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Institutional Aspects of Capital in Joan Robinson's 'Rules of the Game': Rentier versus  
Entrepreneurs in Managerial Capitalism

Yara Zeineddine

Working Paper

Introduction

While much of the Cambridge capital controversies centred around the *measurement* of capital (particularly in aggregate production function models), Joan Robinson, and later Geoff Harcourt, claimed that the institutional *meaning* of capital was an important, and overlooked, source of controversy. Joan Robinson is well-known for questioning the “meaning” of capital during the years of the third capital controversy (1950s - 1970s) and after that (Harcourt 1969 p. 370, 1976 p. 19; Nell 1989 p. 384; Turner 1989 p. 113). Cohen and Harcourt (2005) argued that the origin of capital controversies lies in the tension between two aspects of capital: capital as a physical stock of equipment and capital as a monetary fund. Harcourt interpreted Robinson's question in relation to this duality (Nell 1970 p. 43). In her later writings, she indeed stated that her main point in the controversy was to highlight that the aggregate production function conflates the two different aspects of capital into one – which she called putty capital. She linked these two aspects to two neoclassical traditions: the Walrasian tradition, in which capital represents a stock of heterogeneous equipment, and the Marshallian tradition, where capital is regarded as a monetary fund. Robinson's claim that this was her main point might appear to be an overstatement. Of course, she did focus mainly on a methodological criticism of the aggregate production function (Dow 1980 p. 371; Cohen 1984 p. 621). However, I show in this article that her discussion of the two aspects of capital has important theoretical implications when compared with the categories of capital that she

developed in her own accumulation model<sup>1</sup>. In this model, Robinson did not refer to either of the traditions mentioned in her criticism.

This article explores Robinson's own answer to the question of the meaning of capital. Such a study requires an examination of the setting in which capital is accumulated. Indeed, Robinson considered that the definition of capital varies according to the type of economy considered (Robinson & Lutfalla 1977 pp. 166–167). Robinson's accumulation model describes the workings of managerial capitalism, which is characterized by the separation between the ownership and control of capital. This separation entails a distinction between rentier capital and entrepreneur capital.

The present work is far from being the first attempt to highlight Robinson's definition of capital. Here, however, I focus on the interactions between rentier capital and entrepreneur capital as resulting from the operation of capitalist "rules of the game". These rules of the game coordinate accumulation behaviours - which are not always compatible - on the scale of society as a whole. This is especially the case in the setting developed by Robinson, where capitalists are considered as having two aspects – that of entrepreneurs and that of rentiers. From that standpoint, the rules of the game are necessary for the accumulation of capital. This entails an institutional aspect of capital, the composition and accumulation of which is determined by such rules.

The article starts by introducing the role of the rules of the game in the study of capitalism, before moving on to discuss the workings of managerial capitalism by examining the roles of entrepreneurs and rentiers in accumulation. Finally, Robinson's criticism of putty capital and its implications are presented in the light of the previous exposition.

1- Capitalist rules of the game as a tool for the study of capitalism

In Robinson's view, accumulation is an historical process, in which capitalism is only one step. This setting entails specific rules that govern the human behaviour from which accumulation results. Hence, these rules play a central role in both explaining the workings of a capitalist economy and defining it.

### 1.1. From the analysis of capitalism to causal models of accumulation

Robinson wrote that "the proper subject matter of economics is an examination of the manner of operation of various economic systems, particularly our own" (Robinson 1979d p. 119), and indeed, capitalism was her subject of analysis (Harris 2005 p. 82). She thought of it as an inherently contradictory system that should be studied in order to discover the "principles of coherence [...] imbedded in its confusion" (Robinson 1969 [1956] p. 60). Her reading of Marx's *Capital* surely influenced her in that direction, as she concluded her *Essay on Marxian Economics* with the following statement:

Marx, however imperfectly he worked out the details, set himself the task of discovering the law of motion of capitalism, and if there is any hope of progress in economics at all, it must be in using academic methods to solve the problems posed by Marx. (Robinson 1966 [1942] p. 95)

Marx's view of economics as the study of capitalism clearly impregnated Robinson's own conception of economics throughout her intellectual path. She wrote that:

Marx had founded his analysis upon the English classics, but he imported into it an element that they lacked: the view of capitalism as a particular economic system that had grown up in particular historical circumstances and would evolve according to its own inherent characteristics. (Robinson 1979b p. 290)

After Marx, Robinson considered that “Keynes had reintroduced the concept of capitalism as a particular economic system, evolving through history” (Robinson 1979a p. 91). She had already argued that the view of capitalism as a “phase in historical development” (Robinson 1962a p. 74) was one of the main features of the Keynesian revolution. Such an interpretation might be considered an overstatement by some of Keynes’s readers. Obviously, it was influenced by Robinson’s own focus of interest. Nevertheless, Keynes had in fact emphasized the importance of theorizing the “world we live in to-day” (Keynes 1979 p. 78): he focused on the distinction between an entrepreneur economy and a neutral economy in some early drafts of *General Theory* published in volume XXIX of his *Collected Writings*<sup>2</sup>. He considered that classical economy “as exemplified in the tradition from Ricardo to Marshall” (ibid p. 67) dealt with a neutral economy, whereas his theory dealt with an entrepreneur economy. He compared his entrepreneur economy to Marx’s circuit of capital (M-C-M’) with regard to its specification of “the attitude of *business*” as “parting with money [...] in order to obtain more money” (ibid p. 81).<sup>3</sup> In her review of this volume, Robinson mentioned Keynes’s distinction as “very interesting” (Robinson 1980 p. 392) but without giving it any further importance. However, she used a similar argument to that of Keynes when she affirmed that Adam Smith’s economy of “artisans and small traders” (Robinson 1974b, in CEP V, 1979, p. 34) as well as Walras’s and Pigou’s representation of society as “a pure co-operative” (Robinson 1974a, in CEP V, 1979, p. 54) society fail to describe industrial capitalism<sup>4</sup>. Moreover, Robinson’s interpretation of the micro-macro split shows that she assessed economic theories based on the representation of society underlying them:

This [the concept of capitalism as a particular economic system] was no good to the new orthodoxy burgeoning in the United States. The subject was split into two parts; Keynes was safely corralled in the section called ‘macroeconomics’ while the main stream of teaching returned to celebrating the establishment of equilibrium in a free

market. This section of theory was described as ‘microeconomics’, that is, the study of prices of particular commodities and the behaviour of individual sellers and buyers [...]. (Robinson 1979a pp. 91–92)

Robinson considered that Keynes’s analysis looked at the economic system as a whole, whereas microeconomic theory dealt with independent buyers and sellers searching for the best way to allocate their resources. Her interpretation of Keynes’s approach suggests a parallel between the distinction between an entrepreneur economy and a neutral economy on one side, and macroeconomics and microeconomics on the other. It is close to that of Gerrard for whom in a neutral economy, economic behaviour is analysed in choice-theoretic terms as the outcome of optimizing allocative decisions, whereas in an entrepreneur economy, macroeconomic outcomes are explained with regards to the motivations and patterns of behaviour of economic agents (Gerrard 1995 p. 450).

Unsurprisingly then, Robinson’s discussion of accumulation deals with “a capitalist economy [which] has long been established” (Robinson 1969 [1956] p. 73). Her purpose was “to find the simplest kind of model that will reflect conditions in the modern capitalist world” (Robinson 1962b p. 34). Such a model should nonetheless be “applicable to actual history”, which means that a “causal story [...] has to be told” (ibid pp. 25-26). From this standpoint, an economy follows a certain path “because the expectations and behaviour reactions of its inhabitants are causing it to do so” (ibid p. 26). Those behaviours are not determined independently from the institutional environment in which they occur. Indeed, Robinson considered it “impossible to discuss the behaviour of individuals in a vacuum without saying anything about the legal, political and economic setting in which they are to operate” (Robinson 1979a p. 92). Consequently, the institutional environment to which the model applies has to be specified:<sup>5</sup>

To build up a causal model, we must start [...] from the rules and motives governing human behaviours. We therefore have to specify to what kind of economy the model applies, for various kinds of economies have different sets of rules. (Robinson 1962b p. 34)

Causality is characterized here by the understanding of the “rules and motives” governing the human behaviour that determines the path of the economy. Indeed, individual behaviours mainly result from the operation of those rules rather than from an allocative optimizing process. This is the consequence of considering an economy as embedded in an institutional environment, i.e., looking at an economic system in its entirety. Hence, discussing accumulation in a capitalist economy requires one to determine the rules prevailing in this system. These rules seem to have two functions in Robinson’s analysis. The first is analytical, as they allow to explain the workings and evolution of a given economy by influencing its path. The second is definitional because, as different kinds of economies have different sets of rules, the latter become a defining characteristic of the former.

The nature and functioning of capitalist rules are discussed in *The Accumulation of Capital*. There, Robinson distinguished a peasant economy from an industrialized economy. Far from being of minor importance, this distinction allowed her to single out the features of a capitalist system.

## 1.2. Morality and the rules of the game

Robinson’s discussion of the determinants of behaviour is conducted on two levels: that of a peasant economy and that of an industrial economy. In a peasant economy, accumulation is ruled by the peasant morality – which should be understood as a rule of behaviour. The peasant economy is obviously a theoretical abstraction. It highlights the need for the economy

to coordinate as a whole. On such a scale, the multiplicity of actors implies that there is no one 'morality' that could prevail over another. Thus, economic life is organized through the intervention of the rules of the game. Robinson defines what she calls the peasant morality as follows:

The morality of a peasant [...] is to put back into the soil what he takes out of it, and to set aside seed from each harvest, so as to preserve productive capacity for the future, not only for his lifetime, or his children's lifetime, but for the future as such. (Robinson 1969 [1956] p. 33)

On the peasant's scale, the accumulation of capital is a recurrent process of surplus reinvestment. The peasant economy is also developed in Eatwell and Robinson's textbook (Robinson & Eatwell 1976 [1974] p. 6). There, it is presented as a subsistence economy based on intergenerational solidarity among the members of each family of peasants. The peasant's morality is driven by the preservation of his heritage rather than the search for profit. According to Robinson, an economy must be impregnated by the peasant's morality in order for it "to be viable over a long run, with peaceful conditions" (Robinson 1969 [1956] p. 34). She contrasted such a morality with predatory behaviour and the exploitation of natural and inherited resources which are observed at a national scale. On such a scale, the peasant's morality is not applicable.

This is especially the case in a capitalist economy where conflict is a feature of the system. This conflict is entailed by "the divorce between work and property, which makes large-scale enterprise possible" (ibid p. 60). In a capitalist economy, Robinson distinguished two groups involved in accumulation: entrepreneurs and rentiers, who each follow their own moralities. On the scale of the economy as a whole, accumulation behaviours are coordinated by the rules of the game, which "have been developed precisely to make accumulation and technical

progress possible in conditions of uncertainty and imperfect knowledge” (ibid p. 60). These rules of the game are “largely concerned with the manner in which work and property are combined in production and with the rights that they give to shares in the proceeds” (ibid p. 4). From this definition, property rules – as in private ownership of the means of production – appear as a central element of the rules of the game. Such a view is supported by Robinson and Eatwell’s statement that social systems are mainly distinguished by the type of property rules that they adopt (Robinson & Eatwell 1976 [1974] p. 80). This does not mean, however, that the rules of the game are confined to property rules, nor that capitalism is only characterized by private ownership of the means of production in Robinson’s model. Indeed, private property exists in Robinson’s peasant economy. The main difference between such an economy and a capitalist one is hence the “divorce between work and property”.

If Robinson had referred to Marx’s distinction between a simple commodity economy and a capitalist economy, her exposition might have been clearer. Marx defined simple commodity production “solely in terms of horizontal social relations” while he considered capitalist economies as “involving vertical as well as horizontal social relations” (Roosevelt 1975 p. 13). A simple commodity economy is a theoretical abstraction (Rubin 1990 [1923] p. 257) – and not an historical state – where producers own their means of production (Bühr 2001 p. 67). This parallel highlights an important difference between the peasant economy and capitalism: the fact that the final output is the fruit of interdependent activities in the latter, and not the result of the work of independent producers as in the former. This is an important feature of capitalism, which supports a view of production as a social activity rather than a dependency relationship between an isolated individual and capital (Hunt 1983 pp. 337–338). Such a view entails an inquiry of the organization of production in Robinson’s accumulation model, calling for us to examine the role of capitalists in this process.

## 2- Entrepreneurs versus rentiers: how Robinson defined capital

Under the effect of the capitalist rules of the game, capitalism enters a specific period - managerial capitalism - where private ownership of the means of production becomes private ownership of the financial funds necessary to their acquisition. This occurs as private property shifts from the hands of entrepreneurs, who become salaried managers, to those of the rentiers who represent shareholders. More broadly, rentiers are the class of society who live on the interest they receive on the bonds and credits they possess. From this standpoint, the accumulation of capital is a process that involves both entrepreneurs and rentiers, which implies a distinction between rentier capital and entrepreneur capital.

### 2.1. Managerial capitalism as the outcome of the capitalist rules of the game

The relationship between rentiers and entrepreneurs is explained by the working of the capitalist rules of the game, which can be summarized as follows:

- Capitalist the rules of the game foster large-scale production and developed techniques. This induces the concentration of production which in turn requires the concentration of its control. (Robinson 1969 [1956] p. 6)

- Capitalist the rules of the game encourage the establishment of debt ownership, the income one obtains from financial property. (ibid p. 7)

Under capitalist the rules of the game, large-scale production is more advantageous for 'technical economies' and 'strategic power' on the market, so production becomes more concentrated.<sup>6</sup> This requires a new form of organisation of production, which calls for the development of a class of managers to control it. In addition, the development of the financial market and financial institutions enables the supply of the necessary financial funds for

investment. Thus, the status of the entrepreneur assumes a managerial nature, whereas the rentiers provide the funds for productive investment. Robinson's entrepreneur is therefore different from Keynes's "old style entrepreneur managing a business that he built up by his own resources" (Robinson 1966 p. 64). He is more of a salaried employee managing a company owned by rentiers.

This is reminiscent of Marx's view that the development of capitalism leads to what is known as the divorce between the ownership and control of capital (Foster 1990 p. 60; Tomlinson 1990 p. 189).<sup>7</sup> Indeed, De Vroey showed that in book III of *Capital*, Marx suggested a separation between two roles played by capitalists: the contribution of funds by the "money-capitalist" and their utilization in the production process by the "industrial capitalist" (De Vroey 1975 p. 2). This separation is complete in the specific period of capitalism described by Robinson where "[...] industry and trade are now dominated by *managerial capitalism*, that is by companies nominally owned by a shifting population of shareholders and actually run by salaried staff" (Robinson 1966 p. 64). Thus, Robinson's accumulation model brings into play two distinct aspects of capitalists, as she considered "capitalists in their aspect as owners of wealth, as opposed to their aspect as entrepreneurs" (Robinson 1969 [1956] p. 247). This opposition stems from the fact that the rentier morality and the entrepreneur morality are not always compatible,

The rentier morality which inculcates thrift and the acquisition of safe placements partly supports and partly frustrates the morality of entrepreneurs, which inculcates the accumulation of ever-increasing productive capacity. (ibid p. 53)

Rentiers search for the best return on their financial investments, whereas entrepreneurs are concerned with the growth of their firm. This brings about a sharp distinction between entrepreneur capital and rentier capital.<sup>8</sup>

## 2.2. The distinction between entrepreneur capital and rentier capital

Broadly speaking, the capital of an entrepreneur consists in the productive capacity of the firm he runs, while the capital of a rentier consists in the financial investments he has made. The property relationship – in the form of private ownership – only defines the latter aspect of capital, while the former is defined by a control relationship. Robinson considered that “the entrepreneurial aspect of capital is dominant” in her accumulation model, which means that “profit is desired mainly as a means of accumulating capital, rather than capital being desired mainly as a means of consuming profit” (ibid p. 393). She justified this view by saying that if it had not been so, the system would not have been “tolerated so long [nor] flourished so well” (ibid p. 392). This justification is based on theoretical, ideological, and practical grounds.

On the level of theory, Robinson considered the expansion of shares and bonds as a form of credit; since she assumed it to be “convenient to include financial incomes with rentier incomes” (ibid p. 250). Such a view is similar to that of Hilferding – for whom “the shareholder is, in a sense, a money capitalist who does not expect more than interest on his invested capital” (Hilferding 1981 [1910] p. 124) – although she did not mention him. Her definition of rentier capital is thus very close to Marx’s and Hilferding’s definition of “fictitious capital”. This notion refers to interest-bearing capital which is accumulated outside the production process (De Brunhoff 1990 p. 187). Indeed, Robinson considered that owning capital is not a productive activity, since capital only becomes productive once it is operated by labour (Robinson 1966 [1942] p. 18).

The ideological argument stems from the foregoing. Since rentier capital does not contribute to the production process, the only justification for rentier income is private ownership of the

funds financing productive investments. Robinson questioned the legitimacy of income from property, describing it as “unearned income”:

Rentier property, as a social institution, provides a number of conveniences. [...] For the most part, however, its function is only to provide what the Inland Revenue rightly described as *unearned income* [...]. (Robinson 1966 p. 64)<sup>9</sup>

The practical argument concerns the efficiency of funding productive investment through rentier capital. Not only does rentier capital not contribute to the actual production process, its operation entails certain costs.

The contribution which the capital market makes to providing finance for industry is very small in relation to the resources that go into keeping up the whole affair. (ibid p. 65)

Robinson suggested that such a funding system might not be desirable. She even went a step further by stating that it is not even necessary:

A system without ‘capital’ in the sense of private property in finance proved highly successful in accumulating ‘capital’ in the sense of industrial equipment. (Robinson 1970b p. 80)

Hence, the fact that Robinson considered the entrepreneurial aspect of capital dominant stems from the fact that she viewed rentiers as a sort of leisure class which is not needed for accumulation. Indeed, she defined accumulation as a rise in the investment in entrepreneur capital resulting from entrepreneurs’ decisions. Rentier capital only plays a role in providing finance for such investment. Moreover, Robinson did not think that such a funding system is needed, as she clearly stated her preference for state funding (Robinson 1966 p. 67) or reinvestment out of retained profits (Robinson 1969 [1956] p. 47).

Such a position has important implications regarding the definition of capital. Robinson defined it as “physical productive resources, which would have the same significance in an artisan, a capitalist and a socialist economy” (Robinson 1953-54 p. 86). This does not mean that she considered capital as having the same composition in different settings, but rather that she defined it as the productive capacity – physical resources allowing production – of a given society. In the peasant economy, capital is the fertility of the soil. In an industrialized economy, productive capacity consists in:

[...] a stock of long-lived equipment which must be maintained by repairs and renewals, and which can function only in an environment in which the rules of the game in respect to property, trade and the financial system are accepted and maintained in working order. (Robinson 1969 [1956] p. 34)

Capital in an industrialized economy is the stock of equipment goods engaged in production. Such a stock can only function, Robinson tells us, in an environment where the rules of the game are “accepted and maintained in working order”. This arises from the fact that accumulation of capital is conditioned by the institutional environment in which it occurs. In managerial capitalism, this statement can be interpreted as the condition that allows entrepreneurs to manage a stock of equipment that is legally owned by rentiers. Consequently, capital has an institutional aspect<sup>10</sup> determining both its composition – which differs between a peasant economy and an industrialized economy – and its accumulation.

Another implication for the definition of capital is that Robinson did not consider rentier capital as a component of an economy’s productive capacity, although she referred to it as capital. Indeed, she used the expression “capital as a factor of production”, or “capital regarded as a factor of production” (Robinson 1953-54 p. 82, 1959 p. 157, 1971 p. 597, 1982 p. 179) to refer to capital goods as distinct from rentier capital.<sup>11</sup> Such a distinction helps to

elucidate her affirmation that “‘Capital’ is not what capital is called, it is what its name is called” (Robinson 1953-54 p. 83). This puzzling statement can be interpreted as a way of acknowledging that the use of the term capital can refer to an economy’s productive capacity as well as the means for financing it. However, the two aspects should not be confounded, as she pointed out during the years of the Cambridge controversy.

### 3- The rejection of putty capital and the consequences for the relationship between profit and accumulation

The previous section highlighted the institutional aspect of capital in Robinson’s definition. This aspect is missing from the neoclassical representation of capital criticized by Robinson during the Cambridge controversy. This facilitated the confusion between money capital and capital goods which had important implications for the distinction between saving and investment on the one hand, and for distribution theory on the other.

#### 3.1. Putty capital and its implications for distribution and time in capital theory

Robinson’s 1953-54 article is considered the starting point of the Cambridge controversy in the public domain. In this article, she questioned the concept of capital as represented by the symbol  $C$  in the aggregate production function:

Moreover, the production function has been a powerful instrument of miseducation. The student of economic theory is taught to write  $Q = f(L, C)$  where  $L$  is a quantity of labour,  $C$  a quantity of capital and  $Q$  a rate of output of commodities. He is instructed to assume all workers alike, and to measure  $L$  in man-hours of labour; he is told something about the index-number problem involved in choosing a unit of output; and

then he is hurried on to the next question, in the hope that he will forget to ask in what units C is measured. Before ever he does ask, he has become a professor, and so sloppy habits of thought are handed on from one generation to the next. (ibid p. 81)

Even though this criticism resulted in a discussion concerning the measure of capital, it does not seem to have been Robinson's main concern. In fact, she discussed the question in several contributions (Robinson 1953-54, 1959, 1969 [1956], 1971), but she considered that the answer to this question depends upon the assumptions of the model. Hence, she simply measured capital goods in terms of wage units and called it real capital.<sup>12</sup>

The value of the stock of capital can be reckoned in any convenient *numeraire*, such as a man-hour of labour or a basket of consumer goods. (Robinson 1964 p. 26)

As Harcourt stressed, Robinson's inquiry was more about the meaning of capital, which is at the least a different approach to the problem of its measurement. The expression meaning of capital refers to the aspect of capital, i.e., its composition. In her accumulation model, Robinson used the concepts of entrepreneur capital and rentier capital which depend on the rules of the game. In other writings – which can, roughly speaking, be considered as a part of her negative contribution to capital theory – she also mentioned two aspects of capital, but with respect to two “pre-Keynesian” traditions (Robinson 1971 p. 597). The first is the Walrasian tradition in which capital is constituted of heterogeneous durable goods and equipment.<sup>13</sup> The difficulties related to this concept of capital are well-known, especially regarding the possibility of applying marginal distribution theory to it.<sup>14</sup> The second tradition is the Marshallian tradition which considers capital as a sum of money<sup>15</sup> and return on capital as the reward of waiting. Here, the factor of production is waiting instead of capital goods. To some extent, rentier capital can be compared to Marshall's conception of capital and entrepreneur capital to that of Walras. But Robinson's accumulation model accounts for both

aspects of capital and explains the relationship between them through the institutional aspect of capital. In a postscript to her 1953-54 article, Robinson explained her statement concerning the unit of measure of capital as pointing out the failure of the aggregate production function to distinguish between the two different aspects of capital (Robinson 1978 p. 90). She considered that in such a function, capital refers to a stock of durable goods following Walras, but it is treated as if it were a homogenous entity, namely money (Robinson 1970a p. 311, 1971 p. 598). She called this concept of capital 'leets' capital, in reference to James Meade (Robinson 1970a p. 312), or sometimes putty or jelly capital:

When the question was raised in Cambridge (England) twenty years ago, the orthodox answer was: let us pretend that 'capital' consists of a physical substance that it is just like finance so that the problem does not arise. It is homogeneous, divisible and measurable, and can be embodied in any variety of equipment, instantaneously, without cost and without change in the initial quantity. (Robinson 1979a p. 95)

Whether this is an *a posteriori* justification or not, it is consistent with Robinson's treatment of capital in 1956. The concept of putty capital has two important implications regarding the role of time in capital theory and distribution. Robinson seemed to be aware of those issues even before the controversy started:

Owing to the ambiguous nature of the word *capital*, there is a tendency to confuse the supply of finance with the supply of saving. (Robinson 1953 [1952] p. 80)

In the Robinsonian scheme of thought, investment is financed by money capital - which she sometimes called finance, i.e., the financial means that allow investment. Net investment then creates an equivalent amount of saving, which helps to reconstitute the stock of money capital. Henceforth, investment in a certain period is not financed by savings from that period, but rather by the supply of money capital that has been created by past savings (Robinson &

Eatwell 1976 [1974] pp. 271–272). Putty capital therefore abolishes time from the analysis of capital because it merges both aspects of capital into one entity. Robinson explained that capital starts out as a sum of money, but once the investment is made, it becomes capital goods (Robinson 1953-54 p. 84). Consequently, two time-lapses should be taken into account. First, the time-lapse in which savings are converted into a supply of money capital, through the use of savings for the acquisition of bonds and shares on financial markets. Second, the time-lapse in which money capital becomes capital goods through investment.

There has been a lot of tiresome controversy over this putty. The bastard Keynesians try to make out that it is all about the problem of 'measuring capital'. But it has nothing to do either with measurement or with capital; it has to do with abolishing time. (Robinson 1974c, in CEP V, 1979, p. 173)

The two aspects of capital cannot coexist in time, because the act of investment - which Robinson defined as the use of finance for creating equipment goods - is not simultaneous with the act of saving. Confounding investment and saving has an important consequence because it consolidates the view that accumulation results from a society's total savings.

He [Keynes] pointed out that accumulation depends upon decisions about investment taken by business firms and governments, not by decisions about saving taken by households, and he drew a clear distinction (which was confused in the old orthodoxy) between interest, as the price that a businessman pays for the use of finance to be committed to an investment, and profit, which is the return that he hopes to get on it. (Robinson 1979c p. 59)

Conflating the two aspects of capital also paves the way for the confusion between profit, which is the return on productive investment, and interest, which is the reward for financial placement. The distinction between profit and interest is important for Robinson, because it

allows us the separation of the return on capital goods from the income from property thus acknowledging that profits result from investment.

The distinction which Keynes had drawn between interest - the price of loans - and profit - the return on investment - was muddled up again and the rate of interest was taken to measure the productivity of this imaginary substance. (Robinson 1979a p. 95)

From this confusion arises the idea that the marginal productivity of capital can be measured by the interest rate. In Robinson's accumulation model, interest is an obstacle for investment because it is deducted from retained profits. Hence, her discussion of the relationship between profit and accumulation accounts for the distinction between rentier capital and entrepreneur capital.

### 3.2. The double-sided relationship between profit and accumulation

Robinson was very critical of the idea that accumulation of capital decreases the rate of profit. She considered that the relationship between accumulation and profit is more complex. This is mainly due to the effect of technological progress resulting from accumulation:

Given the degree of competition and the rate of growth of population, the course of the rate of profit over the long run (abstracting from short-period fluctuations) depends on the interaction between technical progress and the rate of accumulation. Technical discoveries (unless extremely unfavourable to capital) are continuously tending to raise the rate of profit and accumulation is tending to depress it. (Robinson 1953-54 p. 103)

This idea that accumulation decreases the rate of profit can be found in Ricardo's and Marx's writings, which Robinson criticized on this point. However, she distinguished classical

diminishing returns from that following a rise of the ratio of real capital to labour along the production function as she wrote that:

Classical diminishing returns arise from an increase of population relatively to constant natural resources, which may well correspond to the facts of life, whereas the diminishing returns shown in the production function are the result of the artificial assumption of a given state of knowledge. (ibid p. 94)

Indeed, her most virulent criticism was directed towards the following analysis: this inverse relationship between accumulation and profit results from the comparison of equilibrium positions along the production function.

From the proposition that, in equilibrium conditions with identical technical possibilities, a larger ratio of ‘capital’ to labour is associated with a lower rate of profit and higher real wages, the pseudo-causal theorem is deduced that accumulation of capital tends to lower the rate of profit. (Robinson 1962b pp. 30–31)

The main issue with such an analysis is that it represents accumulation as the movement from one point to another along the production function. Considering that it is possible to go back and forth along this function, time is reversible in such a setting, which means that it cannot represent a process taking place in time. Robinson discussed this issue through her well-known distinction between logical time and historical time.<sup>16</sup> Logical time is reversible, but in historical time, “today is a break in time between an unknown future and an irrevocable past” (ibid p. 26). This means that the present is influenced by the past and the future is uncertain, which entails that expectations are not always met and play an important role in the analysis (Asimakopulos 1991 pp. 3–10). Another consequence of historical time is that capital goods exist in a way that embodies the state of technical knowledge and are not transferable from one use to another without costs. Technical conditions are the result of past changes and

different techniques can coexist at a moment of time (Harris 2005 p. 95). Hence, historical time supposes the heterogeneity of capital goods and of techniques instead of putty capital and constant technical progress. Indeed, Robinson argued that ““a given state of technical knowledge” consists simply of a production function in terms of leets and labour” (Robinson 1970a p. 312).

As a consequence, Robinson considered the relation between accumulation and profit as bidirectional. On the one hand, the rate of accumulation depends on the expected rate of profit: the higher the expected rate of profit, the higher the rate of accumulation. On the other hand, the rate of profit is positively linked to the rate of accumulation: the higher the rate of accumulation, the higher the realized rate of profit.<sup>17</sup> The two relations combined determine what Robinson called the short-term entrepreneurial equilibrium. This short-term equilibrium, represented as the intersection between the two relations, determines the desired rate of growth.<sup>18</sup> This desired rate of growth depends on the ‘animal spirits’ of entrepreneurs because it is determined by the relation of expected profit to accumulation. The desired rate of growth also depends on the thriftiness of rentiers, whose saving decreases the realized profit rate associated with a certain accumulation rate. As seen in the previous section, the income of rentiers is deducted from the retained profits of the firm, while, however, providing the necessary finance for investment.

Thrift, in short, makes possible a high rate of accumulation and yet sets obstacles in the way of achieving it. This paradoxical operation of the capitalist rules of the game is one of the main subjects which we hope to be able to elucidate by economic analyses. (Robinson 1969 [1956] p. 55)<sup>19</sup>

The desired rate of growth can be interpreted as accounting for the motives and behaviours of rentiers and entrepreneurs. From this starting point, accumulation may take different paths,

depending on the comparison between the desired rate of growth and the actual rate of growth. Robinson considered that the latter is determined by population growth and technical progress. In a sense, the comparison between the desired rate of growth and the possible rate of growth can be understood as the comparison of accumulation behaviours with the reality of technical progress and population growth. As seen previously, these behaviours are governed by the rules relative to a specific economy. Hence, Robinson's model accounts for the institutional environment as well as for the technical conditions in which accumulation occurs.<sup>20</sup>

## Conclusion

In her discussion of accumulation, Robinson explored the workings of managerial capitalism. She characterized this specific period of capitalism by explaining the development of the capitalist rules of the game leading to its emergence. This development entailed a sharp separation between the ownership and control of capital which forms the basis of Robinson's distinction between rentier capital and entrepreneur capital. Robinson did not think that the rentier aspect of capital would ever be dominant – maybe because she was against it. However, recent theoretical developments suggest that it did become dominant as capitalism entered a new period: financialization. Robinson may have failed to predict this, or at least she may have hoped for another outcome. Nevertheless, her idea that the development of an economy can be explained by the operation of the rules of the game prevailing in it can be of great use as a tool for periodizing history.

## References

- Asimakopulos, A. (1984). Joan Robinson et la théorie économique. *L'Actualité économique*, **60**(4), 521–552.
- Asimakopulos, A. (1989). Kalecki and Robinson: An “Outsider’s” Influence. *Journal of Post Keynesian Economics*, **11**(2), 261–278.
- Asimakopulos, A. (1991). *Keynes’s general theory and accumulation*, Cambridge: Cambridge University Press.
- Bihr, A. (2001). *La reproduction du capital: Prolégomènes à une théorie générale du capitalisme*, Vol. I, Lausanne: Page Deux.
- Cartelier, J. (1995). *L'économie de Keynes*, Bruxelles: De Boeck Université.
- Cohen, A. J. (1984). The methodological resolution of the Cambridge controversies. *Journal of Post Keynesian Economics*, **6**(4), 614–629.
- Cohen, A. J., & Harcourt, G. C. (2003). Retrospectives: whatever happened to the Cambridge capital theory controversies? *The Journal of Economic Perspectives*, **17**(1), 199–214.
- Cohen, A. J., & Harcourt, G. C. (2005). Introduction: Capital Theory Controversy: Scarcity, Production, Equilibrium and Time. In *Capital Theory*, Cheltenham, UK: C. Bliss, A. Cohen, and G.C. Harcourt, eds., Edward Elgar, pp. xxvii–xxlx.
- De Brunhoff, S. (1990). Fictitious Capital. In *The New Palgrave: Marxian Economics*, London and Basingstoke: J. Eatwell, M. Milgate and P. Newman eds., Macmillan Press Limited, pp. 186–187.
- De Vroey, M. (1975). PART I: The Corporation and The Labor Process: The Separation of Ownership and Control in Large Corporations. *Review of Radical Political Economics*, **7**(2), 1–10.
- Dillard, D. (1984). Keynes and Marx: A Centennial Appraisal. *Journal of Post Keynesian Economics*, **6**(3), 421–433.

- Dow, S. C. (1980). Methodological morality in the Cambridge controversies. *Journal of Post Keynesian Economics*, **2**(3), 368–380.
- Foster, J. (1990). Bourgeoisie. In *The New Palgrave: Marxian Economics*, London and Basingstoke: J. Eatwell, M. Milgate and P. Newman eds., Macmillan Press Limited, pp. 59–64.
- Gerrard, B. (1995). Keynes, The Keynesians and the Classics: A Suggested Interpretation. *The Economic Journal*, **105**(429), 445–458.
- Harcourt, G. C. (1969). Some Cambridge controversies in the theory of capital. *Journal of Economic Literature*, **7**(2), 369–405.
- Harcourt, G. C. (1976). The Cambridge Controversies: Old Ways and New Horizons-Or Dead End? *Oxford Economic Papers*, **28**(1), 25–65.
- Harcourt, G. C. (2001). Joan Robinson, 1903-1983. *Innovations*, **14**(2), 9–32.
- Harris, D. J. (2005). Joan Robinson on ‘history versus equilibrium.’ In *Joan Robinson’s Economics: A Centennial Celebration*, Cheltenham, UK ; Northampton, MA: B. Gibson eds., Edward Elgar, pp. 81–108.
- Hilferding, R. (1981) [1910]. *Finance capital: a study of the latest phase of capitalist development*, London ; Boston: Routledge & Kegan Paul.
- Hunt, E. K. (1983). Joan Robinson and the labour theory of value. *Cambridge Journal of Economics*, **7**(3/4), 331–342.
- Keynes, J. M. (1979). *The general theory and after: a supplement*, Vol. XXIX, London: D. Moggridge eds., Macmillan.
- Laperche, B. (2001). Les ressorts du monopole : Essai sur l’hérésie de Joan Robinson. *Innovations*, **14**(2), 33–54.
- Lavoie, M. (1987). *Macroéconomie: théorie et controverses postkeynésiennes*, Vol. 8, Dunod;[Saint-Jean-sur-Richelieu, Québec]: Éditions Bo-Pré.

- Lavoie, M. (1996). La traverse kaleckienne dans un modèle d'accumulation à deux secteurs avec coût complet : a la recherche d'une synthèse post-classique. *Cahiers d'économie politique*, **26**(1), 127–164.
- London, F. (1991). Théorie de la croissance: quelques développements récents [Première partie: la croissance récente]. *Revue de l'OFCE*, **36**(1), 157–211.
- Marshall, A. (2013) [1890]. *Principles of Economics.*, New York; Gordonsville: Palgrave Macmillan.
- Nell, E. (1989). Accumulation and Capital Theory. In *Joan Robinson and Modern Economic Theory*, Palgrave Macmillan, London: Feiwel G., pp. 377–412.
- Nell, E. J. (1970). A note on Cambridge controversies in capital theory. *Journal of Economic Literature*, **8**, 41–44.
- Rebeyrol, A. (1999). *La pensée économique de Walras*, Paris: Dunod.
- Robinson, J. (1953) [1952]. *Rate of Interest and Other Essays*, London: Macmillan and Co. Ltd.
- Robinson, J. (1953-54). The Production Function and the Theory of Capital. *The Review of Economic Studies*, **21**(2), 81–106.
- Robinson, J. (1959). Some problems of definition and measurement of capital. *Oxford Economic Papers*, **11**(2), 157–166.
- Robinson, J. (1962a). *Economic Philosophy*, London: C. A. Watts & Co. Ltd.
- Robinson, J. (1962b). *Essays in the Theory of Economic Growth*, London: Palgrave Macmillan UK.
- Robinson, J. (1964). Pre-Keynesian theory after Keynes. *Australian Economic Papers*, **3**(1–2), 25–35.
- Robinson, J. (1966) [1942]. *An Essay on Marxian Economics*, London: Palgrave Macmillan UK.

- Robinson, J. (1966). *Economics an awkward corner*, London: George Allen & Unwin Ltd.
- Robinson, J. (1969) [1956]. *The Accumulation of Capital*, London: Macmillan Press.
- Robinson, J. (1970a). Capital Theory up to Date. *The Canadian Journal of Economics / Revue Canadienne d'Economique*, **3**(2), 309–317.
- Robinson, J. (1970b). *Freedom and Necessity*, London: George Allen & Unwin Ltd.
- Robinson, J. (1971). The Measure of Capital: The End of the Controversy. *The Economic Journal*, **81**(323), 597–602.
- Robinson, J. (1974a). History versus equilibrium. *Indian Economic Journal*, **21**(3), 202–213.
- Robinson, J. (1974b). The abdication of neo-classical economics. In *Economic theory and planning: essays in honour of AK Das Gupta*, Oxford University Press, pp. 54–65.
- Robinson, J. (1974c). What has become of the Keynesian revolution? *Challenge*, **16**(6), 6–11.
- Robinson, J. (1978). *Contributions to modern economics*, New York: Academic Press.
- Robinson, J. (1979). *Collected Economic Papers*, Basil Blackwell, Vol. V, Oxford, pp. 90–98.
- Robinson, J. (1979a). The disintegration of economics. In *Collected Economic Papers*, Basil Blackwell, Vol. V, Oxford, pp. 90–98.
- Robinson, J. (1979b). The labour theory of value as an analytical system. In *Collected Economic Papers*, Vol. V, Oxford: Basil Blackwell, pp. 289–297.
- Robinson, J. (1979c). The meaning of capital. In *Collected Economic Papers*, Vol. V, Oxford: Basil Blackwell, pp. 59–71.
- Robinson, J. (1979d). Thinking about thinking. In *Collected Economic Papers*, Vol. V, Oxford: Basil Blackwell, pp. 110–19.
- Robinson, J. (1980). The Collected Writings of John Maynard Keynes. Volume XXIX: The General Theory and After - A Supplement. *The Economic Journal*, **90**(358), 391–393.
- Robinson, J. (1982). Spring Cleaning. *Wirtschaft Und Gesellschaft-WuG*, **8**(2), 175–182.

- Robinson, J., & Eatwell, J. (1976) [1974]. *L'économie moderne*, Paris; New York: McGraw-Hill.
- Robinson, J., & Lutfalla, M. (1977). Qu'est-ce que le capital? *Revue d'économie Politique*, **87**(2), 165–179.
- Roosevelt, F. (1975). Cambridge Economics as Commodity Fetishism. *Review of Radical Political Economics*, **7**(4), 1–32.
- Rubin, I. I. (1990) [1923]. *Essays on Marx's theory of value*, Montréal: Black Rose Books.
- Samuelson, P. A. (1962). Parable and Realism in Capital Theory: The Surrogate Production Function. *The Review of Economic Studies*, **29**(3), 193–206.
- Tomlinson, J. (1990). Finance Capital. In *The New Palgrave: Marxian Economics*, London and Basingstoke: J. Eatwell, M. Milgate and P. Newman eds., Macmillan Press Limited, pp. 186–192.
- Turner, M. S. (1989). *Joan Robinson and the Americans*, Armonk, NY: ME Sharpe.
- Veblen, T. (1908). On the Nature of Capital. *The Quarterly Journal of Economics*, **22**(4), 517–542.

#### Footnotes

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<sup>1</sup> Robinson's accumulation model was mainly developed in *The Accumulation of Capital and Essays in the Theory of Economic Growth* published in 1956 and 1962.

<sup>2</sup> Keynes defined a neutral economy – which he referred to as a “barter economy” in the earlier version of the draft – as one “in which the factors of production are rewarded by dividing up in agreed proportions the actual output of their co-operative efforts” (Keynes 1979 p. 66). This does not mean that he viewed it as a moneyless economy, but simply as one where money neutrality is assured. An entrepreneur economy is one where entrepreneurs hire the factors of production in exchange for money, and where the fluctuations in effective

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demand are a “dominating factor” in determining the level of employment. An important feature of the entrepreneur economy is therefore the fact that it is a setting where underemployment is conceivable, which makes it an important element of Keynes’s analysis (Asimakopulos 1991 p. 19; Cartelier 1995 p. 37).

<sup>3</sup> For an account of the integration of money into Marx’s and Keynes’s analyses, see Dillard’s paper (1984).

<sup>4</sup> Robinson’s argument appeared in papers published before the volume in question, which suggests that she was already aware of it. This is not surprising, as she attended Keynes’s lectures in 1933, the year when those drafts were written.

<sup>5</sup> Harcourt (2001 p. 23) highlighted the importance of the rules of the game in Robinson’s works from this perspective.

<sup>6</sup> For the link between Robinson’s and Marx’s views concerning capital concentration and the change of methods in Robinson’s works leading her to it, see Laperche’s paper (2001).

<sup>7</sup> According to Asimakopulos (1984 p. 522), Robinson drew the concept of a capitalist system and its rules of the game from Marx.

<sup>8</sup> Robinson compared this distinction to that of Veblen between “pecuniary” and “instrumental” capital (Veblen 1908 p. 518), although she admitted to not having read his works when she made it in 1956 (Robinson 1979d p. 116).

<sup>9</sup> In the notes section of the quoted book, Robinson referred to Keynes’s “euthanasia of the rentier”, stating that “this prospect now seems more remote than it did to him [Keynes].” (Robinson 1966 p. 88)

<sup>10</sup> This aspect of capital in Robinson’s works has already been highlighted, see Cohen and Harcourt (2003 p. 208).

<sup>11</sup> “How can finance be treated as a factor of production?” (Robinson 1978 p. 116)

<sup>12</sup> For an extended presentation of this concept, see Lavoie (1987 pp. 33–36).

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<sup>13</sup> Rebeyrol (1999 p. 167) showed that although capital goods are constituted by heterogeneous goods produced in differing conditions, the diversity of capital only appears from the point of view of capital supply, whereas it is considered in its entirety on the demand side.

<sup>14</sup> This was the aim of Samuelson's 1962 article that was dedicated to Robinson in response to her 1953-54 article. Samuelson wanted "[...] to show that a new concept, the "Surrogate Production Function", can provide some rationalization for the validity of the simple J. B. Clark parables which pretend there is a single thing called "capital" that can be put into a single production function and along with labor will produce total output (of a homogeneous good or of some desired market-basket of goods)." (Samuelson 1962 p. 195)

<sup>15</sup> "And this term [interest] is also used more broadly to represent the money equivalent of the whole income which is derived from capital. It is commonly expressed as a certain percentage on the "capital" sum of the loan. Whenever this is done the capital must not be regarded as a stock of things in general. It must be regarded as a stock of one particular thing, money, which is taken to represent them." (Marshall 2013 [1890] pp. 61–62)

<sup>16</sup> An account of the different interpretations of historical time in Robinson's works can be found in a paper by Lavoie (1996 pp. 128–129)

<sup>17</sup> Robinson's double-sided relationship between the rate of accumulation and the rate of profit is inspired by Kalecki's double-sided relationship between investment and profit, see Asimakopulos (1989).

<sup>18</sup> For an illustration, see Robinson's banana diagram (Robinson 1962b p. 48).

<sup>19</sup> Goodwin's growth model, which he developed in 1967, also emphasizes contradiction and conflict as the driving force of the cyclical mechanism of capitalist economies in the inspiration of Marx. However, Robinson mainly focused on the interactions between rentiers

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and entrepreneurs, while Goodwin dealt with the conflict between employers and salaried employees. See Lordon (1991 pp. 185-199).

<sup>20</sup> Robinson was inspired by Harrod's construction of his growth model, as she stated in the preface of *The Accumulation of capital*.