](#) terminology, they should not ask a question about the word “wealth” but ask a question about the thing “wealth”. As the author points out, although both types of

### 2.2.1. The classical disputes over the nature of wealth

Although this kind of research was undertaken by Adam Smith<sup>22</sup> in his *Wealth of Nations*, the author did not provide a clear explanation of what constitutes “wealth” in reality. In fact, the term is given various definitions in Smith’s book.<sup>23</sup> As can be inferred from Cannan’s (1903:14–31) explanations, these different definitions gave rise to conflicting conceptions of wealth, which is where the distinction between productive and unproductive labour has its roots. This distinction was correctly designated by Kirzner (1976:30) as the starting point of a lasting debate among economists on whether immaterial “utilities” should be included under the heading “wealth”, i.e. a debate on the definition of wealth. The problem is that, although authors attempted to define “wealth”, the definitions they proposed were not of the same nature<sup>24</sup>.

On the one hand, some authors tried to offer a real definition of “wealth” (that is, if this kind of definition exists, see note 21) by inquiring into the nature of the subject-matter of economics. In doing so, their inquiries inevitably led to the conclusion that actual wealth is also composed of non-material goods or utilities – see, for example Say (1880/1964: 119–127) and Lauderdale (1819: 56–57). The problem is that the inclusion of nonmaterial goods within the scope of economics seems to be difficult to reconcile with its scientific character, a position that was firmly defended by (almost) all classical economists. There were two main reasons for this:

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questions have been subsumed under the same name (definition) – see Robinson (1965: 12–16) – they have different purposes. Moreover, as Robinson (1965: 171–178) goes on to explain, the search for answers to the second type of question has included several kinds of intellectual activities, which traditionally have been subsumed under the (false, according to Robinson) name of a “thing-thing” definition.

<sup>22</sup> It is clear that Smith investigated the nature of real wealth – e.g. see the passages where he criticizes the way that wealth is commonly understood (Smith 1776/1994: 273, 371, 456ss). Even Robbins (1998: 128–129) described the work of Smith as “(…) the work of a profound thinker anxious to discover the nature of things”.

<sup>23</sup> That Smith was not able to clarify the nature of wealth is shown by the fact that Malthus (1836/1986: 33) held that, although *The Wealth of Nations* contained no formal definition of wealth, it is clear that the author understood it as being “material objects”. However, Smith defined wealth at least in the following alternative ways: “power of purchasing labour” (1776/1994: 34), “the exchangeable value of the annual produce of the land and labour of the country” (1776/1994: lxii, 277, 367), and “the accumulate produce of the improvements of agriculture and manufactures” (1776/1994: 754).

<sup>24</sup> This explains why it was not possible to reach an agreement; although all the authors believed that they were trying to do the same thing, this was not really the case. This kind of confusion can even be found in works by the same author. For example, take Cannan (1928: 1): he argued that the question “what is wealth?” is exactly the same as “what is it most convenient to take as the subject-matter of economics?” [emphasis added]. On the other hand, Cannan (1903: 1) stated that “the first problem that confronts us is therefore the question of the nature of wealth that is the subject of production and distribution”. The first kind of question is a word-thing stipulative definition, whereas the second kind of question is a thing-thing or real definition (see note 21 and the text below).

(i) it introduced some vague elements into the language and concepts of economics (i.e. what is meant by an increase or decrease in wealth); and consequently, (ii) they made it more difficult to study the causes of the wealth of nations and to measure the changes in the wealth of a person or a country in empirical studies. Even worse, the limits of the science became blurred, because in this case the science of wealth would have to cover subject-matter from other sciences, and these kinds of definitions were accused of being too wide – on this point, see Malthus (1836/1986: 23), and McCulloch’s criticisms of Lauderdale’s definition of wealth in Kirzner (1976: 30–31).

On the other hand, other classical economists who were aware of these problems lost sight of the need to investigate the nature of “wealth” in order to bring to a close the issue of definition of the science, and centred their attention on preserving the scientific character of their studies. Given the need to eliminate ambiguity from concepts in order to successfully pursue science, the definition of wealth and other elements had to be as accurate as possible. As Robinson (1965: 68–69) explained, this had to be done by stipulating what it was going to be understood by “wealth”.<sup>25</sup> Thus, these definitions of wealth were not the same kind as those of the previous group, for they were nominal, not real, definitions. In this sense, the authors who adopted this strategy usually agreed on reserving the term “wealth” to mean “material products” – see Malthus (1827/1986: 234; 1836/1986: 33–34) and Stuart-Mill (1848/1987: 9 and 48). The adoption of this convention had at least one major advantage: it made the development of the science possible because, by removing the ambiguity introduced by real definitions, it established precise language and made it possible to accurately measure the changes in the wealth of a country, both of which are necessary conditions for economics to be a science, as we have seen.

The outcome of these two alternative ways of defining (and understanding) “wealth” was a series of disputes between the two groups of authors. The reasons offered by some authors of the first group in support of their view that wealth should also include non-material utilities anticipated some of the problems that Robbins would subsequently encounter in accepting the materialistic definitions of the science. For example, Say (1880/1964: 120) considered that the fruits of the labour of physicians, singers, musicians, lawyers, etc., were as real as the products of the manufacturer, as was testified by the fact that prices were paid for their services as well as by the fortunes some of them acquired – hence, they were the object of economic inquiry. Similarly, authors such as M’Culloch considered that the division between material and immaterial implied by the Smithian distinction between productive and unproductive labour was fictitious and that it was not

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<sup>25</sup> This does not mean that they defined wealth in a completely arbitrary way, that is, without taking into any consideration the real attributes of wealth, but that they artificially introduced limits by focusing their attention on some characteristics of real wealth, generally for the sake of clarity either in the language used or in the scientific concepts developed [see Stuart-Mill (1848/1987: 46–53), Malthus (1827/1986: 4; 1836/1986:21–23 and ss.)].

possible to draw this division in relation to human effort – see [Cannan \(1903/2005: 26–30\)](#). Although these disputes were gradually abandoned as new conceptions of economic issues arose, the old definitions of economics as a science of (material) wealth continued to occupy a central place in economic thought – see [Kirzner \(1976: 41\)](#). Hence, the problems associated with this conception of the science still survived.

### 2.2.2. Robbins's difficulties with equating wealth with material utilities

As shown at the beginning of this section, due to the education he received, the starting point of Robbins's analysis was the acceptance of the materialistic definitions, i.e. those that equated wealth with material products. Thus, it is not surprising that the deficiencies Robbins found were closely related to the issues debated by the classical economists outlined above. In the first place, Robbins had difficulties in accepting the Smithian division between productive and unproductive labour [Howson \(2004: 425\)](#) – which was the source of all the debates summarized in Section 2.2.1 – because he considered this division to be misleading, as [Howson \(2011: 130\)](#) indicates. In fact, the first chapter of the *Essay* (7–9) shows that Robbins found it contradictory the position of the contemporary authors who rejected the Smithian distinction of productive and unproductive labour, but who still argued that the subject-matter of economics was material welfare: if the labour of opera singers and dancers is regarded as productive, it cannot be productive of something material. As long as economics is concerned with the pricing of these services, it is not concerned with something that is material. The same idea is expounded a few pages before in the *Essay* (5–6) by means of the example of the theory of wages: as it was widely accepted that the theory of wages was a part of economic analysis, Robbins showed that if the ultimate subject-matter of economics were material wealth, a large proportion of this body of knowledge would lie outside the scope of the science and the entire process of general analysis could never be employed, as it was in fact employed.

The second problem is more subtle because it is more philosophical in nature and thus is only mentioned in passing in the *Essay* (11, n1). Recall that, as shown in Section 2.2.1, the meaning of the term "material" was adopted by the second group of classical economists mainly to facilitate the scientific character of their studies. As a consequence, the restrictions that this convention imposes on the subject-matter are found to be arbitrary as soon as they are subjected to scrutiny, because the welfare derived from human actions cannot be completely sorted into material or immaterial welfare (since it is a mixture of both): "Material welfare seems to involve a division of states of mind which are essentially unitary." Robbins wrote (*ibid.*) The same idea is developed in greater detail in the notes Robbins prepared for eight lectures on Unsettled Problems in Theoretical Economics in Oxford, where Robbins expressed two difficulties with the word "material":

"(a) In the first place the word material seems to be displaced. It is not the satisfactions which are material but the means of satisfaction (...) (b) tenable though the distinction may be in extreme cases it does not seem to me

to be a useful one so far as the majority of the satisfactions of daily life are concerned. These seem to me to lie in a middle area (...) I eat a plate of porridge. Perhaps that is a material satisfaction. As the bottom of the plate emerges I enjoy the pattern of the porcelain. Is that material or immaterial and supposing the latter – then is the production of plain plates the concern of economics & the production of ornamental the concern of some other study?" [Howson \(2004: 424, 19n\)](#).

Summing up, the practical difficulties involved in correctly identifying the scope of the existing theoretical structures of the science and the deeper philosophical impediments Robbins found in equating economic wealth with material wealth are both related to the arguments that appeared in the classical debates on the nature of wealth.

## 3. The concept of scarcity in Robbins: the problems it solves and the difficulties it generates

The discomfort caused by his problems with the existing definitions of economics prompted Robbins to break with the (old) tradition of taking it for granted that wealth (or material welfare) was the subject-matter of the science and to look for another factor that better characterized economic activity. This is precisely the issue that occupies the second part of the initial chapter of Robbins's *Essay* where, immediately after condemning the materialist definitions, he introduced the common factor that characterizes economic phenomena, that is: "(...) the scarcity of means to satisfy ends (...)" (*Essay*, 15) – see also [Robbins \(1971: 146\)](#). As soon as this factor is used to understand the problems described in the preceding section, the benefits of substituting wealth by scarcity become apparent.

Firstly, it solves the immediate problem of including war in the field of economics: "(...) The waging of war necessarily involves the withdrawal of scarce goods and services from other uses (...) It has therefore an economic aspect" (*Essay*, 16).<sup>26</sup> More generally, it breaks with the arbitrary classification of human behaviour implicitly introduced by the wealth-type definitions of the science and directs attention only to the aspect of human activity that is significant to the economist (*Essay*, 17),<sup>27</sup> which was the direction in which Robbins thought the definition of economics should be improved.

Secondly, by identifying scarcity as a key element of the subject-matter of the science, Robbins also eliminated the problems generated by associating wealth with material goods or means; thus, this approach definitively resolved the classical discussions about whether economic analysis should include immaterial utilities. It is not only that scarcity also affects nonmaterial means, like time or other people's

<sup>26</sup> It also resolves the logical difficulty that leads to the conclusion that if war is not part of the subject-matter of economics, there should be no production during war – see *Essay* (48, n2).

<sup>27</sup> See also [Robbins \(1946: xxii\)](#). [Corry \(1987: 207\)](#) also considered that this is the main consequence of Robbins's substitution of wealth by scarcity.

services, but also that it is a quality which entirely depends on the relationship of these means or goods to valuations (*Essay*, 21–22, 46). In this sense, this factor explains why the theory of wages is an integral part of any system of economic analysis – see *Essay* (16) – and also makes it possible to understand why economic analysis can be applied either to a community of sybarites or a community of ascetics (*Essay*, 24–26).

Moreover, the characterization of the subject-matter of economics in terms of scarcity is superior to its previous characterization in terms of material wealth because the latter can be subsumed into the former. This point was clearly seen by Robbins in the *Essay* (47–48), where he states that “(…) wealth is not wealth because of its substantial qualities. It is wealth because it is scarce”. Given that scarcity is a relative concept because it depends upon valuations, wealth is also relative: when valuations change, what constitutes wealth also changes. An illustrative example of this is the production of war machines after the Armistice was signed: “(…) what at 10.55 a.m. that morning was wealth and productive power, at 11.5 had become ‘not-wealth’, an embarrassment, a source of social waste. The substance had not changed (…). The ends had changed. The scarcity of means was different” (*Essay*, 48).

The amount and relevance of the problems solved convinced Robbins that economic phenomena were associated with the appearance of scarcity and that other factors, like the existence of an exchange relationship, were a technical incident subsidiary to it (*Essay*, 20). Note that it is in this substitution of wealth by scarcity that Robbins advocates where part of the breadth of his definition has its roots. This replacement forced a change in the way this subject-matter should be conceived: instead of thinking of it as involving some types of human behaviour, Robbins showed that it should be conceived as involving an aspect of all human behaviour – see *Essay* (16–17) or [Robbins \(1981: 2\)](#). In view of the problems this substitution solved it is clear that Robbins was correct in defending the modification of the subject-matter of the science. This change not only breaks with the false limits imposed by the wealth-type definitions on the subject-matter, it also widens the scope of the science, making it clear that some activities which were not previously considered economic actually had an economic aspect. This explains why some early reactions to Robbins’s definition were that it was too wide, which closely resembled the criticisms raised against the classical definitions of wealth that included non-material utilities, as we saw in Section 2.2.1. However, it does not follow from this substitution that *all* human behaviour is economic, or that it can be reduced to economic terms such that it can be studied only with the economic method. For this to be the case, at least one additional theoretical step must be taken, as we will see.

### 3.1. The problematic status of scarcity in Robbins’s writings

Although the central position of scarcity in Robbins’s conception of the subject-matter is unquestionable, the true status of scarcity is ambiguous in practice. The first issue to ascertain is whether Robbins thought that scarcity was the actual

subject-matter of economics or whether it was merely a key condition. Although a few passages<sup>28</sup> suggest that Robbins equated scarcity with the subject-matter, his well-known definition of the science suggests a different view:

“Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses” (*Essay*, 16).

A glance at the text immediately reveals that it is human behaviour, and not scarcity, which is depicted as the subject-matter of economics. In fact, there are many other examples both in the *Essay* and in other related sources where Robbins explicitly states that it is human behaviour (and not scarcity directly) that economics studies.<sup>29</sup> Despite his lack of clarity, a review of his writings suggests that Robbins considered that economics does not directly deal with scarcity, but with human behaviour as affected by this factor. The influence of scarcity generates economic problems [see [Robbins \(1939: 116–117\)](#)], which come in many different forms due to the various and changing manifestations of scarcity (*Essay*, 117).<sup>30</sup> However, since all of the problems are caused by the same factor (scarcity), this is exactly the element that unites the problems considered by economic science (*Essay* 2–3, 15).

The second issue is whether the concept of scarcity alone suffices to completely characterize an economic problem. This is a more difficult question to answer as it depends on clarifying what Robbins understood by scarcity, something which is far from clear. Although some passages suggest that Robbins considered scarcity to be the combination of limitation in supply *plus* the existence of alternative uses,<sup>31</sup> there are other passages which clearly indicate that Robbins equates scarcity with a mere limitation in supply.<sup>32</sup>

<sup>28</sup> See, for example, *Essay* (78): “(…) the chief of these postulates are all assumptions involving in some way simple and indisputable facts of experience relating to the way in which the *scarcity* of goods which is the *subject matter of the science* (…).” [emphasis added]; or [Robbins \(1971: 146\)](#) “(…) the underlying factor which made so many different activities and relationships susceptible to economic analysis was the scarcity of the means with which they were concerned” – see also [Howson \(2004: 427\)](#).

<sup>29</sup> See *Essay* (46): “Economics, we have seen, is concerned with that aspect of behaviour which arises from the scarcity (…).” Similar pronouncements can be found in the other pages of the *Essay*: 14, 15, 16, 17, 24, 28, 46. Additionally, the sentences in [Robbins \(1971: 146\)](#) or [Robbins \(1981: 1\)](#) place behaviour as the subject-matter of the science. Finally, human behaviour also appears as the subject-matter of the science in the notes quoted by [Howson \(2004: 426\)](#).

<sup>30</sup> The idea that the problems dealt with by economics takes diverse forms is implicitly stated in *Essay* (2–3, 15, 46 n, 49, 150). Some examples of these forms can be found in [Robbins \(1934b: 90\)](#) and the notes cited by [Howson \(2011: 659\)](#).

<sup>31</sup> See the notes quoted in [Howson \(2004: 426\)](#) or [Howson \(2011: 175\)](#). In addition, the meaning of the concept of scarcity that emerges from [Howson’s \(2011: 213\)](#) brief summary of the *Essay* also reveals that Robbins implicitly suggested in at least some passages of his book that scarcity requires the presence of alternative uses for the means.

<sup>32</sup> See *Essay* (20, note 3): “In a social economy (…) the mere multiplicity of economic subjects leads to overlook the possibility of the existence of scarce goods with no alternative uses”. In *Essay* (36,



This ambivalent conception of scarcity may help to explain why in some places in the text Robbins argued that the mere presence of scarcity suffices to completely characterize an economic problem<sup>33</sup> (in order to make sense, scarcity must here be understood in the first sense of the term), whereas in other places he suggested that scarcity alone does not generate an economic problem<sup>34</sup> (to make sense, scarcity must now be understood as a mere limitation in supply). Clearly, this indeterminacy in Robbins's writings (and thought) makes it impossible to determine the true content of actual scarcity, which subsequently impedes resolving the issue of whether it alone can give rise to an economic problem.

However, the issue becomes even more complicated, for in the pages of the *Essay* (12–14) where Robbins characterized in detail the elements that make up the economic aspect of human behaviour, he introduced a new compulsory factor: the existence of multiple (and hierarchically ordered) ends.<sup>35</sup> The problem is that throughout his works Robbins alternates between characterizing scarcity in terms of the "multiplicity of ends" and in terms of the "alternative uses" of the means.<sup>36</sup> In doing so, he subtly associated both notions and, consequently, reduced to only two the conditions for the emergence of an economic problem in practice – the other one being, as we have seen, the

limitation of means. This mixing of concepts is also evident in other parts of the *Essay*, where intermediate notions were used by Robbins to characterize scarcity.<sup>37</sup> This association between "alternative uses" and "multiplicity of ends" was detected by Souter (1933: 380), who additionally denounced it as being illicit and insisted on keeping both concepts separate Souter (1933: 382). Clearly, Souter is right in keeping the concepts of "plurality of ends" and "alternative uses" separate, since "ends of behaviour" are not the same as "uses of means".<sup>38</sup> But then, the more fundamental question arises of which one of these two elements is the true determinant of scarcity in practice – and, therefore, of the emergence of an economic problem.

### 3.2. Is scarcity a consequence of the presence of "alternative uses" or "multiplicity of ends"?

In the following I am going to expand on the issue of why scarcity in practice cannot be determined by the number of objectives that the actor has in mind when performing an action or taking a decision. This will immediately imply that the presence of "plurality of ends" cannot be an element that demarcates the subject-matter of the science.

Note, in the first instance, that if the number of objectives considered by the individual were a factor that determined whether his or her behaviour was influenced by scarcity or not, the subject-matter of the science would

46) and Robbins (1971: 146) scarcity is characterized in the same lines. This second interpretation implies a conception of scarcity very similar to that of Senior (1836/1965: 7–8, 11–13), Menger (1994, 94ss) or Bronfenbrenner (1962), which is more in accordance with its usual meaning. Finally, it is worth noting that this is also the meaning some authors attach to the term "scarcity" in Robbins – e. g. Sowel (2004: 2–3).

<sup>33</sup> See, for example *Essay* (24): "In so far as the achievement of any end is dependent on scarce means it is germane to the preoccupations of the economist". The same idea is also expressed in different terms in *Essay* (17, 28, 38), Robbins (1971: 146), and Robbins (1981: 1, 9). See also the notes summarized by Howson (2011: 659) in which the scarcity of goods is equated with the nature of the economic problem.

<sup>34</sup> See *Essay* (13): "Nor is the mere limitation of means by itself sufficient to give rise to economic phenomena. If means of satisfaction have no alternative use, then they may be scarce but, they cannot be economized".

<sup>35</sup> According to the explanations that appear in these pages, although four elements are required to completely characterize an economic problem – that is, limitation of means, alternative uses, multiplicity of ends, and hierarchical ranking of the ends – it is clear that the last two can be subsumed into just one, for both refer to the same category (ends) and both are necessary for the emergence of economic phenomena – see *Essay* (75–76). In fact, the existence of a hierarchy of ends is a refinement introduced by Robbins in the second edition of his *Essay* (14, note 2).

<sup>36</sup> The characterizations of scarcity in terms of "multiplicity of ends" can be found in the *Essay* (15, 24, 42n, 46, 88 138) as well as in Robbins (1934b: 90), Robbins (1938: 344), Robbins (1979: 997), Robbins (1981: 2) and Howson (2011: 173). The characterization of scarcity in terms of "alternative uses" (or, equivalently, in terms of "alternative application") can be found in the *Essay* (12, 14, 16, 26, 83) as well as in Howson (2011: 214). Additionally, the fact that many authors understand that Robbins is defining economics in terms of (multiple) ends and scarce means highlights the existence of this confusion – see, for example Drakopoulos (2011: 467), Milonakis and Fine (2009: 224), or Hodgson (2001: 208).

<sup>37</sup> At least the following "compounded" concepts appear in the *Essay*: "desired alternatives" (17), "valuation of alternative opportunities" (69 n) or "hierarchy of alternatives" (99).

<sup>38</sup> This is not the place to fully elaborate this point, but I will at least offer some suggestions concerning the distinction between the notions of "multiple ends" and "alternative uses". On the one hand, the very notions of "ends" and "means" refer to different features of human behaviour. Ends are, as Knight (1999: 8) explains, "whatever the individual strives to do or to get" with his action – i.e. what it is aimed at when performing an action. In this sense, ends are completely chosen by the agent, and so they are subjective. On the contrary, the "use" of a means is the way it is employed to reach some desired goal – or, more formally, the integration of a given means into the process of human action. Uses of means are partially determined by the objective characteristics of the instrument which is being employed – since it is normally designed to facilitate the achievement of a certain goal – and, consequently, are not completely chosen by the agent. For example, a hammer and a nail can be used to hang a painting on the wall, but not to paint it. On the other hand, the quality of being alternative is more stringent than the quality of being multiple or plural. Obviously, the former requires of the latter in that, for uses of a given means to be alternative, there must be at least two (i.e. a plurality) of them. But "alternativeness" additionally precludes any form of "simultaneity" in the use, which is something not impeded by "plurality". In this sense, a single action can serve to achieve more than one goal. For example, one can perform a job to earn a living and, simultaneously, to help others or enjoy oneself – so this activity is both intrinsically and extrinsically rewarding, see Dyke (1981: 11). As I will explain in the main text, the uses of the means are alternative in at least two basic senses: (i) a social one, which stems from the quality of rivalry in consumption – see Section 3.2 and (ii) a temporal one, which stems from the fact that the same particular amount of a given means cannot be used at two different moments of time – see Section 4.

be subjectively determined, because the ends of action are chosen by the individual – see [Mises \(1996: 12\)](#) or [Parsons \(1934: 513–515\)](#). In addition, since our objectives of action are essentially mental or immaterial ([Robbins, 1953: 106](#)) they are not observable (*Essay*, 90), so their number is unknown to the external observer. Therefore, it would be impossible to objectively determine if a given action has an economic aspect, for this would require (of that impartial observer) knowing the number of objectives that the actor took into account at the moment of choice – or, at least, that this number is greater than one.<sup>39</sup> Moreover, the influence of scarcity on human behaviour could be determined at will, for the agent could easily eliminate it (and the problems it raises) by simply disregarding all the ends of action except for one and aiming for this objective alone. Hence, as long as scarcity is an objective attribute of human behaviour, it cannot depend on factors that can be subjectively modified by the chooser, as is the case of “multiplicity of ends”.<sup>40</sup>

Secondly, the existence of alternative uses for a means does not depend on factors that can be subjectively modified, and thus it constitutes a factor that objectively determines the emergence of economic problems. This can be easily seen by considering the case of an agent living in society: the uses of a given means are not only determined by the different ends pursued by an arbitrary user, but also by the existence of different potential users that can employ the same means to reach their (possibly identical) ends, as pointed out by [Rivett \(1955: 216\)](#).<sup>41</sup> Clearly, this

<sup>39</sup> Then, viewed from the outside, the same action could fall within or outside the scope of the science and it would not possible to conclude that, for example, buying a car is an economic action unless one could be sure that the buyer had more than one goal in mind when performed it. What the procedure suggested by Robbins could show, at most, is whether the agent’s motive for action was economic or not – as [Robbins \(1939: 117\)](#) himself suggests – which is a very different issue to ascertaining whether the agent’s activity had been influenced by scarcity. Hence, as [Crespo \(2013: 764\)](#) explains, one thing is whether human behaviour has an economic aspect or not, and another different one is whether the actor attempts to act economically or not.

<sup>40</sup> In addition, if multiple ends were a necessary element for scarcity to appear, the other subjective factor related to them (e.g., the existence of a consistent hierarchy of ends) would also be required for the emergence of economic problems. However, Robbins considered that the influence of scarcity does not depend on the consistency of ends: see *Essay* (91–93), [Robbins \(1934b: 101\)](#), [Robbins \(1979: 998\)](#) or [Robbins \(1981: 2\)](#). Furthermore, the idea that the influence of scarcity on human behaviour is independent of subjective factors is implied in *Essay* (30, 152, 156) and [Robbins \(1934b: 90\)](#), where the obligation to choose (see Section 4) is stated. Apart from these theoretical reasons, the argument advanced by [Noorgard \(1990\)](#) that resources may be scarce even if people are not aware of this fact shows that the influence of scarcity on human behaviour is actually independent of factors that can be subjectively modified by the chooser.

<sup>41</sup> In other words, when humans live in society alternative uses of a given means appear simply because (i) there are many people who can employ the same means, even though all of them want it for the same purpose, (ii) the use of a quantity of a means by a person impedes the use of this quantity of a means by others. However, note that (ii) corresponds to the notion of rivalry in consumption [see [Peston \(1972:12–14\)](#)]. It should be taken into account that, as [Foldvary \(1994:12–13\)](#) explains, there exist more types of rivalry

is the quality of scarcity that Robbins explicitly emphasized when he wrote that scarcity denotes “(…) limitation with respect to demand. Good eggs are scarce because, having regard to the demand for them, there are not enough to go round” – *Essay* (46). However, Robbins failed to note that this example reveals that a multiplicity of ends is not a requisite for scarcity, since in this case it affects human behaviour even if all consumers want eggs for the similar (and unique) purpose of eating them – which, on the other hand, is what happens under normal circumstances.<sup>42</sup> In more technical terms, good eggs are scarce because they are rivals in consumption (see note 41). Furthermore, if the property of rivalry is considered, it is even clearer that “multiplicity of ends” cannot be a condition for the emergence of scarcity, because, even if ends are multiple, the problem of scarcity does not arise when means are not in rivalry, as is the case of a typical public good, such as a lighthouse. Summing up, the quality of rivalry in consumption, which is independent of subjective factors and cannot be modified at will by human beings, is captured by the concept of “alternative uses”, but not by “multiplicity of ends”. This is the second reason for supporting Souter’s claim that both concepts are not equivalent, and it leads to the conclusion that “multiplicity of ends” cannot be a factor that determines the existence of actual economic problems.

### 3.3. A suggested way of escaping the problems of Robbins’s conception of scarcity

This analysis makes it clear that the association between “alternative uses” and “multiplicity of ends” implied by Robbins is illicit. Furthermore, this analysis also shows that the real factor which, together with limitation in supply, gives rise to economic phenomena is the existence of “alternative uses” for means. These findings add a new problem to the list of unsettled questions from the subsection 3.1: what is the actual status of “multiplicity of ends”? Do they play any role at all in the configuration of economic problems? The conclusion is that, although Robbins solved many old problems with his characterization of scarcity, he simultaneously introduced new problems into the science.

than “quantity rivalry”, so means can become scarce for different reasons.

<sup>42</sup> This is even clearer in the case of an individual person: Robinson Crusoe may want eggs for the sole purpose of eating them, but they are scarce because the eggs he eats today (or for breakfast) are not available for tomorrow (or for dinner). This fact provides Robinson with a rationale for considering the optimal timing of his consumption – which is an important type of economic problem, as Robbins explicitly recognizes (*Essay*, 13n). Notice that this is related to the problem of depletable resources explained in Section 4 below: even if we want, say, coal for the unique purpose of, say, producing electricity, it makes sense to pose the economic problem of finding the optimal extraction rate of this resource. These examples reveal that ends of action do not need to be plural for human behaviour to be conditioned by scarcity; consequently “plurality of ends” cannot be a requisite feature for human behaviour having an economic aspect. Obviously, all this implies that Robbins is wrong when using the number of ends as a criterion to separate economics from technique – this is a point that has already been criticized by other authors, e.g. [Rivett \(1965: 217–220\)](#).

Fortunately, it is possible to find a solution for all these difficulties at once. It is precisely the need to keep the concepts of "multiple ends" and "alternative uses" separate which suggests that Robbins's definition can be conceptually divided into two separate halves, each portion containing one of the former concepts. As shown below, the location of these expressions in Robbins's definition additionally suggests the point where this division must be made.

Let us return to Robbins's definition. At the risk of stating the obvious, it is worth emphasizing in the first instance that what this definition describes is the science of economics, as its opening words clearly indicate. Therefore, the remaining text must be read as an explanation of different aspects of the science, two aspects in particular, as suggested in the previous paragraph. This implies that the definition can be divided into two different parts which focus on the aspect of the science which is being described in each part:

- (i) The first part of the definition is composed of two separate fragments, i.e. "which studies human behaviour" [when it has to make use of] "scarce means which have alternative uses". The course of this investigation shows that these fragments refer to what Robbins considered to be: (a) the subject-matter of the science (human behaviour); and (b) the real elements that shape human behaviour and which, whenever they are present, make this behaviour exhibit the (economic) aspect that is relevant to the science.
- (ii) The second part of the definition, i.e., "(...) as a relationship of ends and scarce means" (emphasis added), characterizes the method used by the science to study its subject-matter. This reading is suggested by: (a) the conclusion arrived at in the previous subsection that "multiple ends" cannot be a determinant of the economic aspect of human behaviour; and by (b) the exact wording used by Robbins, which indicates the real status of "multiplicity of ends".<sup>43</sup>

I propose the term *real scarcity* to refer to what the first sub-definition describes and the term *formal scarcity* to refer to what the second sub-definition describes, given that both are related to the central concept of scarcity. Notice that this distinction of notions only applies to Robbins's thinking. That is to say, it is a way of escaping from his confusing description of the elements that are required for human behaviour to have an economic aspect – i.e. to be influenced by scarcity. In this sense, the notion of *real scarcity* captures those factors highlighted by Robbins that, according to my previous explanations, are actually present in every practical instance of scarcity. Just for this reason, this notion refers to the subject-matter of the science. On the contrary, the notion of *formal scarcity* refers to those factors listed by Robbins which cannot account for the emergence of scarcity in practice. This latter notion concerns the method of the science because Robbins (maybe inadvertently) slides into the description of its elements what really are theoretical assumptions used to gain scientific knowledge about the economic aspect of human behaviour.

<sup>43</sup> Note that the first two words in italics suggest that what is being described in this part is the way economics studies human behaviour.

As this division of concepts has been obtained from my analysis of Robbins's characterization of economics, it seems convenient to verify that each notion really corresponds to the aspect of the science it intends to designate. In addition, as it is merely a suggestion to correctly interpret Robbins, it seems appropriate to offer additional arguments for its adoption. This implies showing: (i) whether the division sheds light on the conundrums that surround the concept of scarcity in Robbins's writings and that have been highlighted in Section 3.1; (ii) whether it is consistent with other ideas expressed by Robbins in his texts; and (iii) whether it helps to gain a better understanding of Robbins's overall position. The following two sections deal with all these issues and fine-tune these notions.

#### 4. The notion of *real scarcity* as the subject matter of the science and the breadth of Robbins's definition

The notion of *real scarcity* proposed in the previous section is related to the subject-matter of the science, because this concept denotes the actual conditions which generate the economic dimension of human behaviour.<sup>44</sup> However, a precise meaning is required to clarify this notion. Since Robbins's held contradictory views regarding the actual content of scarcity (see Section 3.1), his writings are not a reliable guide to accurately characterize *real scarcity*, so I will only refer to Robbins to verify whether the characterization proposed is compatible with what he said and, more importantly, whether it sheds light on his texts.

My suggestion is that *real scarcity* must be understood as the conjunction of limitation of means and the existence of alternative uses for them or, as the following explanations will make clear, as limitation caused by the existence of alternative uses for means. Two reasons can be offered to include the existence of "alternative uses" as an essential element of *real scarcity*. Firstly, note it is the existence of at least one use for a given substance which makes the limitation in the quantity relevant to human behaviour. To put it differently: if there were no use for a given raw material, its (possible) limitation of quantity would not generate any relevant problem of scarcity. As Neuyermayer (2000: 328) said: "Some natural resources are scarce on this world in a physical sense. If they have no productive use, nobody cares about this scarcity, however".<sup>45</sup> Secondly, to see why the alternative character of the uses (of a means) is also a required element for *real scarcity* to appear, consider the case of non-renewable natural resources. The alternative character of their use is manifested in the fact that a given quantity of the raw material can be used today or tomorrow,

<sup>44</sup> This also explains the terminology adopted: I have chosen to design it "real" because this term refers to requirements that take place in the real or actual world (not to theoretical requirements), which is the view that Robbins holds on scarcity, as Parsons (1934: 536) highlights.

<sup>45</sup> The example of natural resources perfectly fits the Robbinsian conception of scarcity, see Essay (36). See also the quotes from Beckerman and Ray cited in Neuyermayer (2000:311), which reinforce the view explained in the text.

but not at both dates – even if the uses at different dates are qualitatively identical, i.e. the only difference between them is the moment in which the material is used. This can only happen because the use of some quantity of them in the present precludes the use of that quantity in the future – or, in technical jargon, because they are depletable. Note that this “alternative” character is also a requirement for these materials to be scarce for they would not be scarce at all if, despite being available in a limited quantity, the same amount of resource could be used today and tomorrow, i.e. indefinitely, as shown by [Neuermayer’s \(2000: 311\)](#) examples of nondepletable resources.<sup>46</sup> Obviously, this is a minimal sense of the term “alternative”, for more complex forms of “alternative uses” appear in reality (especially when humans interact in society, see note 41), but it suffices to show why it is a necessary condition for *real scarcity* to appear.

It is easy to show that these two features of *real scarcity* do not contradict Robbins’s conception of scarcity. For example, the requirement that raw materials must have (at least one) uses to be scarce is implicit in the informal example of bad eggs that appear in the *Essay* (46): these are redundant because there is no use for them.<sup>47</sup> Besides, the quality that the uses of a means must be alternative is clearly seen in the example put by Robbins to refute Sir Joshua’s position that attention to the aesthetic will in the long run increase material welfare – see *Essay* (29–30).<sup>48</sup> Finally, the minimal sense that can be put to the notion of “alternative” is completely in accordance with Robbins’s characterization of one of the most important types of economic action – i.e. intertemporal choice, see *Essay* (14n).

Understanding *real scarcity* in the way suggested is not only in agreement with Robbins’s views, but also has great advantages, for it sheds light on other parts of his writings and other key economic principles. Note that, once *real scarcity* is understood as suggested, it not only provides an exact interpretation of Robbins’s texts, but it also (affirmatively) answers the question of whether the sole presence of *real scarcity* suffices to generate economic phenomena

<sup>46</sup> The fact that the uses of the means must be alternative in character is captured in other definitions of the science with the introduction of the term “competing uses” – see [Rees \(1968: 472\)](#). These are simply different ways of expressing the basic fact that uses of must be “exclusive” in at least the minimal form explained in the main text. This helps to understand why [Mundell \(1968: 7\)](#) finds that the mere word “alternative” suggests scarcity – it is at the very core of the concept.

<sup>47</sup> Other authors also introduce the same requirement, though in an indirect way. See, for example, [Debreu \(1959: 33\)](#) who explained: “(...) some industrial waste product may be a nuisance the disposal of which is costly; should an invention, i.e. a new technology, open uses for it, it might become a scarce commodity.”

<sup>48</sup> Especially, the following text: “There are cases when it is *either* bread or a lily. Choice of the one involves *sacrifice* of the other (...) Economics brings into full view that conflict of choice which is one of the permanent characteristics of human existence”, *Essay* (30, emphasis added). The alternative character of the uses was also tacitly stated by Robbins in other parts of the *Essay* with the use of words like “relinquishment” or “sacrifice”, which refer to (and makes sense only in relation to) that characteristic – see *Essay* (14, 15, 25, 30, 145, 146, 145) and [Robbins \(1934b: 90\)](#).

– thus, it completely clarifies the problems mentioned in Section 3.1.

More importantly, this interpretation of *real scarcity* can help to correctly understand the status of choice, which is a concept that in the *Essay* first slides into the description of the subject-matter of the science<sup>49</sup> and is occasionally transformed by Robbins into its actual subject-matter in a somewhat imperceptible manner.<sup>50</sup> Choice (among alternative uses of the means) is the outcome of the influence of *real scarcity* on human behaviour, for it is imposed upon us by the alternative character of the uses of the means that is introduced by the presence of *real scarcity*. Note that the only implication of the presence of *real scarcity* is that it forces us to choose (among alternative uses of the means), but not that we must do it in an intelligent way; in other words: we cannot eliminate the influence of *real scarcity*, but we can ignore it and choose without complete awareness of the alternatives rejected. This point is crucial to understanding why Robbins considered that the significance of economic science precisely relies on its ability to empower us to be fully aware of the implications of what we are choosing, i.e. of the value of the alternatives rejected – see *Essay* (151–158) or [Robbins \(1981: 2\)](#).

Obviously, the foregoing description of choice is a coherent suggestion regarding how to interpret Robbins’s explanations, since he is not clear on this point. In fact, his fuzzy characterization of the elements which make scarcity shape human behaviour is so spread throughout his account of (economic) choice, that the status of this concept is ill-defined. These are the factors which bulk large in the “breadth” of Robbins’s definition, for they make “choice” indistinguishable from “choice induced by scarcity”. And this mixing of concepts constitutes an inflection point on the way economics is conceived. The science took a (somewhat) long route which ultimately led to the characterization of economics as the science of (any rational) choice<sup>51</sup> – i.e. a method without a proper subject matter. However, the complete description of this complex process falls outside the purpose of this paper, and it will be addressed in other investigations.

Finally, the concept of *real scarcity* also makes clear the centrality of other related concepts and principles of economics, namely, the concept of opportunity cost and the associated TANSTAAFL principle. As [Buchanan \(1991: 718\)](#) explained, the need to choose implies the existence of selected as well as rejected alternatives, so opportunity costs are the expression of the basic relationship between scarcity and choice.<sup>52</sup> Because of the ubiquity of

<sup>49</sup> See *Essay* (12, 15) and [Robbins \(1934b: 90\)](#). See also [Howson \(2011: 175\)](#): “(...) it is because of this necessity of choosing (...) that those aspects of human activity which we study as economists come into being”.

<sup>50</sup> See *Essay* (14, 20, 30, 83, 152). The imperceptible way in which choice is exchanged for scarcity as the subject-matter of the science in the *Essay* has led some authors to argue that Robbins equated the subject-matter of economics with choice – see, for example, [Scoon \(1943: 311\)](#), [Buchanan \(1964\)](#), [O’Brien \(1988: 33\)](#) or [Hodgson \(2001: 195–196\)](#).

<sup>51</sup> See [Mundell \(1968: v\)](#) or [Gwartney, Stroup and Lee \(2005: 5\)](#).

<sup>52</sup> The link between the concepts of choice and opportunity cost was recognized by [Robbins \(1934a: 2\)](#).

*real scarcity*, we are constantly facing opportunity costs in our actions such that these are revealed to be a pervasive trait of human behaviour, which subsequently leads to the formulation of the TANSTAAFL principle.<sup>53</sup>

## 5. The notion of *formal scarcity* as the method of the science and the formalism of Robbins's definition

So far, the argument has showed that the existence of "alternative uses" (for means) is a defining feature of *real scarcity*, that is, the actual subject-matter of economics. However, the other part of the claim made in Section 3.3 remains to be justified, that is, that the existence of a "plurality of ends" is a condition related to the method of the science – at least as this "plurality of ends" is conceived by Robbins. This is the task of this section. The argument attempts to show that all the elements which are associated with the two basic features of Robbins's definition that I have classified as belonging to the method of the science (ends and means) have a theoretical category. Therefore, they are not real conditions for the emergence of an economic problem, but rather they are conditions for the science to properly illuminate actual economic problems. To show this point, I will disentangle the process by which economics analyses human action and will point out its similitudes with Robbins's description of the elements that fall under my notion of *formal scarcity*.

To follow the argument, note that economics belongs to the category of knowledge that treats human behaviour as problem-solving, as Knight (1940a: 464; 1940b: 26–27) correctly explained. This is due to the fact that economics studies the human problem caused by the emergence of *real scarcity*. As described above, *real scarcity* imposes a cost on every human action that cannot be avoided and should be taken into account in order to make more intelligent use of the resources at our disposal. The point is that this problem of assigning scarce resources to different goals can take many different forms in reality, so it actually represents a family of problems. In this sense, the task of economics is to identify this family of problems, firstly, by correctly understanding their foundations, and secondly, by finding the most adequate solution to each particular problem. This, in turn, requires that the common elements of the different specific problems as well as their common structure are brought to the light in such a way that the influence of *real scarcity* on human behaviour is correctly captured by the theory. It is precisely for this reason why economic theory is considered "analytical", as Knight (1940a: 462) argues: human behaviour is analyzed in terms of the fundamental categories that are present in each of these particular problems, so that cause-effect explanations can be deduced and the consequences of certain courses of actions (or choices)

can be clearly established.<sup>54</sup> Obviously, this is a kind of scientific knowledge that demands a formal representation of *real scarcity*.

### 5.1. First stage: the division of human action into two polar categories

The formal representation of *real scarcity* is developed in a two-stage process in theory. In the first stage, human behaviour is framed in terms of two radical categories: ends and means. Accordingly, the elements that play the roles of ends and of means are clearly identified and distinguished in theory. Note that this clear-cut categorization is a formal requisite and not a real one, since human action is more complex and the different elements do not admit of this radical classification.<sup>55</sup> However, the complexity of human behaviour is not an obstacle to using ends and means as polar categories to analyze it. Note that, at each stage of the sequence of human action (see note 55), the influence of *real scarcity* on human behaviour gives rise to problems that have a similar means-ends structure. This means-ends structure stems from the fact that, at some point within the process of human decisions and actions, we have to stop deliberating about what we want to do, as Crespo (2007: 373) points out. As the outcome of this interruption, the elements that the actor wants to reach with his or her (immediate) action become the (immediate) following links of the complex "chain" of human action – i.e. the (immediate) ends, which additionally are now taken as given Crespo (2007: 373). On the other hand, the achievements performed in previous actions constitute the conditions that the acting man has to use to reach this (immediate) following link – the means, which are now the focus of the attention of the actor Crespo (*ibid.*). Finally, the tension that these elements exhibit in the theory formally captures the relative status of *real scarcity* and its influence on current choice. This common and simplified structure is key to comprehending the foundations of economic problems and to solve them – the two aims of economics.

The fact that Robbins advanced a similar conception of human action<sup>56</sup> helps to understand why he defended that

<sup>54</sup> Note that what is explained in this paragraph is in completely agreement with Robbins's views, as my previous analysis reveals.

<sup>55</sup> This is the point that has been raised by some commentators or critics of Robbins. For example, Parsons (523–524) explained that human behaviour is articulated into a complicated chain of means-ends relationships, in which most of the elements are located between the polar categories of the "ultimate end" and the "ultimate means" – on this point see also Crespo (2007: 376). In this intermediate sector, the end or purpose of a given human activity is the means to a further end or ends [see Kaufmann (1933:383)]; hence, the different links of the chain play the role of ends or means depending on the problem at hand. The typical case is money, which is the end of wage-work but, simultaneously, the means of consumption, as Parsons (1934: 523) pointed out. To put it differently, ends (except the ultimate one) are such only in relation to the particular and immediate context of action, as Kirzner (1976: 126) pointed out.

<sup>56</sup> Though this clear-cut distinction is not explicitly defended by Robbins, it is implicit in his insistence on considering ends and means the two different sources of the changes in conditions of scarcity –

<sup>53</sup> See Hessen (1987: 285) for a brief history and explanation of this principle and Colander (2005: 253) for the presence of these elements (scarcity, opportunity costs and the TANSTAAFL principle) in current teaching in microeconomic courses. The explanations of Gwartney, Stroup and Lee (2005: 8–10) provide an additional example of the centrality and interrelation of these concepts.

(i) these elements of human behaviour are not relevant to economics in themselves; rather, it is their relationship that is of interest to economic science [see *Essay* (38)], and (ii) economics is not concerned with the process of selection of ends – despite this being a real problem, as acknowledged by Knight (1940a: 464–465).

## 5.2. Second stage: the theoretical assumptions about the goals of action

In the second stage, it is assumed that the elements that play the role of ends in the theory must be (i) hierarchically ordered (see note 35 for the places where Robbins explicitly expresses this view about ends), and (ii) weighted in such a way that progressive comparisons among them are possible. Clearly, the first element is a theoretical requirement for capturing the influence of *real scarcity* but not a practical requirement for its emergence, as revealed by Robbins's recognition that scarcity shapes human behaviour even if ends are not consistent – see note 40 above. Moreover, Robbins suggested that economics *assumes* rationality (e.g. consistency of ends) because it is desirable to do so in order to facilitate the selection of a system of ends that are mutually consistent with each other – here, Robbins refers to a consistency of achievement (of ends), which is not the same requirement as the (theoretical) consistency of ends, see *Essay* (152n). To put it differently, the existence of a hierarchically ordered set of ends is a condition for the theory to be fruitfully applied to the solution of practical economic problems.

The fact that the second assumption mentioned above does not explicitly appear in the *Essay* and is only implicit in a few passages hides its actual relevance to the theory and complicates the task of correctly assessing it.<sup>57</sup> This second assumption is what Nicolaidis (1988: 320) called the “continuity” principle (of neoclassical economics), which he considers to be central to economic analysis:

“(…) This term is chosen on purpose to exemplify a fundamental and yet not easily recognized aspect of economic choice. The whole of economics is about continuity: all goods and services are comparable in generating either utility or disutility; (..) decisions are made at the margin after assessing all possible effects and costs (..) Of course in each case continuity is defined differently, but all these definitions have the common element that all segment's in an agent's set of choice are comparable.”

In other words, one basic assumption in economic theory is, using Lazear's (2000: 101) jargon, that trade-offs can always be computed, at least on the margin.<sup>58</sup> The key point

is that this is a theoretical assumption that is also necessary to illuminate real human economic problems using economic science; otherwise they would not be relevant in formal terms. That this is a theoretical hypothesis is not hard to see, as shown by Arrow's (1997: 759) defence of it. To see its theoretical relevance, note that it is possible to have hierarchically ordered ends for which no rates of interchange or sacrifice among them (or among goods) can be established – take the example of lexicographic preferences. In this case, a formal problem would still exist, although it would be a trivial one, for there is only one rational way of allocating means to ends: these preferences dictate that the means can only be allocated to reach the most preferred end in the list – and if some means are left after this operation, preferences dictate that the remaining means have to be devoted to reach the second end in the list, and so on. Since trade-offs between the ends cannot be computed, means cannot be redistributed to produce a preferred (or indifferent) combinations of ends; hence, economic science cannot be of much guide.<sup>59</sup> This is the ultimate reason why Nicolaidis (*ibid.*) affirmed that “every failure of the paradigm of the rational maximizing agent can be interpreted as a breakdown in continuity”, or why Nutter (1979) has argued that the presence of lexicographic preferences imposes a limit on the applicability of economic science that goes beyond its traditional boundaries.

In conclusion, for economic theory to be relevant to solving a problem, the existence of a hierarchy of ends it is not only required, but also the possibility of quantifying how much of a given end a person is willing to give up to obtain more of another – the Hicksian marginal rate of substitution [see Hicks (1981: 8–10)]. As Knight (1934: 232n) explained, this is the reason why the indifference surface is indispensable if comparison and choice are to be used in the sense of cause and effect to explain behaviour. The key point is that, once again, both are formal requisites for economic theory to be useful for practical purposes. They are formal because, as should now be clear, the characteristics explained above are requisites for capturing in theory the influence of *real scarcity* on human action in a fruitful way, and are not conditions for its emergence. In other words, it is a *scientific description of real scarcity*, but it is not a

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it is not possible to work out in theory the opportunity cost of displaced alternatives – which is the way in which economic theory understands costs, as Robbins (1934a: 2–3) explained. However, this does not imply that this cost does not exist.

<sup>59</sup> As marginal utility is not quantitatively definable in the ordinal utility approach, indifference surfaces are needed to know how much quantity of a good would compensate the chooser for the loss of a marginal unit of another good [see Hicks (1981:9)]. In the case of lexicographic preferences it is not possible to calculate this quantity because the indifference curves are single points. Note that this problem is relevant only from a theoretical point of view: it affects the capacity of the theory to illuminate behaviour, but does not alter the fact that this behaviour is conditioned by *real scarcity*. This point should be kept in mind to avoid the kind of mistake made by Polanyi (1994:100), who erroneously considered that the example of the text is a case of insufficient, but not scarce, means. Other examples in which a hierarchy of ends exists but in which there is no room for “economic calculation” (i.e. the notion of *formal scarcity* cannot illuminate these cases) can be found in Etzioni (1988: 42).

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see *Essay* (16, 36, 38, 44). It is also implicit in his rejection of ends from the sphere of economics – see Falgueras-Sorauren (2015).

<sup>57</sup> Robbins referred to this element as “ratios of valuation between goods” [*Essay* (16)], “internal arbitrage operations” [*Essay* (92)] and only makes explicit reference to the “indifference curves” in very few places in passing [*Essay* (35n, 75, 87, 126, 141)].

<sup>58</sup> In fact, many economists consider these trade-offs to be a defining feature of the economist's point of view – e.g. Buchanan (1966: 168), Harcourt (1979: 246, 250 n5) or Amacher, Tollison and Willett (1976: 20–21). Note that, if these trade-offs cannot be computed,

good characterization of the conditions that determine the emergence of the economic aspect of human behaviour. This view of scarcity as a relationship between limited means and multiple ends that are hierarchically ordered and that can be progressively compared is what I call *formal scarcity*<sup>60</sup>; it is also what the second part of Robbins's definition integrates.

## 6. Conclusion

It is now time to round off the argument and show how this long journey through the intricacies of Robbins's writings serves to clarify the three problematic issues posed in the introduction.

The initial analysis of the problems regarding the subject-matter of the science that the classical economists left unresolved has shown that they coincided with the main difficulties that Robbins was trying to solve. His search for a solution led him to rethink the definition of the science, substituting (material) wealth by scarcity as the underlying factor that makes different activities susceptible to being studied by economic science. As the result of this substitution, the new definition changed the way the subject-matter was conceived, which explains why some authors considered it to be the turning point that marked the passage from the old "political economy" to the new "economics". This substitution also paved the way for the solution of other methodological issues that puzzled Robbins, as the author himself indicated (Robbins, 1971: 147). This contradicts the view that the definition of the science was not Robbins's central concern in the *Essay*, as Colander (2009: 438) argued, and shows that, on the contrary, it is the key element around which all the remaining ideas in the *Essay* are organized.

However, my exposition has also made it clear that Robbins's characterization of scarcity is plagued with imprecision, which also obscures its exact status as regards the subject-matter of the science, e.g. does Robbins consider that scarcity is the actual subject-matter of the science or is it merely a key condition for it? In particular, the article shows that, as Souter stated, "alternative uses" and "plurality of ends" are not interchangeable terms that can be used to denote the same basic feature of scarcity. The need to keep both concepts apart shows that Robbins's definition actually contains two sub-definitions: one that describes the subject-matter of the science (which I have called *real scarcity*) and another that integrates its method (which I called *formal scarcity*). This finding justifies the position of authors who argued that Robbins's definition describes the method of the science, since this is what, de facto, part of this definition does.

Simultaneously, this distinction between *real* and *formal scarcity* sheds light on the foundations of the

two well-known implications of Robbins's definition: its "breadth" and its "formalism". On the one hand, the "formalism" or "narrowness" of Robbins's definition arises from the concept of *formal scarcity*, because, in order to capture the influence of *real scarcity* on human behaviour, this method reduces it to just two basic categories: ends and means. On the other hand, the "breadth" of Robbins's definition is related to the concept of *real scarcity* in two different ways. The scope is initially widened as the result of substituting *wealth* by *real scarcity*, as introduced in Robbins's definition. Since this breaks with the false limits imposed on the subject-matter by former definitions, it encourages the reconsideration of the economic aspect of topics previously considered to be noneconomic. However, the scope was mainly widened due to Robbins's failure to correctly identify the conditions for the emergence of *real scarcity*. This failure produces an incomplete characterization of economic choice – or choice under the influence of scarcity – which subsequently led economists to equate choice resulting from the influence of scarcity to choice in general. As a consequence, the definition generates the false impression that all types of (human) choice are germane to the study of economics.

The concepts of *real* and *formal scarcity* also account for the particular influence exerted by this definition on the subsequent evolution of the science. The expansion of economists' interests is a consequence of the "breadth" of Robbins's definition, while the narrowing of professional interest to certain types of methods is the outcome of the influence of its "formalism". This conclusion brings to light, although only in an embryonic way, the influence of Robbins's definition on the emergence of economic imperialism. Nevertheless, the analysis presented is insufficient to correctly appreciate the exact way this influence was exerted, since this is a theme that requires more detailed study and that must be postponed to future investigations.

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<sup>60</sup> I have chosen the term *formal scarcity* because, firstly, it is in line with Robbins's view that the science of economics studies the form of economic phenomena, i.e. their general uniformities – see Howson (2004: 428–249). Secondly, it has resonances of the way Polanyi (1957: 243–248) refers to Robbins's characterization of economics.

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