AN INTERPRETATION OF THE CONCEPT OF "MONEY RATE OF INTEREST" IN KEYENS’ THEORY AS THE "GRENZBEGRIFF" (CONCEPT OF LIMITATION) IN CONNECTION WITH "OWN-RATE OF INTEREST," AND ITS LOGICAL CHARACTER IN MONETARY ECONOMY\textsuperscript{1)}

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I

The logical character of Money as the form of "Wertermittelung" (mediation of values in different dimension).

Dr. Kiichiro Soda contemplated once, the concept of money\textsuperscript{2)} as the logical condition for the formation of the economic world. According to him the possibility for the formation of the economic world could be established, when the "Bewertungsgesellschaft" (valuating society) comes into existence by means of the concept of money as "Vermittelungswert" (mediating value). He meant by the "Vermittelungswert" (mediating value) the value in its pure form.

The value in this form appears at the last of the genetic stages ("genetische Stufen") following those of the "Affektionswert" (value of affection) and "Gegendstandswert" (value of the object), and therefore as the value in its pure form. According to K. Soda the "Vermittelungswert" (mediating value) is genetically the last, but logically it is considered the first. Soda asserts that, it is possible to interpret the formation of economic world as a social phenomenon\textsuperscript{3)}. This way of thinking was improved by Dr. Kozo Sugimura\textsuperscript{4)} who arrived at the concept of "Nullwert" (zerovalue)\textsuperscript{4)}. Whereas in the case of Dr. Soda, "der ökonomische Kulturwert" (economic cultural value) as the "Grenzbegriff" (concept of limitation) in the order of value on the one hand and the concept of money as the objective presentation of the "Wertordnung" (order of values) on the other hand, were not yet combined with each other, Dr. Sugimura, by the concept of the "Nullwert" (Zero-value), could combine both. Thereby indicating the form of existence for the value of money as the "Funktionswert" (functional value) by which it would be possible

\textsuperscript{1)} It is to be noted that the concept of "Grenzbegriff" translated here into the "concept of limitation" is different from that of marginal unit, for example, that of "marginal efficiency of capital."

\textsuperscript{2)} Dr. Kiichiro Soda (1881—1927) studied in England and Germany from 1904 to 1913, and got the title of Doctor at the University of Tubingen with his Thesis "Geld und Wert, eine logische Studie" (1909), written in German. He taught at the Tokyo University of Commerce (the Hitotsubashi University) and the Imperial University of Tokyo.


to compose the rational order of value in economic life. In this sense the value of money is nothing but the carrier (Trager) of “Wertvermittlung” (mediation of value). Whereas Dr. Soda determined value of money by keeping in mind, the idea of the world in the classical school, Dr. Sugimura conceived the same as the logical basis for the formation of Carl Menger’s (1840—1921) idea of “Guterordnung” (order of Goods) in the economic world, that is, as the logics to mediate among the “Wertordnung der Guter” (goods in value order) of different dimensions, i.e. consumers goods, production goods and investment goods. It is true, Dr. Sugimura did not differ from Dr. Soda as their respective efforts were concered with the clarification of the ogical foudation for the formation of the economic world. Dr. Sugimura, however, made clearer the logics of the “Wertvermittlung” (mediation of values in different dimension) and combined them with the “Grenzbegriff” (concept of limitation), therefore he certainly took a step forward in the development of monetary theory and also of the economic phylosophy.

Needless to say, it is important to clarify the logical possibility for the formation of the economic world. To that extent, however, we are concerned, with the logics themselves, while still other problems have to be solved for instance: in what form the economic world shall be grasped in its real and concrete application; or, how the “Bewertungsgesellschaft” (society of valuation) shall be found in its concrete form. These are the problems where the concrete appearance of the field of valuation have to be observed, how to find in the real economy the things conceptionally clarified, and how to examine their real “Geltung” (validity) as interpretation of reality. This writer is the opinion that an aspect of the concreteness in the said meaning shall be found in the world of prices, or in the “price level”. This approach was taken, on the one hand, with the the intention of making more concrete the theory of both Dr. Soda and Dr. Sugimura by depending on their way of thinking. On the other hand, however, it was also intended to recognize anew the concept of “price level” and establish it as the “field of valuation”, whereas the concept had been confined to be an object of the theory of variation and determination of price levels. Speaking more specifically, it was intended that the concept of “price level” which had been taken up in its restricted meaning either as object of the “Quantity Theory of Money” or as general concept for individual commodity prices be approached, in a different way. Namely, by establishing the price level as the concrete representative or measure of the value of money, it was now amied to clarity the following ideas: That the price level comprehending in itself all of the commodity prices is thereby placed in a position capable of measuring the individual commodity price and also capable of making clear the mutual relations among commodity value; That the totality becomes thereby rather the measure of individual phenomena, this totality is placed in a position to regulate the form of extence for individual determination and variation. In this sense, the concept of price level may be called the “field.”

When the value of money as the “Grenzbegriff” (concept of limit) is observed in its concrete appearance as the “preice level”, it should be noted that only one side of the concrete appearance is thereby observed. Usually, the value of money has been discussed in its three aspects; price level, rate of money interest and foreign exchange rate. The

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AN INTERPRETATION OF THE CONCEPT

The concept of money as "Vermittelungswert" (mediating value) is in the abstract, logical form and therefore is of general character, possibly comprehending all of the said aspects. When the concept of money is observed, in its concrete appearance, however, this is not true. In an attempt to clarify the concept of money in its concrete appearance, as mentioned above, this writer concentrated on the concept of "price level". In similar way, the rate of money interest as well as the foreign exchange rate should be investigated. In this article it is intended to interpret the concept of the rate of money interest by means of the same logics as above. In this connection, Keynes' theory on the rate of interest, seems to be very interesting due to his unique character. Although his determination of the rate of interest does not always seem completely acceptable yet his explanations starting from the concept of "own-rates of interest", at least observed from the said point of view, seem to give a clue in interpreting his method and the theoretical character of his concept concerning the money rate of interest. More precisely, it can be said not only in the process if deriving the concept of money rate of interest, he has tacitly accepted the way of thinking in "Grenzbegriff" (concept of limitation), he also has allowed the "money rate of interest" to be a concrete form of existence for the "Vermittelungswert" (mediating value). Because of this, his theory on the rate of interest is taken up in this article.

II

The concept of "Money Rate of Interest" as the "Grenzbegriff" (concept of limitation) of "Own-rate of Interest" in Keynes' theory.

"The General Theory of Employment, Interest and Money" (1936) of Keynes is, in its paragraphs concerning the "Money Rate of Interest", most difficult to understand and to accept. This is due to the fact that these paragraphs have been explained by the concept of "liquidity preference", a new concept which has never before been used for the explanation of interest.

It is well known, the theory of interest is described throughout 8 chapters constituting Book IV "The Inducement to Invest" of "The General Theory". The main subject discussed on these pages is the determination of the money rate of interest. Keynes deals especially with the circumstances under which the volume of investment is determined. "The marginal efficiency of capital" and "the rate of interest" are studied as the two main factors determining the volume of investment. The determination of the money rate of interest was made the main subject in those chapters and therefore it was only natural for the theoretical requirements to investigate the "properties" of the money rate of interest. Accordingly, these problems were discussed in Chapter 17 "The Essential Properties of Interest and Money" of "The General Theory". And our discussions will center around this chapter since the said problems are just those which we must take up at this point.

The writer's interpretative conclusion is that Keynes who divided the concept of "own-rates of interest" for every durable good was conceiving the money rate of interest as the limitation of said concept. It can be said, that the method he applied here was, unintentionally taking recourse to the logics of "Grenzbegriff" advocated by Dr. Soda and Dr. Sugimura. In other words, we find in Keynes' theory a theoretical application of the logics of "Grenzbegriff" (concept of limits), or viewed from other side, we find in the
concept of “own-rates of interest” another concrete example of application of the said logics. (This interpretation of ours will be valid only when the logics are observed while being separated as such.) If viewed in terms of the contents these logics are supported by the “liquidity premium” and by the “liquidity preference” constituting the factors of determination, both points involve some questions which yet have to be answered.

At the beginning of the Chapter mentioned before, Keynes wrote: “It is natural to enquire wherein the peculiarity of money lies as distinct from other assets, where it is only money which has a rate of interest, and what would happen in a non-monetary economy.” (The General Theory. p. 222.). He asserted that the full meaning of his theory would never be clarified unless these questions be answered correctly. To answer these questions he first defined the money rate of interest as being nothing but the percentage to be obtained as follows: When the amount of money, for example, with the term of one year is compared with the amount of “spot delivery” of commodity or in terms of money for “forward contract”, and the amount by which the former exceeds the latter is expressed in the percentage of the latter, then this percentage is the required figure. He asserted also that in the case of every capital asset there must be something existent similar to the rate of interest in the case of money. Thus, he conceived that for every durable goods, such as wheat, copper, house etc., there must be a rate of interest expressed in terms of itself—a wheat-rate of interest, a copper-rate of interest, a house-rate of interest, etc., and he named this the “own-rate of interest”. It can be said that the logical character so to speack, of the money rate of interest has been based on this concept of “own-rate of interest”.

This “own-rate of interest” bears a definite relation with the difference between the the “future” contract and the “spot” contract, for example, in the case of wheat which is quoted in the market. Keynes wrote “but, since the future contract is quoted in terms of money for forward delivery and not in terms of wheat for spot delivery, it also brings in the money rate of interest.”

Apparently he started from the existence of “money rate of interest”. In order that one may begin with the existence of “money rate of interest”, however, there must be a logical justification for such a justification. It is just the concept of “own-rate of interest” that may certify the existence of such logics since the concept would explain the logics while the concept of limits or Grenzbegiff of the “own-rates of interest” inherent to various goods being constituted by the “money rate of interest”. This assertion will be substantiated as follows: The “own-rates of interest” inherent in various goods are nothing but the “Gegenstandswert” (value of objects) of various goods as capital assets (in the case of the rate of interest, the “Affektionswert” (value of affectation)) as named by Dr. Soda should be considered as non-existent, since we start from the stage where the goods have already become capital assets and we are already beyond such stages of forms of value as allowing the existence of “Affektionswert”), and the rate of interest for the money capital which has appeared genetically at the last stage has been established as a limiting case, that is, as the “Vermittelungswert” (mediating value)—which was explained by Dr. Sugimura as “Nullwert” (zero-value). Only if the money rate of interest being genetically the last is assumed to be logically the first to come, it be considered as being of “Vermittelungswert” (mediating value) character. Hence the above assertion is made.

At this point the writer would like to write down some unsolved questions con-
cerning Keynes' explanations of the "own-rate of interest". The questions are related to Keynes' explanation that would allow twofold interpretations on the said concept, and the questions are also in connection with the expression of "money-rate of interest". As seen from the above explanations, the "own-rate of interest" is the "rate of interest for durable goods...expressed in terms of themselves", and there may be a wheat-rate of interest, a copper-rate of interest etc. The same would hold true under the assumed non-monetary economy, and the own-rate of interest can be said to be equivalent to the "natural rate of interest" once so called. Following these explanations, however, Keynes writes "In the case of a commodity, such as wheat, which is quoted in the market, the difference between the "future" contract and the "spot" contract bears a definite relation to the wheat-rate of interest. But, since the future contract is quoted in terms of money for forward delivery and not in terms of wheat for spot delivery, it also brings in the money-rate of interest. The exact relation is as follows...". And taking the example of wheat he examines the prices of wheat for spot delivery and for future contract both as price, that is, in terms of amount of money. He adopts the method under which the difference between above prices is compared with the money-rate of interest and based on this comparison the wheat-rate of interest. In this respect, he must have already presupposed the existence of the money-rate of interest, whereas it is allowed as a theoretical method for approaching to the reality to start from the assumed non-monetary economy and, as is well known, this led to the concept of "natural rate of interest", Keynes' theory is characterized by its taking the monetary economy as direct object. For example, when the term "marginal efficiency of capital " is used, the "capital" therein means "money capital". On the other hand, judging from Keynes' way of thinking as evidenced by his terminology of "own-rate of interest" as well as "money-rate of interest", it may be assumed that by "interest" he means "efficiency of capital" while discriminating between the forms of its expression as "own" and "money". For example, the wheat-rate of interest, although it is of course related to wheat itself, has been explained by Keynes in the way as follows: The difference in terms of money between the prices of wheat for spot delivery and future contract shall be converted with the money-rate of interest as basis, and the figures thus obtained shall be further converted into the ratio of wheat between two periods of time in terms of amount to obtain the "own-rate of interest" for wheat. In this connection it is noted that the rate of interest on money is expressed as money-rate of interest in the same way as own-rate of interest with the only discrimination between "money-rate" and "own-rate" of "interest". Whether the ratio in the form of capital assets themselves or the ratio in the form of money is meant by the "interest", cannot be concluded from the above explanations. If based on the traditions of past economics the interpretation in the sense of the former is likely and Keynes himself possibly employed the concept of "own-rate of interest" with this traditional way of thinking in his mind. However, judging from his way of thinking in general as evidenced by his reasoning under which the formation and existence of monetary economy is presupposed, it is also possible that the "interest" itself is already in the monetary form and its expression as "rate" results in the difference between "own-rate" and "money-rate". All of the economic activities in the capitalist economy are aimed at increase of assets in the form of money. From this point of view, it can be said that Keynes conceives all of capital assets converted into money. On the other hand, however, judging from the way of reasoning characteristic of Keynes, it is aslo
possible to interpret his concept of "own-rate of interest" as the "own-rate" of capital assets in terms of themselves.

Although the question will be left unsolved for a while as to which interpretation of "own-rate of interest" is correct, it can be said under either interpretation that the "money-rate of interest" has been defined by Keynes as a concept of "Grenzebegriff" character for "own-rate of interest". However, if the latter interpretation is assumed, it can be said that the "money-rate of interest"—that is, the own-rate of interest on money, or the money-rate of interest on money—which is coming genetically last been introduced beforehand as being logically the first to come.

In terms of contents, however, the above development of the concept has been explained by Keynes by means of the "liquidity premium". Namely, he enumerates the following three items: (The attributes of various assets so named by him may be regarded as the aspects of assets indicating the "Gegenstandswert" ((value as object)).

1. Certain kinds of assets produce "yield" or "output" \((q)\) measured in terms of themselves by aiding in some production process or providing some services for consumers.

2. Almost all of assets excluding money, whether being used for producing yield or not, undergo some wear and tear or necessitate some expenses due to the lapse of time only. These expenses are named "carrying cost" expressed in terms of itself \((c)\).

3. From the situation where one could freely dispose of an asset for a period of time, one would obtain certain potential conveniences or safety. The amount (measured in terms of itself) which one would pay for the said conveniences or safety is named "liquidity premium" \((l)\).

All earnings to be expected from the possession of an assets for a period of time are equal to yield minus carrying coast plus liquidity premium, or \(q-c+l\) which is the own-rate of interest for the asset concerned.

When the three attributes inherent to capital assets are observed in relation to commodities other than money and to money, respectively, the following differences can be noted. In the case of commodities other than money, that is, capital assets, the yield usually exceeds the carrying cost, and the liquidity premium is negligible, while in the case of money the yield is nil, the carrying cost is negligible and the liquidity premium is considerable. In other words, the own-rate of interest is determined by \(q-c\) in the case of general capital assets and the same is dependent on \(l\) in the case of money.

Some interpretative explanations are given below. First, the fact that the "own-rate of interest" is determined by the difference between yield and carrying cost, \(q-c\), in general, that is, in the case of capital assets other than money, and the same is determined mainly by the liquidity premium in the case of money means that the money can be freely converted into any other capital assets. Secondly, the factors which constitute the contents of own-rate of interest for general capital assets are practically non-existent in the case of money, and on the contrary the factor which is negligible as a factor constituting the won-rate of interest for general capital assets is almost the only factor constituting the own-rate of interest for money. This qualitative transformation certifies that the own-rate of interest for money is the limit of the own-rate of interest and that the concept being genetically the last is logically the first. This means that the existence of money-rate of interest is logically presupposed and at the same time the money-rate of interest is practically made the standard for the own-rate of interest for all other commodities—
it is, in a sense, an aspect and form of existence of the value of commodity.

The main characteristic of Keynes' "General Theory" is that he, with the money-rate of interest as center, depicted a certain economic state, a state which he considered as equilibrium—in other words he thought there are respective equilibria depending on the height of money-rate of interest. For this reason Keynes' theory has been called a monetary economic theory as compared with the older theories which exclude money. This characteristic of Keynes should be, in the light of our above interpretation, ascribed to the fact that the existence of money-rate of interest was logically presupposed.

III

Of the logical preposition of "Money-Rate of Interest" in monetary economy—the concept of "Money Rate of Interest" as the "Vermittelungswert" (mediating value), or the logical meaning as the mediator of values in different dimension and the parameter between various economic subjects.

In the Keynes' economic theory as a whole major importance is placed on the theories of determination and variation of economic volumes, and the theoretical tools or concepts which have been newly advocated and employed are almost all functional or of a parameter character. In the case of the theory of money rate of interest, the substantial economy in the traditional meaning is lacking. This is characteristic of Keynes' theory or his way of thinking, however, it cannot be denied that his theory is poor in the grasping of the substantial economy, and this is one of the fundamental reasons why this writer cannot agree completely with Keynes. Be that as it may, the fact that the above mentioned logics and method of "Grenzbegriff" (concept of limits) have been employed by Keynes was a clue for this writer in understanding the theory on money rate of interest, a theory which had been deemed very difficult to understand. A clue was given because we could find there Keynes' concept of monetary economy which would supplement his whole theoretical system and also his method, which is of primary importance prior to the individual theories on function, determination or substance.

In view of the above, we would like, in addition, to describe the idea of the monetary world, which can be developed from the logical character inherent to the money rate of interest, or its logical character as the "Grenzbegriff" (concept of limitation) of the "own rate of interest" for various capital assets.

As was mentioned above, it was already established by Dr. Soda that, only when the concept of money is made logically precedent, the "Bewertungsgesellschaft" (society of valuation) becomes possible and the economic world can be formed. It was also Dr. Sugimura's idea to establish this concept of money as "Nullwert" (zero-value). Furthermore he developed this concept to mediate the order of value of different dimension and to make possible the formation of economic world. This idea of Dr. Sugimura was based on Carl Menger's idea of "Güterordnung" (order of goods) but by giving a theoretical arrangement to the latter's order consisting of "Güter niedriger Ordnung" (goods in lower stages of order) and "Güter höherer Ordnung" (goods in higher stages of order), Dr. Sugimura arrived at three dimensions of value consisting of consumers goods, production goods and investment goods. Furthermore, he established the value of money as "Nullwert" (zero-value) or "Vermittelungswert" (mediating value) which is the logical
form of value places at the limits, and moreover is common to all three dimensions of value, whereby the value of money mediates among the order of value in different dimensions. The investment goods—so called by Dr. Sugimura in this case—were not the investment goods in common sense, but the goods represented by securities, or the securities themselves. The world of goods and the financial world involving securities are combined with each other through the “investment” and “savings”. In the following paragraphs I try to explain the character of “money-rate of interest”—another attribute of the value of money—as “grenzbegriff” (concept of limitation) and to develop this concept as the logics of meditation for the dimensional structure of economic world.

As discussed already: the value of money is established as mediation between the value of goods in different orders in the case of C. Menger or among three dimensions of value mentioned by Dr. Sugimura. Furthermore we have seen this idea is based on the “Grenzbegriff” (concept of limitation) by which the formation of economic world or “Bewertungsgesellschaft” (society of valuation) is established. Money is considered as bearer of “Vermittelungswert” (mediating value) placed at the last of the genetic stages of value from “Affektionswert” (affection value), “Gegenstandswert” (value as object) and “Vermittelungswert” (mediating value). This concept is assumed to be logically a priori. Following this thought, the formation of economic world and the mediation of value of different dimensions (Vermittlung der Wertordnung zwischen verschiedenen Dimensionen) is logically completed. Not only the problems are examined in terms of logic themselves, but also the practical field of “Bewertungsgesellschaft” (society of valuation) is thereby composed. From the standpoint of the practical field, however, we cannot go without a form of existence by which the form of money as capital and the form of money as income separated. This would lead to the formulating of new problems in view of the fact that a new theoretical field had been opened centering around “investment” and “savings”. It is suggested that the mediation between the said two positions—capital and income—or between the entrepreneurs and the income receivers or household budget be established in the same way as in other cases. It was with intention of obtaining significant suggestions in this respect that we attempted above to understand the “money rate of interest” as “grenzbegriff” (concept of limitation) of the own-rate of interest.

In order to explain the “Wertigkeit” (valuability) of the “Güter höherer Ordnung” (goods of higher order), Menger developed an idea of “Güterordnung” (order of goods) from the standpoint of subjects of recognition, as distinct from the theory of “marginal utility” which is obtained from the standpoint of valuation (a standpoint confined to the valuation of consumers goods). By means of the “Zurechnungslehre” (theory of imputation) based on the said idea he succeeded in clarifying the “Wertigkeit” (valuability) of the “Güter höherer Ordnung” (goods of higher order). The members of the Subjective School (the Austrian School) following Menger—Böhm-Bawerk and Friedrich v. Wieser—developed the “Kosten-Gesetz” (law of cost) which would explain the value of production goods in the middle stage of of the said “Güterordnung” (order of goods) not as attribute from consumer goods but so to speak, directly. By the “Kosten-Gesetz” (law of cost), position of enterprenuers who are directly confronted with respective production goods was brought to light. The value of production goods, if based on goods themselves, is related to individual production goods, but if
seen from the standpoint of enterprisers it is derived from the prices of the goods (production goods) constituting the expenses of enterprisers' output. So, it was possible by arranging theoretically the goods into a category of production goods, to establish the price levels for a number of commodity groups. It was the discrimination of "the price level of consumption goods" and "the price level of investment goods" in Keynes' "A Treatise on Money" (2 vols. 1930.) to carry out an arrangement in the said direction. (The diagram of "the stages of production" in Hayek's "Prices and Production", 1931, is most faithful to Menger's idea of "Güterordnung"). This arrangement into two price levels was carried out by Keynes for the purpose of theoretical simplification. Logically, however, there should be a price for each good of the same kind. If one takes this point of view, he would be required to price goods in terms of themselves. It can be said that the concept which has been established to satisfy this requirement on one hand and at the same time to observe the matter from the standpoint of possessor of capital assets or the aspirant of possessing such assets is just the concept of "own-rate of interest" mentioned above. It may be said that against this "own-rate of interest" the "money-rate of interest" takes a position parallel to the position which is taken by the "Nullwert" (zero-value) as "Vermittlungswert" (mediating value) against the value of different dimensions.

We examine the above discussion in its relationship with the "cash balance equation" which has been a tradition of the Cambridge School and reached a completed form in Keynes' writings. "The cash balance" is grasped at a certain spot the national economy as a whole and is considered as an aggregate. The "cash balance" conceived as aggregate is nothing but the total of the "cash balances" held on hand by the economic subjects. In other words, it is the "stock" of money for the national economy as a whole as against the "flow" of money. On the other hands, although the money-rate of interest is treated as one rate of interest from a theoretical point of view and moreover usually as the rate of its long-term, yet there exist in reality a number of rates of interest different from one another dependent on their term and character. This means that there are various rates of interest for money in accordance with its "flow", or more precisely, in accordance with the "stock" of money heald on hand by respective economic subjects at a certain spot. This system may be called a system of the rate of interest. When the money-rate of interest was discussed as representative of the rate of interest in the world of "zero-value", it was in the abstract meaning. Concretely, however, the money-rate of interest is constituted by the system of the rate of interest. The rates of interest covered by this system will, on one hand, influence the decision or behavior of economic subjects in respective channels of flow of money and, on the other, will be determined by the amount of stock of money. Furthermore, the rates of interest will function so as to influence the shifting of the stock of money from one channel to another and also the shifting of the flow of money from one pool to another.

The channel or pool of money, has led to Keynes' idea of level of prices mentioned above—"the price level of consumption goods", "the price level of investment goods". It is true, there exist "money market", "capital market" etc. where various rates of interest are specifically determined. However, in order to combine the judgments of various economic subjects, that is, the judgment of the saving public or investor (liquidity preference), the judgment of financial organs (concerning the relation of deposit and capital demand and their comparison with capital supplying cost), the judgment on the
part of enterprise (comparison between the rate of interest of borrowing and the rate of profit), the judgment in the administration of public finance (comparison of the interest rate of bond and the burden of public finance) etc., and thereby to make possible the formation of an economic world, there must be a prerequisite, that is, the existence of the "money-rate of interest" in such meaning as was mentioned above to integrate various rates of interest on money into one.