THE RATIONALE OF ORIGINARY INTEREST

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ABSTRACT

Judging from the tenor of some recent publications, time preference is still not generally accepted as the cause of originary interest. Up to the present day, the theory has not been formulated in a way to rest its case beyond doubt. In this paper it is argued that the time preference theory is deterministic and therefore incompatible with freedom of choice. The reason for originary interest must not be looked for in preferences, but in the logic of action itself. Based on the critique uttered in the earlier chapters, a positive and truly praxeological theory of originary interest is developed. The reason for originary interest has to be looked for in the value-spread between the psychic costs and the psychic revenues of actual human actions, not in contingent preferences.

KEYWORDS: interest theory, praxeology, time preference

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1. INTRODUCTION

In a recent article,[2] Professor Hülsmann proposed a radically new "Theory of Interest." He maintains that time preference is not, if at all, the sole cause of the phenomenon of originary interest. Instead, originary interest must be regarded as the fundamental value differential between means and ends in human action. The article has, up to the present day, not been the object of debate[3] although highly deserving of it. Hülsmann shows, contrary to Frank Fetter and Ludwig von Mises, that there is still a decisive step to make until a purely praxeological explanation of originary interest is reached. In the present essay it is argued that Hülsmann is correct in criticising the time preference theory. But the theory that he presents as a substitute does not totally satisfy either. He concentrates on the role of means and ends. The relationship between these two is, however, only of a *technical* character. The relevant *economic* relationship can only be found between the psychic costs and the psychic revenues of human action. It is there that the reason for originary interest can be found.

In chapter two, the concept of originary interest is shortly explained. Chapter three summarises Hülsmann's critique of the time preference theory. As the name of the latter already indicates, the phenomenon that the corresponding theorists have in mind is a matter of contingent preferences. It therefore does not rest on praxeological laws. Chapter four illustrates that Professor Hülsmann himself, although being aware of the problems, does not entirely succeed in providing a praxeological theory of interest. In the fifth chapter, the reason for originary interest is argued to lie in the value-spread between the psychic costs and the psychic revenues of human action, no matter what the preferences of the respective actors look like. The sixth chapter contains the essence of our *a priori* knowledge concerning the relationship between time and action. It explains why total interest payments increase with the passing of time. Chapter seven deals with actions that could be problematical to the proposed theory. Chapter eight explains the existence of monetary interest as a simple implication of the logic of action. On the basis of the theoretical results, chapter nine finally argues that the higher productivity of roundabout production processes is a result, not the cause, of the interest phenomenon.

2. ORIGINARY INTEREST

It has been recognised for centuries that the passing of time is not without influence on human behaviour. And this influence becomes especially visible in the phenomenon of *interest* that has to be paid for borrowed money. The longer the period of time that money is borrowed, the higher total interest payments become. Now, as Ludwig von Mises and other

2 See Hülsmann (2002).

3 An exception is Gunning (2005).

economists of the Austrian School show, the role of interest rate on loans is "one of complete and utter dependence on the rate of interest as determined"[4] elsewhere. According to them, the interest rate pervades the whole economy.[5] All producers in a market economy are producing because they expect to profit "from the *price spread* between their selling price and their aggregate factor prices."[6] These price spreads would exist even if there were no loan and no capital markets and, therefore, no plainly visible interest rate.7 Without these spreads, there would be no "incentive for investment"[8] in the first place. It is important to add that, in the eyes of the named theorists, these price spreads do not disappear in the *evenly rotating economy*.[9] In other words, they still exist in *equilibrium*, that is, after all "latent forces operating which will go on bringing about price changes" have acted out, and "provided no new data appear, the final price and the final state of rest are established."[10] The *equilibrium* spread between the prices of consumption goods and the sum of the prices of the factors of production employed in their production is called *originary interest*.[11] It is the task of this paper to explain this spread based on our *a priori* knowledge of human action.

3. TIME PREFERENCE AS THE REASON FOR ORIGINARY INTEREST

Depsychologising Frank Fetter's and Franz Čuhel's exposition[12] Mises[13] explains the phenomenon of originary interest by the existence of "time preference" – the fact that men "discount future goods as against present goods."[14] As this statement alone would be very general, he confines the discount to present and future goods "of the same kind and quantity."[15] This expression goes back to Eugen von Böhm-Bawerk. "The core and central

4 Rothbard ([1962] 2004, p. 425), see also Mises (1949, p. 524), Dorp (1937, p. 62), and Fillieule (2010, p. 126).

5 See Fillieule (2010, p. 124).

6 Rothbard ([1962] 2004, p. 423, emphasis by Rothbard), similarly Hülsmann (2002, p. 77).

7 See Rothbard ([1962] 2004, pp. 425 f.).

8 Ibid. (p. 425)

9 See Mises (1949, p. 521).

10 Both quotes from ibid. (p. 247).

11 See ibid. (p. 521), also Hülsmann (2002, p. 87), Fillieule (2005, p. 5).

12 See Pellengahr (1996, p. 11). Fetter's exposition can be found in Fetter (1915, chapter 20), Čuhel's remarks in Čuhel (1907, p. 304).

13 See Mises (1949, pp. 521 ff.).

14 Ibid. (p. 523)

15 Ibid. (p. 521)

point of interest theory," the latter expounds, is that, "as a general rule, present goods are worth more than future goods of the same kind and quantity."[16] Mises erases the expression "as a rule" and maintains that this statement holds generally.[17]

The expression "preference" as used by time preference theorists indicates that they consider time preference to be subject to human discretion. This would imply that one could have a preference for time or not, just as one can have a preference for apples or not. But this is not how Mises wants this term to be understood. "*Time preference is a categorial requisite of human action*."[18] It appears in all actions, and can therefore not be subject to human discretion.

If Mises now went on to show that time preference indeed is a "categorial requisite" of human action, our sole point would be that the expression "preference" is misleading. Yet, he does not succeed in formulating a praxeological theory of time preference.[19] This point has been brought home by Professor Hülsmann. Following the latter, Mises's explanation of time-preference can be called "the consumption theory of time preference."[20] It is based on the observation that people consume, which is an empirical or historical fact, but not a praxeological law. *People do not necessarily consume, i.e., they do not necessarily prefer present goods to future goods*. Even the consumption that is essential for survival is not forced on us by praxeological laws. There exist and always have existed men who value specific things more than their own survival. Hülsmann mentions warriors and martyrs.[21] The will to consume even the minimum, consequently, is not fixed in man by some praxeological law. Think only of the case of breathing. Man has to breathe to survive. Nobody would deny that. *But it is not the logic of action that forces us to breathe*. In the formulation Mises gave to it, time preference is a matter of contingent preferences, not a law of action.

At this point it seems to be indicated to go into an argument that many Austrian economists[22] discuss in order to support their theory of time preference. They try to demonstrate that their opponents violate the *ceteris paribus* condition. Therefore, they discuss the following objection: "In wintertime, why should anyone prefer ice delivered then [present good]

16 Böhm-Bawerk (1921b, p. 318, see also p. 327). Similarly Fisher (1930, p. 36).

17 See Hülsmann (2002, p. 79 f.).

18 Mises (1949, p. 481, emphasis added)

19 His arguments also do not seem to be accepted, or even recognised, by most other economists: "To our knowledge no one has ever provided convincing evidence that there is in fact normally positive time preference, or even specified an empirical test capable of` determining whether there is or not." (Olson/Bailey 1981, p. 1)

20 Hülsmann (2002, p. 79) Professor Gunning (2005, p. 83) is searching "in vain" for corresponding textual evidence. However, the passage by Mises he himself quotes seems to contain support enough for this interpretation.

21 See Hülsmann (2002, p. 80).

22 See e.g. Rothbard ([1962] 2004, p. 15 f., n. 15), Huerta de Soto (2009, p. 272, n. 9), Mises (1949, p. 486 f.), and Fetter (1915, p. 238).

to ice delivered in the following summer when the weather is very hot [future good]."[23] This argument is thought to provide an example of a situation where most people actually prefer a future good to a present good. According to the Austrian authors, however, this example violates the *ceteris paribus* condition. Consumption of ice-cream in winter, they say, is not the same good as consumption of ice-cream in summer.[24]

Yet, if we construct the same example in a way that doesn't violate the *ceteris paribus* condition, it cannot be inferred from the then prevailing situation that, now, it is perfectly clear that the present good is always preferred over the future one. It is not at all definitive that people having the choice between ice-cream this summer and ice-cream in the next one will always opt for the former. There is no praxeological law hindering people from preferring the latter option. *Human preferences are not subject to restrictions of this kind*.

The essence of this point is that time preference cannot be found in the relationship between different ends in mere human choices, like between consumption today and consumption tomorrow. There is no order of ends fixed in the value scales of individuals that forces them to consume at all in order to survive, i.e., that forces them to prefer present ends to future ones. This area is open to human discretion. Time *preference*, therefore, cannot be the cause of originary interest because it does not necessarily exist, at least in the way it is presented by Ludwig von Mises. Seeing this shortcoming, Professor Hülsmann[25] looks for originary interest directly in the relationship between ends and means, i.e. *in the logic of action itself*, not in the concrete content of human preferences.

4. ORIGINARY INTEREST AS FUNDAMENTAL VALUE-SPREAD BETWEEN MEANS AND ENDS

In his paper, Professor Hülsmann tries to develop a purely praxeological theory of interest without accounting for time preference as a fundamental cause of originary interest. For him, originary interest is to be found in the value-spread between the means and the ends of human actions. *"Originary interest is the fundamental spread between the value of an end and the value of the means that serve to attain this end."*[26] As reason for the fundamental value spread he mentions the fact

> *that the purpose of employing a means can only be to attain the end. The end is what really counts for the acting person, whereas the means is merely the thing or the action*

23 Shapiro (1974, p. 238)

24 See Pellengahr (1996, p. 63).

25 See Hülsmann (2002).

26 Ibid. (p. 87, emphasis by Hülsmann)

that is in between his present state of affairs and the state of affairs in which his end is realized. [...]

[I]t follows from this fact that, by their very nature, ends have, in the eyes of the acting person, a higher value than the corresponding means.[27]

In the following five pages Hülsmann explains why this fundamental value spread has been ignored so far.[28] His main point is that "it did not square with mainstream views on value and value imputation."[29] According to him, even most Austrian economists, following the lead of Carl Menger[30], have explicitly or implicitly assumed that the value of the ends "is fully imputed on the means,"[31] thereby not leaving any value spread that could explain the existence of originary interest.

By claiming this, Professor Hülsmann does not totally do justice to these authors. It is true, even Mises declares that "the value attached to a product is *equal* to the value of the total complex of complementary factors of production."[32] But it is too much to say, in reference to this statement, "that Mises, at least occasionally, did champion value imputation and that he therefore believed there was no value spread between means and ends."[33] For Hülsmann neglects a very important part of the sentence he himself quotes. Mises only holds this equality between means and ends with "due allowance being made for time preference."[34] We see that Mises actually pays attention to the value spread between means and ends. This can be seen even better in the following passage:

The prices of consumers' goods are by the interplay of the forces operating on the market apportioned to the various complementary factors cooperating in their production. As the consumers' goods are present goods, while the factors of production are means for the production of future goods, and as present goods are valued higher than future goods of the same kind and quantity, the sum thus apportioned, even in the imaginary construction of the evenly rotating economy, falls behind the present price of the consumers' goods concerned. This difference is the originary interest.[35]

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27 Ibid. (p. 86 f.)

28 See ibid. (pp. 88-92).

29 Ibid. (p. 88)

30 See Menger (1871).

31 Hülsmann (2002, p. 89).

32 Mises (1949, p. 332, emphasis added)

33 Hülsmann (2002, p. 89)

34 Mises (1949, p. 332)

35 Ibid. (p. 521)

The difference between Mises and Hülsmann is the cause to which they assign the spread between means and ends. Mises thinks that the cause is time preference, the fact that "present goods are valued higher than future goods of the same kind and quantity." For him, this relationship is fundamental. Hülsmann thinks that the spread between means and ends is fundamental and independent of the time factor.

If originary interest is defined, after Professor Hülsmann, as the value-spread between means and ends, two things are essentially needed as given (or at least determinable). These are the value of the means and the value of the ends. This is the weak spot of Hülsmann's theory of interest. The problem with his argument is the lack of an explanation of how the value of the means is derived. Without the latter one cannot say anything about the nature of the value-spread between means and ends. In addition, when originary interest is to be the *fundamental* value spread between means and ends, it is necessary that the value of the means is determined in a way independent of originary interest. It would be a logical circle to explain the value of the means as depending on originary interest, and then declare that originary interest depends, next to the value of the ends, on the value of the means. Now, Hülsmann himself provides the following explanation as to the value of the means:

> *If a means is ever chosen, then the only purpose of this choice is to attain the end it serves. The very nature of a means implies that it is not sought for its own sake.*[36]

Thus the value of the means depends on the value of the end it serves. It is not valued for its own sake. In consequence, before the fundamental value spread between means and ends can be explained, first of all the value of the means has to be clearly derived. And this can only be done by the help of (1) the value of the end, and (2) something in addition. Behind this 'something in addition', however, "lurks implicitly the rate of interest itself."[37] Hülsmann is trapped in a logical circle. He does not provide for an explanation of the value of the means that does not presuppose originary interest.

Yet, Professor Hülsmann's attempt to explain originary interest praxeologically does not consequently have to be dismissed. His critique of Mises's statements of time preference as the source of originary interest remains valid. Time preference as the reason of a value-spread between different ends (present and future ones) is a historical, not a theoretical explanation. The explanation of originary interest has rather to be looked for in the logic of action itself, and this is what Hülsmann has done. But, as was shown above, in his theory the means derive their value from the ends they serve in combination with an already existing originary interest. Contrary to his opinion, the value-spread between them is not self-explanatory. The value-difference between means and ends must *not be seen as explanans, but as an explanandum.*

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36 Hülsmann (2002, p. 87)

37 Fisher (1930, p. 55)

5. THE VALUE-SPREAD BETWEEN PSYCHIC COSTS AND PSYCHIC REVENUES

5.1 THE TECHNICAL VS. THE ECONOMIC POINT OF VIEW

Both theories mentioned so far each contain a fundamental truth. The time preference theory looks for originary interest in the relationship between two goods that are both valued independently of each other: a present good on the one hand, and a future good on the other. However, it is *deterministic.* It does not try to find originary interest in the *logic of action, but in contingent preferences.* Professor Hülsmann's theory has it the other way round. It correctly looks for originary interest in action, but does not consider that the value spread between means and ends is not fundamental but presupposes originary interest.

If there should happen to exist a fundamental value spread in human action over time, it must be found between two goods that are valued independently of each other. The value of the means employed cannot therefore be taken as part of the explanation. Man does not compare the means with the ends and then only acts insofar as the ends seem more valuable to him than the means he has to give up. That one needs the means A, B, and C in order to produce the consumer good D is *a technical, not an economic problem.*[38] In order to become an economic one, there would have to be a trade-off between the means and the end.[39] To employ the means, e.g. exchanging them, destroying them in production etc., however, does not mean to sacrifice them. There is no trade-off. It is the way they fulfil their destiny.[40] They *have* to be employed this way; they have to be used up – it is part of their *technical* function in production. Otherwise, their existence is good for nothing. To be true alternatives, the options the acting person faces must both be directly valuable to him. The problem that constitutes the subject matter of this chapter is to find these true alternatives that are both valuable to the acting person, and also to find the reason for the supposed value spread over time between these two. It is there that the reason for originary interest, if it should happen to exist, has to be looked for: *between something foregone in the present and something obtained in return in the future*, i.e. between what is given up in the present and what is obtained for it in the future.

38 See Plenge (1964, pp. 123 f.) and Liefmann (1923, p. 539).

39 See Liefmann (1923, p. 334).

40 Similarly ibid. (p. 557).

5.2 COSTS AS SACRIFICE OF POTENTIAL WELL-BEING

If the means one employs in action do not represent a sacrifice, is there a cost at all? Are action and production – we use both terms synonymously[41] – costless? Of course not. However, when man wants to obtain an end in the future he has to employ not only means of production like labour and instruments, but also something in addition. Between the setting in of any action and the attainment of the end sought there always elapses a fraction of time.[42] This time could well have been used to enjoy leisure.[43] If one uses this time to attain another end instead, one sacrifices the present enjoyment of leisure.[44] Time is available for every free man and not enjoying it as present leisure time definitely can be called a sacrifice – if we assume leisure to be a consumer good.[45] If leisure was not a consumer good, its employment in attaining future ends would not be a sacrifice. The relationship between its employment and the aspired ends would become a mere *technical one. Costs only arise whenever one has to abstain from consumption in order to attain one's end*. This does not only hold for leisure time, but for all sorts of consumption goods that cannot be consumed because of other ends pursued in action.

The forgoing of consumption is the sacrifice that we are looking for. In contrast to means or producer goods, consumer goods are valued by the actor even if they are not employed to attain different ends. That is why the actor considers them as consumer goods, i.e., as ends themselves. And not consuming them because of his actions is a sacrifice. Without this action they could have been consumed.

Notice that we are not employing the concept of opportunity costs here. Instead, we follow George Reisman who shows that this concept only refers to the fact that one has to choose between several alternatives. We refer the interested reader to his exposition. He argues that "[t]he doctrine of opportunity cost is not required for ascertaining how one might do better. Its sole contribution is obfuscation, not perception."[46] Furthermore, we do not try to make costs "objectively determinable."[47] This point has been raised against other theories that oppose the opportunity cost doctrine.[48] The adherents of the latter maintain that these theories lack the understanding of the fact that costs can only be felt by the person deciding and, therefore, are a subjective phenomenon.[49] This critique does not affect our

41 See e.g. Fillieule (2010, pp. 89 f.).

42 See Mises (1949, p. 476).

43 See Kirzner (1963, p. 145).☺

44 See Salin (1990, p. 16).

45 According to Rothbard ([1962] 2004, p. 43), leisure can generally be considered as a consumers' good.

46 Reisman (1998, p. 460). Also Huerta de Soto (2009) most of the time does without the opportunity cost concept.

47 Buchanan ([1969], 1999, p. 24)

48 Ibid. He especially thinks of the classics (pp. 37 ff.) and welfare economics (p. 49).

49 Baxter/Oxfeldt (1968, p. 307), see also Thirlby (1946, p. 33) and Mises (1949, p. 393).

notion of costs. The sacrifice of a consumer good is also subjectively felt. We do not claim to be able to measure the size of the sacrifice. It is a *psychic magnitude* that is connected to the consumer good that is given away. At this, what is and what isn't a consumption good is determined by the acting person.

5.3 PSYCHIC PROFIT

We come to the conclusion that, in evaluating human action, two things are essential: on the one hand, the consumer goods that one wants to attain in the future. The utility derived from these goods will be called *psychic revenues.*[50] On the other hand, there is the potential consumption that one has to sacrifice in order to obtain the psychic revenues. This sacrifice causes *psychic costs*.

Now, in order to interrelate these two with each other, we have to draw on an aspect of human action which is commonly accepted by economists. It says that people only act insofar as they think to improve their situation. "[A]ll acting is invariably induced by one motive only, viz., to substitute a state that suits the actor better for the state that would prevail in the absence of this action."[51] Or more succinctly: "The objective of all human action is to produce value."[52] It is not difficult to apply this insight to the problem at hand. By acting a person demonstrates that he values the aspired consumer goods more than the consumer goods he sacrifices. In the words of Huerta de Soto: "The actor is only willing to sacrifice his immediate consumption [...] if he thinks that by doing so he will achieve goals he values more."[53] The difference between the psychic revenue and the psychic costs we will call psychic profit.[54]

It seems necessary to mention that *the consumer goods in question are not, as in the time preference theory, "of the same kind and quantity."* We do not maintain a necessary relationship between present and future goods that somehow prevails in human preferences. *Preferences are not predetermined. What can be said, however, is that in actual action the acting person reveals that his preferences, at this moment and in this place, are constituted such that the good he is striving for is worth more to him than the costs he has to incur.* So our analysis holds true also for someone who sacrifices ten apples of high quality today in order to get one apple of low quality next month. *As long as this person acts this way* we know that, to him, the bad apple tomorrow is worth more than the ten apples today.

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50 See Rothbard ([1962], 2004, pp. 71 f.).

51 Mises (1962, p. 77), also Rothbard ([1962] 2004, p. 19).

52 Salin (1991, p. 10)

53 Huerta de Soto (2009, p. 276), similarly Kellenberger (1916, p. 92).

54 See Rothbard ([1962] 2004, p. 20).

5.4 THE PRICES OF THE FACTORS OF PRODUCTION

We are now able to explain how the psychic profit that we have found to be a necessary part of human action is reflected in the prices of the factors of production. For the time being, we abstract from the existence of money. The monetary rate of interest that manifests itself in the money price differential between the means of production and the consumer goods will be explained in chapter eight.

To recall, originary interest is the price spread between the factors of production and the consumer goods they produce that remains even in equilibrium. On first sight, the factors of production are only of *technical* importance. In order to build a house, one needs wood, bricks, three hundred hours of labour, etc. *Economically*, these producer goods concern the acting person only insofar as he has to sacrifice potential consumption, i.e., incur psychic costs, in order to employ them. For example, if he has to work himself, he has to abstain from enjoying leisure. If he also employs other production factors, be it labour services of other people, capital goods, or land, he probably has to pay a *price* for them, that is, some sort of good. *This price is what he has to trade off against the good he wants to obtain, not the paid services or goods themselves.* If the price he has to pay should happen to have no value to him as a consumer good, we are back to a technical relationship between means and ends. In this case he has to pay the price, yes, but so what? It does not cost him anything. An economic relationship would only be at hand if he eventually has to sacrifice a *consumer good* in order to obtain the good constituting the price in the first place. The important relationship is the one between costs and revenues, and not between means and ends. And costs mean consumption sacrifice.

The price of a means of production *reflects* the consumption sacrifice that was necessary to obtain it. Thus, the value-spread that we have discovered in human action between sacrificed and obtained consumer goods, i.e., psychic profit, is transferred to the relationship between the price of the means and the attained end. By giving away a consumer good in order to get a means of production, an actor demonstrates that the end that this means serves to attain is worth more to him than the consumer good he has given away. In other words, in human action, the future consumption good is valued higher than the price of the means.

5.5 PSYCHIC PROFIT IN EQUILIBRIUM

From the logic of action results our knowledge of the value-spread between the consumer good sacrificed today and the consumer good attained in return in the future. We know that this spread exists at least in the mind of the acting person, as the latter would not act if it didn't exist. This value spread is, however, not yet the originary interest that we are looking for. It is merely psychic profit.

> *The difference between the value of the price paid (the costs incurred) and that of the goal attained is called gain or profit or net yield. Profit in this primary sense is purely*

subjective, it is an increase in the acting man's happiness, it is a psychical phenomenon that can be neither measured nor weighed.[55]

Now, in some areas it will be much more advantageous to act than in others. The psychic profit will differ from person to person and from action to action. In a market economy, however, where goods are traded on markets and competition prevails, entrepreneurs are "intent upon profiting by taking advantage of differences in prices,"[56] in our case between the costs and the resulting revenues. "They buy where and when they deem prices too low, and they sell where and when they deem prices too high."[57] In this way, the price spread between the costs and the revenues aimed at will diminish until, in the final state of rest, it nearly disappears.[58] However, even in equilibrium nobody would act without expecting to profit from his action. Notwithstanding the competition, a spread will remain between the price of the means and the end. It is closely related to what we have called originary interest.

We have therewith traced back a price spread in equilibrium to an underlying value-spread between two goods that are both valued for their own sake. Of course, as we have not yet introduced money, it is impossible to express the difference between costs and revenues in any meaningful numbers.[59] When costs consist in leisure time and the revenue in apples, we cannot tell anything about the size of the "profit," even in the final state of rest. To express this spread in numbers and to call it "originary interest" it is necessary for costs and revenues to have a common denominator, for example money prices. However, even without such a denominator, we know that a spread must be there as long as people act and produce.

6. THE TIME SPAN BETWEEN COSTS AND REVENUES

On the one hand, costs precede revenues, and on the other hand, the acting persons expect the revenues to be worth more to them than the costs. With these results, we will be able to explain the existence of originary interest once we introduce money prices. However, another aspect of originary interest has been neglected so far. Any theory of originary interest has to account for the fact "that interest can never be calculated otherwise than

55 Mises (1949, p. 97). We fully agree with this statement, as far as it goes. The reader should keep in mind, however, that Mises generally has a different notion of cost in mind, i.e., opportunity cost.

56 Ibid (p. 325)

57 Ibid.

58 See ibid (p. 331).

59 See Liefmann (1925, p. 147).

with the formula capital multiplied by time multiplied by interest rate. Therefore, also the emergence of interest as costs of the capital-using production must somehow have something to do with time."[60] In other words, *why is it that the price spread between costs and revenues becomes larger the longer the time span between the two becomes?*

If one is to look for the reason of the *rate* of originary interest, the fact that every actor aims at the improvement of his situation by getting a surplus of his revenue over his costs does not suffice. It is impossible to explain with the help of this proposition why interest payments increase with time. The interest rate is calculated as percent *per annum*. If originary interest is somehow to be explained by the logic of human action, an analogous interrelation must be shown to exist in the latter as well, i.e., an increase of psychic profit with the passing of time. In terms of Professor Hülsmann's terminology, this theory would have to explain why the value-spread between means and ends grows larger the longer the period between the two gets. In our terminology, it would have to explain why the subjectively felt value-spread between costs and revenue grows larger the longer the action endures. If such an interrelation between the passing of time and action could be deduced, the basis for the explanation would have been found as to why interest rates are calculated per annum, i.e., per period of time.

Traces of such a theory can be found in the works of some Austrian economists. It is important to realise that the time preference theory of interest is not always expounded entirely homogeneously. Rothbard and Huerta de Soto do not consistently define time preference as a value-spread between ends at different points of time. Instead, according to Rothbard, "with any *given end* to be attained, the shorter the period of action, i.e., production, the more preferable for the actor. *This is the universal fact of time preference*. [...] *The less waiting time*, the more preferable it is for him."[61] Now, in the end, this slightly different formulation does not change the general argument of these authors at all. Its implication, both authors seem to think, is just the same as Mises's notion of time preference criticised above. Says Professor Huerta de Soto: "[T]o put it even more briefly, other things being equal, 'present goods' are always preferable to 'future goods.'"[62] Also Rothbard and Huerta de Soto both see time preference as a *preference* of one good or end over another one. Unfortunately, they equate the notion that man prefers a shorter period of action, or wants to attain his end as fast as possible, with the alleged higher valuation of present goods as compared to future goods.[63] *As has been shown by Hülsmann, the value difference between present and future goods does not exist by necessity. It is not a praxeological law*. Consequently, it cannot be used to substantiate the claim that man always wants to act as fast as possible, i.e., to attain his end in the shortest possible period of time.

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60 Strigl (1935, p. 210)

61 Rothbard ([1962] 2004, p. 15, emphasis by Rothbard). The same thought can be found in Huerta de Soto (2009, pp. 269 f.).

62 Huerta de Soto (2009, p. 270). See Rothbard ([1962] 2004, p. 15, n. 15) for a similar statement.

63 See also Hoppe (1983, p. 67).

The first part of their argument, however, seems to lie closer to our own opinion. They seem to try to explain time preference independently of the concrete content of ends, out of the pure logic of action itself. This becomes clear in the above quoted statement by Rothbard that "the shorter the period of action [...] the more preferable for the actor." However, if a praxeological explanation of originary interest should happen to exist, the claim that man always prefers a shorter period of action must be capable of being deduced from *a priori* valid axioms. In this case, the claim would be neither verifiable nor falsifiable, just like the proposition that action is the application of means to attain ends. Rothbard and Huerta de Soto have not provided us with the said deduction. And, as the still ongoing debate demonstrates, neither has anybody else, or, at least, the argument has not yet been formulated in a way to be self-evident. What is to be tried here is to find a formulation of the nature of the relationship between action and the passing of time that accords to Mises's dictum: "[T]he characteristic feature of a priori knowledge is that we cannot think of the truth of its negation or of something that would be at variance with it."[64]

"As far as man acts he acts in the shortest way possible" is neither self-evident, stated like this, nor does it follow obviously from a self-evident axiom. That is why the meaning of this sentence shall be clarified in the following discussion.

That man acts to achieve his ends in the shortest time possible is knowledge that is placed in our mind as we are, as Mises would say, acting and thinking beings[65] ourselves. We are acting beings ourselves, and therefore we cannot accept the fact that somebody else is acting in a categorically different way than we do. As Mises says,

> *[F]or the comprehension of action there is but one scheme of interpretation and analysis available, namely, that provided by the cognition and analysis of our own purposeful behavior.*[66]

Thus, if my assertion is correct and one indeed cannot help acting in the shortest time possible, it follows that one expects others to do the same. If, for example, we observe another person who does not seem to act as fast as possible, we automatically look for a *logical explanation* for this observation. We do not accept the fact *per se* because we are humans and cannot imagine a human not trying to attain his ends as fast as possible. *And we can only explain the fact that somebody does not try to attain his end as fast as possible by automatically assuming that he prefers to strive for another end at the same time.*

The point can be illustrated by an example from physics. Gravitation is recognised by man. If a ball one lets go of falls to the floor, one does not look for a special explanation for this observation. One counts on the law of gravitation to work, no matter whether one

64 Mises (1962, p. 18). See also Mises (1949, p. 34) and Hoppe (1995, pp. 22 ff.).

65 See Mises (1949, pp. 23 ff.).

66 Ibid. (p. 26)

has heard of the law before or not. Now, if the ball didn't fall downward but to the left, one would not assume that the law of gravitation has somehow stopped. Instead, *one would look for a reasonable explanation for this observation.* It is the same with the proposition that man acts in the shortest period possible to him. If someone appears to behave differently, we automatically look for a logical explanation for this fact. We do not accept it *per se*.

Propositions like this cannot be proved – they are synthetic and *a priori*. "Synthetic a priori propositions are those whose truth-value can be definitely established, even though in order to do so the means of formal logic are not sufficient (while, of course, necessary) and observations are unnecessary."[67] The best that we can do is to consider the arguments that will probably be put forward against it. It is to be hoped that the point will become clearer throughout this discussion.

First of all, some might argue that the opposite proposition could be defended by the same token. Man, one might say, always acts as *slow* as he can, and if he should happen to act faster, then it is only because he has other ends in his mind that induce him to accomplish the first one a little earlier. Against this argument one can consult one's inner experience. If we watch somebody doing something very slowly, we are, in order to explain this fact, automatically looking for reasons that are lying outside the realm of what we see him doing. He might be lazy or tired, he might try to look cool, be lost in thought, or whatnot. Yet, we would never say that he is acting slowly for no reason. It must be because the acting person is not only striving for one end, but for several ones. On the other hand, when we see someone acting very fast, we are not looking for an explanation that lies outside the realm of what he is doing at the moment. What we would say is: Yes, this person is very eager to attain his end! He even disregards other ends, like preserving a good image, not getting exhausted, or whatever, that others might not disregard in his situation. *In any way, acting extremely and unusually fast can be explained by the fact that the actor has no or only few other ends in mind, but obsesses about the one he is striving for right now.* No further explanation is needed than that he really wants to do what he is doing now, and that nothing else is important to him. *Only when someone is acting more slowly than he could we know that there must be something else, another end that hinders him from eagerly striving for the first one.*

A second argument that will probably be produced against our proposition is that there are countless cases where people are acting slowly or are letting time lapse before they even start to act. Someone who has to bake a cake by the end of the week, one might argue, will not produce it on Monday, but will possibly wait until the day when he has to deliver it. Doesn't this prove that, very often, people do not act in the shortest possible time? Yet, what these deliberations prove is simply that, very often, people have several ends in mind. The baker in the example does not only want to bake a cake, but to bake a cake that is ready at the end of the week. Probably he also wants this cake to be fresh and tasty, and therefore he will bake it just in time. What we do know is that man will not wait or act slowly for no reason. *We know, a priori, that man cannot arbitrarily choose to not act as fast as possible.*

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67 Hoppe (1995, p. 18). See there for further methodological details

7. PROBLEMATICAL ACTIONS

7.1 COINCIDING MEANS AND ENDS

Some further possible counter-arguments have to be considered before we get to explain monetary interest in chapter eight. First of all, what about actions that are pursued because they are valued themselves, i.e., what about those cases when means and ends coincide with each other? An example would be a piano player who enjoys playing the piano. A slightly different one would be the case where he plays not for himself but for a friend. Here means and ends still coincide, yet can easily be distinguished. By the way, the coincidence of means and ends cannot at all be regarded as a special case as one might think. In every act of consumption, like eating, drinking, playing games, means are employed to attain a coinciding end.[68]

As long as the action in question takes a *period* of time it does not pose any problems to our theory. Other things equal, the piano player will play his piece of music as fast as possible. If he does not play it quickly, it is not because of an inborn low time preference rate. We know, instead, that there must be a specific reason for it, that the piano player must have another end in mind in addition to simply "playing this piece of music." Probably the music sounds more enjoyable when performed more slowly, or it can be learned more easily this way. We couldn't explain the observation without being aware of a logical reason. So for these cases as well, our statement holds that the subjectively felt reduction of dissatisfaction is larger the longer the action endures. Otherwise, the actor would choose shorter paths of action.

The point is more difficult in cases of action that appear to have no time dimension. Hülsmann mentions spot market exchanges as an important example for actions that provide an agio for the parties involved yet have no time dimension.[69] He writes about coincidences when means and ends "coexist at the same *point of time*."[70] If he was correct, we would have to admit that the passage of time in action is not "the only determining factor, but merely one out of two causes operating to the same effect",[71] i.e., the reduction of dissatisfaction by action. There would be a value-spread between means and ends at a point in time. This could not be explained by our rate of originary interest that links the increase of value to the passage of time.

To illustrate his point that there can be a value-spread between means and ends, even if both coincide *and* do not extend in time, Professor Hülsmann uses the example of a barter exchange between two parties:

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68 See Barnett/Block (2007, p. 130)

69 See Hülsmann (2002, p. 92 ff.).

70 Ibid. (p. 94, emphasis added)

71 Ibid. (p. 92)

Any contractual agreement is made at a point of time, namely, at the point of time when both partners have agreed on the terms of the exchange. By its very nature, choice, in the sense this term is used in economic theory, is made at points of time rather than throughout a process. And because a market exchange involves the decisions of at least two people, the exchange becomes effective only when the last partner has made the decision to cede the title to his property in order to acquire title for another piece of property.[72]

This way of stating the argument takes the effect for the cause. It is surely correct to regard a person's choice as evidence for this person valuing the option he chooses higher than the one he does not choose. So if A hands over an apple to B in order to receive a tomato in exchange this obviously tells us that A and B both think to reduce their subjectively felt dissatisfaction this way. However, they do not achieve this by merely deciding to do so, or by contracting accordingly. *These* events indeed happen at points of time, not in periods of time. Yet, the parties improve their situation only if the exchange actually proceeds. And an exchange definitely requires at least one of them to act. And, different from decisions, an action cannot take place at one *point of time*. It extends in time.[73]

The choice to act in a specific way is only the consequence of an actor appreciating this way of action as being of advantage to him. The advantage, however, must be brought about by action, i.e., by a process that has a time dimension. At the instance of the decision one only chooses between different possibilities of action that *could* – if actually executed – decrease dissatisfaction.

7.2 DURABLE MEANS

Another problem arises because some means do not wear off by the attainment of a single end. They can be used to achieve several of them. Accordingly, it happens very often that someone employs a means that costs much more than the end it serves at the moment. This observation seems to contradict our theory of originary interest because, in these cases, the actor does not value the end more than the price of the means. The following lines will show, however, that this point does not pose any serious problems to our approach.

To give an example: it is impossible to deduce from the observation of someone eating dinner with golden dishes that this person values the meal (his end) more than the golden dishes (means). The dishes do not disappear because of the meal. Our gourmet only parts with the money he spends for the food, and, possibly, some milligrams of the gold in so far as the dishes wear off a little bit. After all, the dishes are available to be put to further uses after dinner in pretty much the same condition as before dinner. There can only be a value-spread between the end on the one hand and that part of the means perished during the

72 Ibid. (p. 95)

73 See Rothbard ([1962] 2004, p. 4).

attainment of this end on the other. If the dishes were indestructible, the notion of a value-spread between the dishes and the meal would become meaningless.

Important for our analysis is not the price of the means employed, but the price of that part of the means that has been used up in action – accountants call this the write-off. To stay in our example, the meal does not have to be worth more than the cost of the dishes, but only than the cost of that part of the dishes that wore off during the meal. At least the person employing the golden dishes thinks so; otherwise he would not employ them.

8. THE MONETARY RATE OF INTEREST

Finally, we are able to explain the emergence of a monetary rate of originary interest as the result of the logic of action. That businessmen orientate their actions by money prices and try to obtain an excess of monetary revenues over monetary costs is nothing more than a corollary of what has been said about action in general, namely that it implies an expected excess of psychic revenues over psychic costs.[74] This latter characteristic of human action, we have seen, lies behind what has been called psychic profit in equilibrium. Now, as far as this psychic phenomenon is concerned, it does not manifest itself in an observable way. As laid down by Hülsmann, it "is not a manifestation of human action in the world of physical things, but a structural feature of human action itself."[75] We know that there must be a value-spread between costs and revenues, but it cannot be demonstrated empirically, as psychic magnitudes defy measurement. In a monetised market economy matters stand differently. There, costs and revenues are

> *physically homogeneous to the point that one can calculate a quantitative difference between the two, that is, between monetary proceeds from selling a product and monetary expenditure for the corresponding factors of production.*[76]

As money could be held in cash balances without physical deterioration if it were not invested, we know for sure that the expected price-spread between the costs and the revenues of investments must be expected to be positive. It would be "absurd"[77] to invest it without the intention to make monetary profit or, in Marxian terminology, a "surplus value."[78]

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74 The same idea is expressed by Hülsmann (2002, p. 93) in terms of means and ends.

75 Hülsmann (2002, p. 97)

76 Ibid. (p. 93, similarly on p. 96). Hülsmann, however, refers to means and ends, not to costs and revenues.

77 Marx (1967, Vol. 1, p. 162)

78 Ibid. (p. 165)

Furthermore, following our discussion on human action in general, the monetary profit that is expected from any investment must increase with the time spread between the incurrence of costs and the attainment of revenues. If there are two investment options with no difference in risk which both promise to return 110 monetary units to an investment of 100, other things being equal, of course that option which takes a shorter time is preferred. A longer time-spread between costs and revenues is only accepted if the expected monetary reward is augmented enough.

Now, the existence of money prices not only makes visible the spread between monetary costs and revenues. It also makes the plans of businessmen homogeneous in that they are all striving for monetary profits. So if some entrepreneurs make high money profits in a special kind of business, other market participants will lower them "by entering the same business, thus bidding up the prices of the required factors of production, and bidding down the prices of the product."[79] Entrepreneurial competition will tend to erase the differences that exist in the monetary profit rate in different lines of business.[80] Competition will thereby tend to adjust the profit rate to the length of the investment. A doubling of this length will bring about a doubling of the rate such that the rate *per period of time* tends to become equal. In the words of Rothbard, if this rate should happen to be five percent *per year*, "[a] production process or investment covering a period of two years will, in equilibrium, then earn 10 percent, the equivalent of 5 percent *per year*."[81]

The rate of profit *per period of time* that remains despite the tendency of competition to eliminate profits can be called *originary interest* or, if one wishes, the *market rate of interest*. We know from our analysis that the price spreads that correspond to this rate "do not come into being by accident." Rather, they are the "premeditated result of entrepreneurial action."[82] Businessmen only act insofar as they expect the monetary revenues to be higher than the costs.[83] This difference "cannot be arbitraged away."[84] Thus, there will always be a positive market rate of interest in terms of money.[85]

The height of this rate of originary interest is determined by the actions of those who invest money. The more they invest, the higher will be the prices of those goods they invest in, i.e., the originary factors of production and production goods, and the lower will be the prices of the goods that constitute the final output, as their supply will increase. Thus, the more people invest, the lower will be the spread between costs and revenues. Entrepreneurs have, it is true, different minimal spreads between costs and revenues that they are willing

79 Hülsmann (2002, p. 98)

80 See Mises (1949, p. 533), Fillieule (2005, p. 5).

81 Rothbard ([1962] 2004, p. 372. emphasis by Rothbard)

82 Both quotes from Hülsmann (2002, p. 93).

83 See ibid. (p. 98).

84 Ibid. (p. 93)

85 Ibid. (p. 99)

to accept. But these differences can be smoothed out.[86] Those who would accept a smaller rate of profit than the one prevailing on the market will gladly accept the latter. Those who demand a higher one will cease investing.

9. THE PRODUCTIVITY OF ROUNDABOUT PRODUCTION PROCESSES

In the foregoing analysis we have obtained two results:

1. man acts to render conditions less unsatisfactory
2. man acts in the shortest possible period of time

These two propositions allow us to understand the phenomenon of originary interest. In the following pages, it will be shown that they can also explain a phenomenon that has gained a lot of prominence within the Austrian School. Although Böhm-Bawerk criticises all kinds of productivity theories at length in his *Geschichte und Kritik der Kapitalzins-Theorien,*[87] he himself mentions as the famous third reason of interest the higher *physical* productivity of time-consuming roundabout production processes.88 Unsurprisingly, his theory has been attacked several times by eminent scholars. It is held that it falls prey to the very same criticism Böhm-Bawerk expounds against former productivity theories.[89] It cannot explain why the value of the consumer goods is not fully imputed to the production factors.90

Nonetheless, Böhm-Bawerk's productivity theory is based on a correct observation. More roundabout processes of production indeed *are*, as a rule, physically more productive than shorter ones. Let it be understood, we do not maintain that all theoretically possible roundabout ways of production are more productive than their shorter counterparts. Of course, there are roundabout ways that are totally unproductive, and short production processes that are highly productive. This point is hinted at by John Maynard Keynes:

> *It is true that some lengthy or roundabout processes are physically efficient. But so are some short processes. Lengthy processes are not physically efficient because they are*

86 Ibid.

87 See Böhm-Bawerk (1921a, pp. 103–170).

88 See Böhm-Bawerk (1921b, p. 339).

89 See e.g. Wicksell (1893, p. 87), Mises (1949, p. 486). Also Kirzner (1996, p. 127), Pellengahr (1996, pp. 11 and 21), and Fillieule (2010, p. 123).

90 See Pellengahr (1996, p. 17), Dorp (1931, p. 293).

> *long. Some, probably most, lengthy processes would be physically very inefficient, for there are such things as spoiling or wasting with time.*[91]

Anyway, it is not from the observation of the higher physical productivity of the more roundabout ways of production that interest can be deduced. It is the other way round. Because we know that all human actions fulfil the two propositions stated above, we know that longer production processes actually chosen are, as a rule, physically more productive than shorter ones. First of all, we know that every production process has to be regarded as being productive in a *subjective* sense, that is, from the point of view of the producer himself. Otherwise, he wouldn't think this production to render conditions less unsatisfactory than they would have been without it, i.e., to lead to revenues that surpass costs, and consequently he would not undertake it. In the words of Eduard Kellenberger, the "much disputed productivity" in question "in the end rests upon the *insight* of the people."[92] Furthermore, it is clear from the second proposition that the person wants his production process to be accomplished in the shortest possible time. If he nonetheless chooses a longer production process, we can be sure that there must be a reason for it. It *might* be that it is more productive *physically*. Then it brings forth *more of the same good* than a shorter process does. But it might also be that it brings forth *different goods that are more valuable* than the goods that can be produced in shorter processes; or that the longer production processes make it possible for the producer to strive for *further ends, like leisure*, in addition to the goods he produces in his production process.93 The only one who knows the reason is the actor himself. What should be clear is that he only chooses longer or more roundabout processes of production if they appear *to him* to be more productive.[94] As Kellenberger notes, it is not correct

> *to understand by physical productivity the production of* ***more*** *or better – more useful – goods as if the adjectives 'better' and 'more useful' had an absolute meaning, a meaning which was independent of man; as if it wasn't the appreciation of man that the judgment concerning what is better or more useful depends. All that 'better' and 'more useful' can signify is 'suited better,' that is, 'more valuable' for* ***special purposes****. [...] Therefore,* ***the deliberate and purposeful production of better and more useful goods is, from the start, value production and not physical production****.*[95]

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91 Keynes (1936, p. 214)

92 Both quotes from Kellenberger (1916, p. 86, emphasis added).

93 See Fillieule (2010, p. 95).

94 See Huerta de Soto (2009, pp. 269 f.) for a similar point.

95 Kellenberger (1916, p. 91, some emphasis added)

So the higher physical productivity of more roundabout ways of production is not the (or leastwise one) reason for the existence of interest. Instead, "every purposeful production of goods is *ex ante psychic or value production*."[96] The higher physical productivity of most of the actually employed roundabout ways only *follows from the fact that they are necessarily expected to be of higher value productivity*, and the latter results from the two propositions developed above, i.e., from originary interest.

Böhm-Bawerk himself somehow is conscious of the problem described here. He acknowledges that there is nothing in longer ways of production *per se* that could account for the higher physical productivity. That is why he sometimes – not always – confines the higher productivity only to those longer processes that are *wisely chosen* ["*klug*" or "*geschickt gewählt*"].[97] In other words, it seems that he tries to deduce the higher productivity of more roundabout processes from human action from the fact that people purposefully pursue those projects that produce value.[98] Yet, he does not think that it is *necessarily* the case that humans choose "wisely". If he had realised that his doubt is only reasonable *ex post* and that, *ex ante*, everybody acts in a way he thinks proper to produce value,[99] or, as Walter Eucken terms it, in a "rational" way,[100] his point would correspond to our notion of originary interest.

The analysis of originary interest as presented above also helps to understand some popular examples given to illustrate the productivity of time or waiting. Wine[101] or wood[102] are very often[103] mentioned as goods that increase in value by the mere passage of time.[104] But one has to realise that there is an indefinite number of instances where time just works in the opposite direction and has a destructive influence on things. Milk, fruits, vegetables, meat, and even wine and wood can – if one waits too long – lose their value to man completely by the passage of time. It is not true without qualification that "wine [...] becomes the longer it is stored."[105] Again, it is not the productivity of time or waiting from which stems the interest phenomenon. Instead, we know from the propositions derived above that time apparently is productive in the actual production of wine and wood.

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96 Ibid., emphasis added.

97 See for example Böhm-Bawerk (1921b, pp. 16, 111, 115, and elsewhere), and Böhm-Bawerk (1921c, p. 2). Strigl (1934, p. 81) uses the same terminology. Böhm omits the idea of "wisely chosen" processes in 1921b (pp. 121, 146, and elsewhere). See also Fillieule (2005, p. 6; 2010, p. 96).

98 See Lutz (1967, p. 13).

99 See Rothbard ([1962] 2004, p. 277).

100 Eucken (1954, p. 69)

101 See Rothbard ([1962] 2004, p. 14), already James Mill (1844, p. 102).

102 See e.g. Eucken (1954, pp. 72 f.).

103 See Lutz (1967, p. 11).

104 Kirzner (1996, p. 139) provides further examples from the literature.

105 Stackelberg (1944, p. 31)

10. CONCLUSION

The purpose of this paper was to show that the reason for the interest phenomenon has nothing to do with preferences. Instead, originary interest can be explained as the result of two propositions concerning the logic of action. According to the first one, men act to render circumstances less unsatisfactory. According to the second, men always want to attain their ends as fast as possible. The combination of both has brought us to a praxeological explanation of originary interest. It has also been shown that the earlier attempt in this direction by Professor Hülsmann has not been entirely successful.

A value-spread over time can be found in every human action, no matter whether we look at goods of the same kind and quantity or not. It is true, it totally depends on the preferences of the actors which goods they consider to produce psychic revenues or psychic costs, and how they balance them against each other. Yet, nothing can be said about these preferences in advance, and they are surely not predetermined in the way maintained by the time preference theory. The results of our investigation indicate that the term "time preference" should be abolished as a *praxeological* category. It should be substituted by the two propositions presented in this paper. "Time preference" might well continue to serve as an expression describing human characteristics, just like the expressions industry, quickness, or laziness do. However, it is not suited for the praxeological deduction of interest.

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