

Praxeological vs. Positive Time Preference:

Ludwig von Mises's Contribution to Interest Theory

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Abstract

Mises's concept of *praxeological* time preference has been confused by neo-Austrians with the idea of *positive* time preference. Praxeological time preference refers to the idea that individuals acting in the consumer role distinguish between actions on the basis of whether they expect the effects to be felt sooner or later. Positive time preference goes beyond this to claim that some set of goods, money, or utility would *always* be preferred in the present to the same set in the future. Neo-Austrian economists have written as though the assumption of positive time preference is needed to explain a "positive rate of interest" in the market economy. This paper has three aims. The first is to show that Mises did not subscribe to the positive time preference view. The second is to discuss the claims to the contrary in order to show how this mistaken interpretation of Mises has evolved. The third is to present the basic assumptions that are necessary to deduce a positive rate of interest under the conditions of the pure market economy.

Praxeological time preference, as applied to economics, refers to the idea that individuals acting in the consumer role distinguish between actions on the basis of whether they expect the effects to be felt sooner or later. This concept, which was developed by Ludwig von Mises, has been confused by neo-Austrians with the idea of *positive* time preference. Positive time preference refers to the idea that some set of goods, money, or utility is *always* preferred in the present to the same set in the future. Neo-Austrians have mistakenly asserted that Mises subscribed to the latter idea.

The main application of these concepts is in explaining market rates of interest. Whereas Mises deduced a positive rate of market interest from praxeological time preference, neo-Austrians have deduced it from the assumption of a positive time preference.

This paper has three aims. First, it shows that Mises did not subscribe to the positive time preference view. Part one defines praxeological time preference as it was presented by Mises and it describes positive time preference as expressed in a recent paper by Peter Lewin that was critical of Mises. Part two assesses Lewin's interpretation of Mises. The second aim is to show how the notion of positive time preference as a foundation for a positive interest rate has evolved in the neo-Austrian literature. This is done in part three. The third aim, which comprises part four, is to expand on Mises's argument by presenting the basic assumptions that are necessary to deduce a positive rate of interest under the conditions of the pure market economy. A brief conclusion is presented in part five.

1. THE PROBLEMS

To illustrate the distinction between positive time preference and praxeological time preference, consider Lewin's discussion. He is concerned with the former concept, although he uses several terms to refer to it. First he defines *time preference* as follows.

...\$100 today is not valued the same as \$100 a year from now. They are economically different goods. In terms of the consumer's subjective preference ranking the marginal utility of \$100 today is greater than the marginal utility *today* of \$100 a year from now. This is *time preference* whose expression is Interest (Lewin 1997: 144).

Next after citing a passage (discussed below) which he associates with Mises's definition of time preference, he writes that Mises "purports to prove praxeologically the necessity of *positive time preference*" (*ibid.*: 147: emphasis added). Finally, he defines the *theorem of time preference* as the theorem "that time preference for the present *must exist*" (*ibid.*: 148). For Lewin the three of these seem equivalent. Time preference means the theorem of time preference, which maintains that there is positive time preference, which implies time preference for the present. To avoid the confusion that might arise from using these different terms, in the following discussion I use the term *positive time preference* to represent the theorem that Lewin claims Mises held. I take it that the theorem is illustrated by the passage quoted above.

As distinct from this, I use the term *praxeological time preference* to refer to the simple notion that individual preference takes account of time. This is the notion that no normal human being would (1) postpone all of his want satisfaction to the indefinite future nor (2) if he could,

take all of his potential want satisfaction in the present. His preferences take account of the time at which he expects his wants to be satisfied.

Mises held the praxeological time preference theory. His fundamental assumption was that the choices of acting man “regarding the removal of future uneasiness are directed by the categories of *sooner* and *later*” (Mises 1966: 483). “Time preference is a categorial requisite of human action” (*ibid.*: 484). He demonstrated praxeological time preference in two ways. In the first, he adopted the role of the consumer-saver. He wrote: “He who consumes a nonperishable good instead of postponing consumption for an indefinite later moment thereby reveals a higher valuation of present satisfaction as compared with later satisfaction” (*ibid.*: 484). In the second, he adopted the role of the capitalist-investor of money. “Those contesting the universal validity of time preference fail to explain why a man does not *always* invest a sum of 100 dollars available today, although these 100 dollars would increase to 104 dollars within a year’s time” (*ibid.*: 486, emphasis added). The fact that a “capitalist” sometimes chooses not to invest *some* of his money demonstrates time preference. Note that Mises did not present this as a proof of time preference, only as a demonstration.

Thus, Mises’s argument went something like this. No one would postpone all of his consumption to the indefinite future. Therefore every individual must exhibit time preference, meaning that “[h]is choices regarding the removal of future uneasiness are directed by the categories of *sooner* and *later*” (*ibid.*: 483). Moreover, a person must prefer to receive satisfaction in the near future to satisfaction in the distant future. If he was indifferent as to when he received satisfaction, we would have no reason to suppose that he would consume in the near future and,

if his time preference does not change, in the distant future either. Indifference, which Mises interpreted to mean “in the absence of time preference,” implies that an individual would be willing to postpone all his satisfaction to the indefinite future.¹

2. ON LEWIN'S INTERPRETATION OF MISES

It seems unlikely that Mises would have been misinterpreted if he had presented his argument more clearly. In fact, Mises does make statements that make it appear like he might have held the stronger theorem of positive time preference. Lewin concludes that Mises believed that he had proved “praxeologically the necessity of positive time preference” on the basis of the following quotation:

Time preference is a categorial requisite of human action. No mode of action can be thought of in which satisfaction within a nearer period of the future is not – other things being equal – preferred to that in a later period. The very act of gratifying a desire implies that gratification at the present instant is preferred to that at a later instant. He who consumes a nonperishable good instead of postponing consumption for an indefinite later moment thereby reveals a higher valuation of present satisfaction as compared with later satisfaction. If he were not to prefer satisfaction in the nearer period of the future to that in a remoter period, he would never consume and so satisfy wants. He would always accumulate, he would never consume and enjoy. He would not consume today, but he would not consume tomorrow either, as the morrow would confront him with the same alternative.

Not only the first step toward want-satisfaction but also any further step is guided by time preference. Once the desire *a* to which the scale of values assigns the rank 1 is satisfied, one must choose between the desire *b* to which the rank 2 is assigned and *c* that desire of tomorrow *to which -- in the absence of time preference -- the rank 1 would have been assigned*. If *b* is preferred to *c*, the choice clearly

¹“[T]here cannot be any question of equal valuation of nearer and remoter periods of the same length. Such an equal valuation would mean that people do not care whether success is attained sooner or later. It would be tantamount to the complete elimination of the time element from the process of valuation” (*ibid.*: 483). From the viewpoint of praxeology, “[w]e must conceive that a man who does not prefer satisfaction within a nearer period of the future to that in a remoter period would never achieve consumption and enjoyment at all” (*ibid.*: 486).

involves time preference. Purposive striving after want-satisfaction must be guided by a preference for satisfaction in the nearer future over that in a remoter future (*ibid.*: 484; Lewin 1997: 146-7).

I examine each paragraph in turn.

In the first paragraph, the second sentence makes the apparently very strong and contestable assertion: “No mode of action can be thought of in which satisfaction within a nearer period of the future is not – other things being equal – preferred to that in a later period.” Lifted from its context, this appears to be the theorem of positive time preference. However, since nothing else in the paragraph supports this interpretation, one ought to examine the sentence carefully. Upon closer examination, the sentence in question contains the phrase “within *a* nearer period.” In other words, Mises seems to be referring to *some* nearer period. The idea Mises wants to present seems to be best captured by the third sentence. This sentence does not imply positive time preference in the usual sense. And it seems fully consistent with the second sentence. The only point that Mises seems to be making here is that to assume that an individual is indifferent to the time at which satisfaction will be felt is tantamount to assuming that he is not an actor. Thus the study of action implies the study of time preference.

Now turn to the second paragraph. It ends with the apparently strong statement that action is guided by a preference for near future satisfaction over remoter satisfaction. Consider, in addition, the following two sentences at the end of the introductory paragraph of the section from which Lewin took his quote: “...Satisfaction of a want in the nearer future is, other things equal, preferred to that in the farther distant future. Present goods are more valuable than future goods” (Mises 1966: 483). However, the introductory sentences of this paragraph are: “...[A]cting man

does not appraise time periods merely with regard to their dimension. His choices regarding the removal of future uneasiness are directed by the categories sooner or later.” Moreover, consider the way that the section ends.

The last part of the section discusses what Mises takes to be the customary way of expressing time preference. He begins by writing that “[i]t is customary to express the essence of the time-preference theory by saying that there prevails a preference for present over future goods.” But he ends by discussing the case of the miser.

The case of the miser does not contradict the universal validity of time preference. The miser, too, in spending some of his means for a scanty livelihood, prefers some amount of satisfaction in the nearer future to that in the remoter future. (*ibid.*: 490)

One may object that this customary means of expression obscures the issue. However, one would be hard-pressed to maintain that Mises subscribed to the idea of positive time preference.²

3. THE EVOLUTION OF MISINTERPRETATION

Lewin's claim that Mises held the positive theory of time preference comes at the end of a series of similar claims in the literature of Austrian economics. All of the claims were concerned with the problem of explaining interest. The aim of this section is to describe this literature as it

²Lewin repeated his mistaken interpretation in his recent book (Lewin 1999: 103-106).

pertains to the point in question. The confusion seems to have started with an apparently innocuous statement by Israel Kirzner about Mises's theory.³

Israel Kirzner

After saying that Mises never published his own special study of the theory of interest, Kirzner writes (among many other things):

Interest is not the specific income derived from using capital goods; nor is it 'the price paid for the services of capital.' Instead, interest expresses the universal ("categorical") phenomenon of time preference and will therefore inevitably emerge also in a pure exchange economy without production" (Kirzner 1976: 53, referring to Mises 1966: 524, 526).

So far as I know Mises did not mention a pure exchange economy. On the pages to which Kirzner refers, he discussed interest in the evenly rotating economy; but Kirzner cannot legitimately be referring to this, since Mises defined the evenly rotating economy as a repetitive system containing capital goods and simulated production.⁴ There can be no "emergence" in such a system. In any case, Kirzner was correct to say that interest would emerge in a pure exchange economy due to praxeological time preference, as will be shown below.⁵

³Outside of this literature, Frank Knight (1941: 412) appears to have also misinterpreted Mises on this issue.

⁴See Mises 1966: 247; 531.

⁵However, I do not agree that Mises did not publish his own special study of the theory. I think that such a study is in the pages of *Human Action*.

Laurence Moss

Now read Laurence Moss's description of the same issue:⁶

According to Ludwig von Mises, this preference for earlier rather than later enjoyments is inherent in all acts of individual choice and is termed "time preference." It has been claimed [by Kirzner] that Misesian time preference guarantees the emergence of a positive rate of interest in a pure exchange economy, that is, where there is no production and the economic future is known with certainty (Moss 1978: 157).

Moss transforms Kirzner's reference to "universal ('categorical')" time preference into a "preference for earlier rather than later enjoyments." This may have been the beginning of the misinterpretation. Moss does not refer to Mises's evenly rotating economy or to any other textual evidence for his interpretation of Mises.

Roger Garrison

Kirzner's characterization of Mises on interest in the pure exchange economy was repeated in a critique of Moss by Roger Garrison (1979: 149). Garrison correctly points out that Moss's definition of time preference in terms of neoclassical "time allocation" is an inaccurate representation of Misesian time preference, which is based on action. But he follows the pattern of not providing textual support for the view that Mises held that there would be interest in a pure exchange economy.

Writing six years later about a capital-using economy, Garrison presents Mises's theory of time preference as follows:

⁶Also see *ibid.*, 164n.

...[M]arket participants are not indifferent about time considerations; they do have time preferences. Whether it is taken as a logical imperative or a broad generalization, there is a systematic preference for "sooner" rather than "later"; the future is systematically discounted. As a consequence, the sum of the equilibrium values of (present) inputs falls short of the anticipated value of (future) output by the extent of the time discount (Garrison 1985: 169).

The problem with this characterization is Garrison's statement that there is a systematic preference for "sooner" rather than "later." It would be more correct to say that praxeological time preference is a systematic preference for (1) sometime rather than never and for (2) some later rather than all sooner.

Most disconcerting in Garrison's essay is a footnote in which he says that "Mises...makes the case that (positive) time preference is a logical imperative" (*ibid.*: 185, note 10, referring to Mises 1966: 483-8). I could find no evidence of this on the cited pages.

Kirzner Again

A sympathetic interpreter of the above papers might argue that these writers did not really mean to imply positive time preference, as defined above. There merely faced the same difficulty as Mises of describing praxeological time preference. However, the same cannot be said for Kirzner's most recent discussion of time preference and interest. Kirzner characterizes the "interest problem" as that of explaining why the price of a machine is not bid up to the point where it exactly equals the expected periodic rentals of the machine. In other words, he asks about the source of interest income (Kirzner 1993: 167-8). He answers by pointing to the rate of interest in the market economy. So the next step is to ask why there is a rate of interest. To deal with this issue, he refers to the "Austrian theory of interest," which he attributes to Frank Fetter and Mises.

He equates the Austrian theory with the pure time preference theory. He says that this theory “solves the interest problem by appeal to the widespread (possibly universal) positive time preference.” “If, in fact, people do prefer (other aspects of the situation aside) to achieve their goals sooner rather than later, then the dilemma posed by the machine and its rentals. .dissolves” (*ibid.*: 171-172).

Whereas Kirzner earlier (1976) had not previously mentioned “positive” time preference, it here plays a central role in his explanation. He would be at least partly following Mises if he wrote that the dilemma would dissolve if it was true that people would never postpone achieving all their goals indefinitely. However, to make the condition that people must prefer to achieve their goals sooner rather than later does not reflect Mises's views. Mises did not claim that people prefer to achieve *all* of their goals sooner rather than later, except in the sense that they would never postpone achieving them indefinitely.

Percy and Bettina Bien Greaves

In the original 1940 German version of *Human Action*, Mises included a section in which he used his time preference theory to assess Bohm Bawerk's theory of interest. Since he left this out of his English version, Percy Greaves decided to add it to a glossary he prepared for Mises's treatise (Greaves 1974: 150-7). Bettina Bien Greaves translated the excerpt and Percy Greaves edited it. The critical passage is translated as follows:

...In acting, one must always, without any exception, value a satisfaction at an earlier point in time more than the same kind and amount of satisfaction at a later time. If this were not so, then it would never be possible to decide in favor of a present satisfaction. Whoever uses or consumes anything, whoever by

acting to relieve to a greater or lesser extent a felt uneasiness is always expressing a preference for an earlier over a later satisfaction. Whoever eats and consumes anything is making a choice between a satisfaction in the immediate future and one in a more distant future. If he were to decide differently, if he were not to prefer the earlier to the later satisfaction, he would never be able to consume at all. He could not even eat and consume tomorrow, because when tomorrow became today, and the day after tomorrow became tomorrow, the decision to consume would still call for valuing an earlier satisfaction more than a later satisfaction. Otherwise, consumption would have to be delayed still further (Greaves, 1974, 156-157).

I believe that this statement makes it absolutely clear what Mises meant when he said that present goods or satisfaction are preferred over future goods or satisfaction. He was referring to what I have called praxeological time preference in this paper. However, in the translation, the section in which this statement appears is entitled “All Consumers Prefer Present Goods” (*ibid.*: 156). This characterization seems to give a mistaken impression.

Beyond this, in a preview of the translation, Mr. and Mrs. Greaves write: “For the same reason that ‘a bird in the hand is worth two in the bush,’ present goods are worth more than the identical items in an uncertain future” (*ibid.*: 150). This is *not* what Mises meant. Uncertainty is a separate characteristic which Mises did not mention at all in this context.

Murray Rothbard

Murray Rothbard discussed time preference in his textbook. His discussion concerned Mises's critique of Schumpeter's claim that interest would not exist in the evenly rotating economy. Mises based his conclusion that there would indeed be interest on the assumption that there could be no capital goods in the evenly rotating economy unless capital goods had a price, which he defined as “originary interest” (Mises 1966: 530-1). Furthermore he argued that the

evenly rotating economy would contain no consumer saving since we assume when we make the construction that the individuals who the construct represents are fully aware of the fact that the future does not differ from the present. But Rothbard's reasoning is different. He provides two reasons for the rate of interest in the evenly rotating economy. The first is that the rate of interest is positive because individual time preferences "are all positive" (Rothbard 1962: 385-6).⁷ This answer directly contradicts Mises's statement about consumer saving, although Rothbard did not acknowledge this. The second, following Mises, is that "capital consumption would ensue" if there was no rate of interest (*ibid.*).

We are not concerned here with interest rates in the evenly rotating economy. The only point to be noted is Rothbard's claim that individual time preferences are all positive. His claim appears to be related to his argument that "we can (if we know them) compare [the individual time preference schedules of two men] based purely on their demonstrated time preference (*ibid.*: 328). In other words, it may be meaningful to say that "Robinson's time-preference schedule is *higher* than Smith's" (*ibid.*: 328-9). Mises, of course, did not attach a sign to time preference, and he did not write anything about demonstrated preference.⁸

⁷He elaborates his theory of interest in the evenly rotating economy based on positive time preference by using demand and supply diagrams at *ibid.*: 323-332.

⁸Rothbard (1956: 229) has claimed otherwise, which is probably why he wrote what he did. There is insufficient space here to deal with Rothbard's claim. Those who are interested should consult the author's 2003 manuscript on Austrian welfare economics.

4. RATES OF INTEREST IN THE MARKET ECONOMY⁹

Why are there rates of interest? The answer is simple enough, *given the existence of error-avoiding entrepreneurship*. It is (1) that individuals have time preference and (2) that there is at least one of the following (a) differences among individuals in their time preference or (b) specialization with respect to the satisfaction of wants through time. Either of the latter conditions combined with condition (1) is sufficient to lead to intertemporal markets and, therefore, interest rates. Individuals in a market economy establish interest rates for the same reason that they establish relative prices – in order to exchange. The only difference is that the exchange is intertemporal. Just as there can be no negative price among goods, there can be no negative interest rate.¹⁰

To comprehend the complexity of market interest rates, we assign all of the action aimed at satisfying wants to entrepreneurship. We say that it is the task of entrepreneurship to identify and put into practice the means that are available to satisfy consumer wants. Recognizing that consumers wants have a time dimension, entrepreneurship is careful, given its aim of earning profit, not to devote all of the resources to the satisfaction of the most immediate wants. If it did this, the profitability of shifting some means toward the satisfaction of future wants would be

⁹The following discussion of interest rates is based on the assumption of neutral money. In other words, we are abstracting from the influences of changes in the quantity of money and in the demands for cash balances. To include these influences would take us away from the main subject of the paper.

¹⁰In this respect, Rothbard (1962: 323-32) is correct to derive rates of interest from differences in time preference, although he could also have derived them from a combination of uniform praxeological time preference and specialization in the satisfaction of wants.

extremely high. The reason is praxeological time preference. Entrepreneurship also is careful not to devote all of the resources to the satisfaction of wants in the indefinite future. If it did this, profit from producing at least some present goods would be extremely high. Whether people have a “positive” preference for present goods over future goods of like kind and quality is irrelevant. Given the presence of entrepreneurship, all that is necessary for a positive rate of interest to exist is that people are not indifferent as between the present and future – i.e., that they prefer some goods now and some later.¹¹

Consider what would happen if there was a shift of social time preference toward the consumption of later goods rather than sooner goods. This means that consumer-savers, having estimated the future prices and availability of goods, have decided that at the current interest rates on their savings and beyond some tradeoff point, the additional future goods they can buy with the savings are worth more than the additional present goods they would otherwise have bought. As consumer demands come to reflect this shift, entrepreneurship would receive and send signals to the effect that saving had increased and that spending on current consumers goods had decreased. In addition, it would send and receive signals that consumer-savers planned to consume a larger amount of future goods than otherwise. The higher savings, other things equal, would cause the interest rates on loans to be lower than otherwise. Combined with the anticipated higher demand for future goods, this would encourage producing entrepreneurs do embark on production projects that would make the future goods available. If the producing entrepreneurs did not embark on such

¹¹Provided, of course, either that time preference differs as among individuals or that there is specialization in the means of satisfying wants over time.

projects, the consumer-savers would find that the future prices are much higher than they expected. Like the producing entrepreneurs, they will have made entrepreneurial errors.

The Assumption That Entrepreneurship Avoids Systematic Errors

To deduce that there will be rates of interest in the market economy, we must add an assumption about entrepreneurship. Assumptions about time preference and specialization are insufficient. We must add that entrepreneurship avoids systematic errors – that it tends to appraise, make decisions, and bear uncertainty in ways that are more likely than not to satisfy consumer-saver wants, in light of production possibilities. We can see why this assumption is necessary by considering the possibility of a zero interest rate.

Could the supply of loanable funds ever exceed the demand for loanable funds at a positive rate of interest? The answer is clearly yes. If producing entrepreneurs did not want to borrow all of the saved money at a positive rate of interest, the interest rate would fall to zero. However, to the extent that producer borrowing fell short of consumer saving, consumers' entrepreneurial expectations that future goods would be available to buy at expected prices would be incorrect. Future prices would turn out to be higher than the consumers expected. Moreover, producing entrepreneurs will have made errors by anticipating that future prices are lower than they turn out to be. They will have failed to take advantage of profit opportunities. Thus, for the interest rate to

fall to zero, both consumer-saver-lender entrepreneurs and producer-borrower entrepreneurs would have to make errors.¹²

Roundaboutness

It is easy to see why the marginal revenue product of methods of production that take different lengths of time (i.e., the revenue product associated with different periods that Bohm Bawerk called “roundaboutness”) is irrelevant to the question of whether there is a positive rate of interest. So long as the conditions described above hold, there will be rates of interest regardless of this element. Nevertheless, entrepreneurship may have occasion to alter its appraisals of the material resources on the basis of when the revenue generated by their use is expected to be received. Such changes will get reflected in entrepreneurship’s decisions to make products available for consumption at different times and, in turn, in the rates of interest. However, while changes that lead to different entrepreneurial perceptions of physical productivity can cause entrepreneurship to change the rates of interest, they have nothing to do with the deduction that rates of interest in the market economy must be positive. Thus Kirzner was correct to say that interest would emerge in a pure exchange economy without production. But this deduction does

¹²Could the market rate of interest ever be negative. Mises wrote that under deflationary expectations, the gross rate of interest on a contract could indeed be negative (Mises 1966: 542). But this seems impossible, as pointed out by Walter Block (1978: 124n). It is possible that Mises’s argument can be salvaged, however. During the Great Depression, many creditors agreed, in effect, to accept repayments on loans that were only a fraction of the amount promised rather than force the debtor into bankruptcy. One might characterize this as indicating that they accepted a negative rate of interest. If this is what Mises meant, he had a strange way of writing it. (Thanks to Paul McCaffree for helping me see this point.)

not depend on the assumption of positive time preference in the sense that this term was used above.

To summarize, the deduction of a positive rate of interest in a market economy is based on the assumptions (1) that individuals have time preference, (2) that there are (a) differences among individuals in their time preference or (b) specialization with respect to the satisfaction of wants through time, and (3) that individuals acting entrepreneurially do not make systematic errors in their efforts to use their means to achieve their ends.

5. CONCLUSION

Mises did not hold the view that a particular set of goods, money or utility is necessarily preferred in the present to the same set in the future. He merely claimed that individuals cannot be indifferent to when they receive their satisfaction; since if they were, they would not evaluate their satisfaction according to the praxeological categories of sooner and later. The view, or more correctly the praxeological axiom, to which he subscribed was that in choosing between alternative courses of action, actors take account of the time at which they expect the alternatives to have their effects. Actors, by definition, would never postpone all of their satisfaction until the indefinite future. And they would never completely neglect the future in their actions. We have called this idea *praxeological time preference*. On the basis of this assumption, combined with assumptions that individuals' time preferences differ, that there is specialization in the satisfaction of wants, and

that individuals acting entrepreneurially do not make systematic errors; the paper deduced a positive rate of interest in the market economy.

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J. Patrick Gunning
Department of Economics
Feng Chia University
100, Wenhwa Road, Seatwen
Taichung, Taiwan 407
R.O.C.
Email: gunning@fcu.edu.tw.
Homepages:

<http://knight.fcu.edu.tw/~gunning/welcome.htm>

<http://www.constitution.org/pd/gunning/welcome.htm>