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**The Relevance of the Marshallian Concept of Normality
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Abstract : This study endeavours to explicate the relevance of the Marshallian concept of normal in the evolution of supply curves and the price mechanism in time. This concept is based on the contradictory or at least ambiguous combination of an *ex ante* perspective of expectation formation and an *ex post* inertial dynamics. We first explore the *ex ante* side of the contradiction by drawing upon the writings of G. Shackle. Subsequently, we examine J. Kornai's conception of the normal state as system-specific. We identify the relationship between normality and the co-ordination mechanism in Kornai's *ex post* approach which may be regarded as an alternative to Shackle's solution. Finally, the pertinence of the Marshallian concept of normal will be demonstrated as will its divergent developments by Shackle and Kornai. This leads us to the conclusion that a further development of the concept is required in order to reconcile both *ex ante* and *ex post* approaches which might be based on recent evolutionary analysis.

**The Relevance of the Marshallian Concept of Normality
in Interior and in Inertial Dynamics
as Revisited by G. SHACKLE and J. KORNAIⁱ**

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Introduction

"Passent les jours et passent les semaines

Ni temps passé

Ni les amours reviennent

Sous le pont Mirabeau coule la Seine

Vienne la nuit sonne l'heure

Les jours s'en vont je demeure"

Apollinaire, "Le Pont Mirabeau", Alcools, 1920

It is an ancient view that truth is attained by the poet. A poem is something made, originated. History, in the view of its first practitioners, was a personal art. Subjugated to the order of time and the irreversibility of sentiments which the flow of the river (the Seine) symbolises, Apollinaire grasps the source of his sorrows and joys in love's fundamental dilemma : the clash between time, flowing like the Seine, and the permanence of one's character and attitudes which is expressed by the metaphor of the Mirabeau bridge. Our reminiscences, as well as our hopes search a way out of this dilemma : the former as a passive means consoles our spirit by recalling the familiar order of life passed, while the latter actively endeavours to shape, or invent a new stability amidst the ongoing changes in the future through anticipation and expectation.

Apollinaire is an artist and not a scientist. He writes about sentiments rather than the mind. But the question he raises with regard to the human spirit is the same as the one science poses : Can the basic stuff and nature of the world be such as to allow us to explain its perpetually evolving life-forms and the endless flux of human history and affairs? "The element of time is the centre of the chief difficulty of

almost every economic problem" (Marshall, [1890] 1961, p. vii). This is how Marshall formulated the same question. He was convinced that the economist must study change. Yet he also believed that the economist must be a seeker of principles and not a mere chronicler of the superficial. How was this contradiction to be resolved? Marshall held that if change was continuous in the sense of proceeding by such small steps and in such varying respects as to be perceptible only over long intervals, then the tendencies which generated change at one date would still be recognisably at work, even if they had themselves meanwhile been modified, at later dates. This explains Marshall's insistence on the distinct and differing effects produced by given forces working undisturbed for short or long periods; and his struggle to clarify his conception of the normal. A normal state would have been achieved if, contrary to the facts of an ever-changing environment and the endless stream of "accidents", such non-disturbance had in fact been realised. This Marshallian concept of the "normal" enables a static analysis to be applied to an ever-changing reality.

This study endeavours to explicate the relevance of the Marshallian concept of normal in the evolution of supply curves and the price mechanism in time. This concept is based on the contradictory or at least ambiguous combination of an ex ante perspective of expectation formation and an ex post inertial dynamics (section 1). In the second section, we explore the ex ante side of the contradiction by drawing upon the writings of Shackle. The third section is devoted to Kornai's conception of the normal state as system-specific. We will identify the relationship between normality and the co-ordination mechanism in Kornai's ex post approach which may be regarded as an alternative to Shackle's solution. Finally, the pertinence of the Marshallian concept of normal will be demonstrated as will its divergent developments by Shackle and Kornai. This leads us to the conclusion that a further development of the concept is required in order to reconcile both ex ante and ex post approaches which might be based on recent evolutionary analysis.

I. Marshall's Concept of Normal and his Time-Spectrum

In his preface to the first edition of the Principles, Marshall ([1890] 1961) set himself the task of elucidating the permanent and the essential behind the transitory appearance of things. The society which lay beneath his eyes, Victorian England, was growing in population, technical knowledge, technical accomplishment, literacy and the breadth of suffrage. Its industrial methods and commercial arrangements were fast changing. Yet this rapid evolution, Marshall seems to assume, was explicable by some permanent logic of human existence. It was to this constant and permanent something that he tried to reach down. And he found in the concept of the "normal" that which enables static analysis to be applied to an ever-changing reality. This concept is, perhaps, the most difficult in all of Marshall's book : "... in the present book normal action is taken to be that which may be expected, under certain conditions, from the members of an industrial group; and no attempt is made to exclude the influence of any motives, the action of which is regular, merely because they are altruistic. If the book has any special

character of its own, that may perhaps be said to lie in the prominence which it gives to this and other applications of the Principle of Continuity." (Marshall, [1890] 1961, p. vi). *Natura non facit saltum*. It is this phrase in the Principles which stands out as an appeal to the gradualness of change and as a measure of ascribing to it permanent and discoverable causes. Within this frame (the continuous character of evolutionary change), Marshall speaks of the "normal".

The normal, with regard to price, daily or yearly quantities supplied, quantities of resources employed in a given industry and so on, is the result of two different processes (technological and market) each with its own time-scale. There must be time enough for the technological process of adaptation to occur and there must be the prospect of the altered circumstances of demand or supply continuing long enough to make the result worthwhile. The fulfillment of both these pre-conditions spawns the long period, allowing the full adaptation of both processes which can be discerned by the businessman, or perhaps the analyst himself. The prospect of the altered circumstances continuing belongs to the interior perspectiveⁱⁱ. This prospect is routinely assumed in standard theory, even for short period analysis. Marshall does not routinely assume it; indeed the prospect of a reversal encourages firms to restrain their price rises when demand expands and to keep price above marginal cost when it contracts; the context, of course, is a firm which is concerned to expand its trading connections, which is the context which most of Marshall's discussions of normality refers to.

Moreover the normal is what would come about given the *ceteris paribus* conditions which, in fact, cannot be preserved. If time for adaptation is prescribed by the analyst is shorter than might be eventually needed, or if the duration of the new circumstances is assumed to be limited, then there will be a "normal" adaptation in respect of these restricted opportunities. The normal is relative to the opportunities. Insisting on the continuity of change, Marshall shows how it can be split into stages, each having its own unity and rationale. The changes in prices which we may regard as normal if we are thinking of the changes from hour to hour on a Produce Exchange do no more than indicate the current variations with regard to the year's history. And normal prices with reference to the year's history are but current prices relative to the history of the century. For time is "absolutely continuous : Nature knows no absolute partition of time into long periods and short; but the two shade into one another by imperceptible graduation, and what is a short period for one problem, is a long period for another" (Marshall, [1890] 1961, p. vii). Despite the absence of any partition between "normal" and "current" price in real time, there is a logical difference between this pair of concepts in a given period of time.

I.1. The Normal Value, the Market Value, and the Average Value

As there is no sharp division between that which is normal and that which is provisionally disregarded as abnormal, there is also no sharp division between normal values and current, market or occasional values. The latter "are those values in which the accident of the moment exert a preponderating influence; while normal values are those which would be ultimately attained, if the

economic conditions under view had time to work out undisturbed their full effect. But there is no impassable gulf between these two; they shade into one another by continuous gradation" (Marshall, [1890] 1961, p. vii). Interpreted in this way, the concept of "normal" goes back to Adam Smith's idea of "natural" value. In fact, for Marshall, the concept of normal value is the real meaning of that much quoted and much "misunderstood" doctrine of Adam Smith and other economists that the normal or "natural" value of a commodity is that which economic forces tend to bring about in the long run. It is the average value which economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their full effect. But we cannot foresee the future perfectly. The unexpected may happen and existing tendencies may be disturbed before they have had time to accomplish what appears now to be realised. The fact that the general conditions of life are not stationary is the source of many of the difficulties that are met with in applying economic doctrines to practical problems (Marshall, [1890] 1961, pp. 347-348). This explains why for Marshall, the normal price is generally not equivalent to average price.

In a rigidly stationary state in which supply could be perfectly adjusted to demand in every particular the normal costs of production, the marginal costs, and the average costs (inclusive of rent) would be the same, for long periods and for short. However in a non-stationary world, the distinction between average price and normal price is essential : "An average may be taken of the prices of any set of sales extending over a day or a week or any other time : or it may be the average of sales at any time in many markets; or it may be the average of many such averages. But the conditions which are normal for any one set of sales are not likely to be exactly those which are normal for others : and therefore it is only by accident that an average price will be a normal price; that is, the price which any one set of conditions tends to produce. In a stationary state alone, as we have just seen, the term normal always means the same thing : there, but only there, 'average price' and 'normal price' are convertible terms" (Marshall, [1890] 1961, p.372). Since "normal" is not equivalent to "average", we can conclude that the consequences of normal behaviour must be the subject of thought-experiments; econometrics is of dubious relevance to the appraisal of such theories.

It is noteworthy that in Marshall's work, the normal value itself is defined under the *ceteris paribus* clause, namely the permanence of some tendency applying to a particular set of sales. It is therefore sufficient to suppose that firms grow and decline, but that the "representative" firm remains always of about the same size, and therefore, that the economies resulting from the resources of such a "representative" firm are constant (Marshall, [1890] 1961, p. 367). Since the aggregate value of production is constant, so too are those economies resulting from subsidiary industries located nearby. Putting it differently, the general economic conditions around us change rapidly; but they do not change rapidly enough to affect perceptibly the short period normal level about which prices fluctuate from day to day (Marshall, [1890] 1961, p. 369).

Normal does not mean competitive, at least not in the modern sense of perfect competition. According to Marshall, market and normal prices alike are brought about by a "multitude of influences of which some rest on a moral basis and some on physical; of which some are competitive and some are not. It is to the persistence of the influences considered, and the time allowed for them to work out their effects that we refer when contrasting market and normal price, and again when contrasting the narrower and the broader use of the term normal price" (Marshall, [1890] 1961, p. 348). Meanwhile, although the normal price is determined by factors which are not solely competitive, for Marshall, the normal usually implies a good deal of competitionⁱⁱⁱ. In fact, the normal price is based on some kind of "expectation", conventions and the attitudes of producers and consumers. The "normal" has many dimensions, not only those related to competitive market forces but also those which lie outside the market and determine the structure of the market. Borrowing the military distinction between tactics and strategy, Marshall contends that in economics 'tactics' refer to those outward forms and accidents of economic organisation which depend on temporary or local aptitudes, customs and relations of classes, on the influence of individuals, or on the changing factors and needs of production. Hence market value belongs to tactics. 'Strategy', in contrast, corresponds to the more "fundamental substance of economic organisation", which depends mainly on such wants and activities, such preferences and aversions as are "found in man everywhere". Indeed, the human needs and preferences are not always the same in form, or even in substance; yet they have "a sufficient element of permanence and universality to enable them to be brought in some measure under general statements" (Marshall, [1890] 1961, Appendix C, p. 777). The concept of normal belongs to this strategy category. In this respect, normal price, contrary to market price, has a regulatory effect, as a sort of gravitational force around which fluctuates the accidental, phenomenal force of market price. This kind of "gravity force" should be clearly distinguished from neo-Ricardian centres of gravitation in which expectation does not play a major role. For Marshall, the normal price is the price the expectation of which will just suffice to maintain the existing aggregate amount of production, albeit with some firms growing and increasing their output, and others shrinking and reducing theirs. The normal reveals the general feature and gives a sense to "aggregate" by defining the particular general conditions underlining an order not only in its competitive market aspects, but also in its non-competitive dimensions.

I.2. Normal Supply and the Time-Spectrum

According to Marshall, we have to represent the normal demand price and supply price as functions both of the amount normally produced and of the time period relative to which that amount is normal. An important difference between the demand curve and the supply curve resides in the fact that the former rests on the fundamental psychological law of diminishing returns, while the latter may be subject to the law of increasing returns. However the law of increasing returns only applies in long run. As a general rule, the shorter the period which we are considering, the greater is the influence of demand

on value; and the longer the period, the more important will be the influence of cost of production on value (Marshall, [1890] 1961, Book V, p. 349). Thus in the long run, supply has the overriding role in determining the normal value. Being subject to increasing returns, the conditions of normal supply are less definite as compared with the normal demand (Marshall, Book V, p. 342).

The general meaning of the term normal supply price is always the same whether the period to which it refers is short or long; but there are great differences in detail. In every case reference is made to a certain given rate of aggregate production; that is, to the production of a certain aggregate amount daily or annually. In every case the normal price is that which meets the expectation of people with regard to the compensation which they claim in order to consider worthwhile to produce that aggregate amount. In every case the cost of production is marginal, viz. it is the cost of production of those goods which are on the margin of not being produced at all, and which would not be produced if the price to be had for them were expected to be lower (Marshall, p. 373). When the term normal is taken to relate to short periods of a few months or a year, supply means broadly what can be produced for the price in question with the existing stock of plant, personal and impersonal, in the given time. When the term normal refers to long periods of several years, supply means what can be produced by plant, which itself can be profitably produced and applied within the given time. Finally, there are very gradual or secular movements of normal price, caused by the gradual growth of knowledge, of population and of capital, and the changing conditions of demand and supply from one generation to another. In fact a theoretically perfect long period must give time enough to enable not only the factors of production of the commodity to be adjusted to the demand, but also the factors of production of those factors of production to be adjusted and so on. And this, when carried to its logical consequences, will be found to involve the supposition of a stationary state of industry, in which the requirements of a future age can be anticipated beforehand (Marshall, p. 379). This "theoretically perfect long period", with its stringent requirement either for rational expectations or the limitation of contingencies, would prevent Marshall (or anyone else) from analysing change. In such a setting normal would be equivalent to average, and the outside view is all that is required.

According to Marshall, the long period during which the true normal price is formed can be explicated as the period in which "the normal action of economic forces has time to work itself out more fully; in which therefore temporary scarcity of skilled labour, or of any other of the agents of production, can be remedied; and in which those economies that normally result from an increase in the scale of production... have time to develop themselves. The expenses of a representative firm, managed with normal ability and having normal access to the internal and external economies of production on a large scale, may be taken as a standard for estimating normal expenses of production..." (Marshall, p. 497). In the light of this definition of true normal price under the law of increasing returns, Marshall can revert once again to the distinction between average values and normal values, since the distinction becomes

particularly clear in a non-stationary state marked by the internal and external economies of production. In other words, this very distinction reveals that the normal value belongs to economic dynamics.

Furthermore, it should be noted that Marshall invokes his typical or representative firm in order to define a “standard for estimating normal expenses of production”. What does a representative firm mean? This question is particularly important in our times since Marshall’s concept of the representative firm is frequently misinterpreted in a Pigovian spirit, and has been criticised on the basis of such interpretation.

As Loasby (1976), Moss (1984), Langlois (1994), and others have argued, what we think of as mainstream “Marshallian” theory today is in many ways more Pigovian than it is Marshallian. Rather than thinking in population terms as Marshall did, and constructing a “representative firm” that reflects the characteristics of the population of firms as a whole (rather than the characteristics of any particular firm), the neo-classical theory of the firm since Pigou begins with identical idealised firms and then builds up to the industry by simple addition. It is this later methodological standpoint, not any logical problem with Marshall’s own conception, that led to the famous controversy over increasing returns early in the century. As Richardson rightly remarks : “the apparent necessity of finding some reason why long-run marginal costs should ultimately rise is created not by the phenomena themselves, but by the nature of the theoretical schema through which we have chosen to study them” (Richardson, [1960] 1990, p. 213). The “theory of the firm” in modern-day price theory builds on the Pigovian foundation. It begins with firms as production functions, each one identical, and each one transforming homogenous inputs into homogenous outputs according to given technical “blueprints” known to all. For Marshall, in contrast, the analysis of the representative firm was part and parcel of a general theory on industrial structure (Marshall, [1898] 1925, 1919). “As Marshall understood, the firm in price theory is a theoretical link in the explanation of changes in price and quantity (supplied, demanded, or traded) in response to changes in exogenous factors...It was never intended to explain industrial structure, let alone to serve as a guide to industrial policy” (Langlois, 1994, p. 3). He attempted to incorporate variety as a key element in his theoretical apparatus. For instance, the notion of industry equilibrium in Marshall’s work, which describes a population of disequilibrium firms with industry level supply-demand equilibrium, is a reflection of his endeavour to capture variety analytically. The concept of “the representative firm” is Marshall’s invention in order to bridge the firm level and the industry level. It must not be confused with Arthur Pigou’s interpretation of “the representative firm” which excludes Marshall’s disequilibrium firm, and transforms it into the homogenous, uniform equilibrium firm.

I. 3. Normality, Increasing Returns, and Economic Dynamics

In a stationary state the income earned by every factor of production is exactly the same as the income expected or anticipated by the producer for bringing that factor into production. In such a state, the earned or actual income would represent the normal measure of the efforts and sacrifices required to

call into existence. The aggregate costs of production might then be found either by multiplying these marginal expenses by the number of units of the commodity, or by adding together all the actual costs of production of its several parts, and adding in all the rents earned by differential returns to production. The aggregate costs of production being determined by either of these routes, the average costs could be deduced by dividing by the amount of commodity; and the result would be the normal price, whether for long periods or for short.

Hence in a stationary state where the expected or normal price of every factor of production is equal to its actual price, the normal price is equal to average cost. It follows that in the Walrasian equilibrium theory, the normal price can be regarded as equal to the average costs if it can be demonstrated that this theory is also based on the hypothesis of the complete realisation of expectations. As a matter of fact, one of the possible methods of approaching a general equilibrium advocated by Walras himself, namely the Walrasian tâtonnement procedure requires the hypothesis of full realisation of anticipation. This procedure can be described as follows. The commissaire-priseur (auctioneer) announces an arbitrary price and waits to receive the information from both buyers and sellers concerning the quantity of goods which they desire to buy or to sell at such a hypothetical price. The buyers and sellers do not carry out any real transaction; they only communicate the information regarding their buying or selling intentions to the commissaire-priseur on a piece of paper. If the expected quantity to sell is equal to the expected quantity to buy, the commissaire-priseur will fix the arbitrary price as equilibrium price. Then the real or actual exchange can begin. However, if they are not equal, the commissaire-priseur will continue to announce new arbitrary prices until he finds the correct equilibrium prices. In this sense, the Walrasian equilibrium as a perfect equilibrium of demand and supply over all markets, can be achieved when the expected or anticipated prices ("normal" prices) are fully realised.

However, "in the world in which we live, the term 'average' expenses of production is somewhat misleading" (Marshall, [1890] 1961, Appendix H, p. 810). Because most of the factors of production, material and personal, by which a commodity is made, come into existence after a certain period of time. Their values are therefore not likely to be just what the producers expect them to be originally; but some of their values will be greater and others less, depending on the scale of returns. Thus present incomes earned by the factors of production will be governed by the general relations between the demand for, and the supply of their products; and their values will be arrived at by capitalising these incomes. Therefore the normal expenses of production in a dynamic world cannot be equivalent to the average expenses due to the permanent deviation of the long period normal values from the originally expected values. This deviation depends, among other things, on the scale returns to production in the long term. For Marshall, "the problem of normal value belongs to economic dynamics. Partly because statics is really but a branch of dynamics and partly because all suggestions as to economic rest, of which the hypothesis of a

stationary state is the chief, are merely provisional, used only to illustrate particular steps in the argument, and to be thrown aside when that is done" (Marshall, Book V, p. 366).

Of course in Marshall's epoch, the concept of "dynamics" was not yet scrutinised. Since the late thirties and during the forties and fifties, the concept of dynamics as opposed to statics has been the subject of hot debate (Baumol, 1951). While Marshall emphasized statics as a branch of dynamics, Hicks suggests that we call "... Economic Statics those parts of economic theory where we do not trouble about dating; Economic Dynamics those parts where every quantity must be dated" (Hicks, 1939, p. 115). For Hicks, statics only embraces the analysis of stationary situations, i.e. situations where nothing changes, and where no attention need be paid to the past or to the future because the facts and analysis relating to the present will apply equally well at any other time. In contrast, Harrod, in his Towards a Dynamic Economics, suggests another definition of dynamics which is more faithful to the Marshall's vision of the problem. For Harrod, dynamics should be confined to the analysis of continuing changes as against once-and-for-all changes. The latter's approach, comparing the system in equilibrium before and after change, is termed comparative statics. While Harrod's definition of dynamics can shed some light on the nature of dynamics as nonstationary (Harrod, 1948), it does not make any distinction between an objective dynamic viewpoint and a subjective one, since Harrod's definition is not based on the criteria of expectations and uncertainty. These criteria are, however, essential in the appraisal of the normal as a dynamic phenomenon.

II. Shackle's Contribution to the Concept of Normal : ex ante Vision

George Shackle has devoted several articles to the clarification of the Marshallian time-spectrum (Shackle, 1965, 1972, 1989). In our view, his most important contribution consists in his insistence on the dual aspects of the concept normal, namely the ex ante perspective of the businessman (interior dynamics), and the ex post perspective of historian, mathematician or observer in general (exterior dynamics).

II. 1. Two Views of Time, Two Types of Dynamics

For Shackle, there exist two utterly different views of time, the outside view and the inside view. What he means by the "outside view" is illustrated especially by the perspective adopted by the mathematician and historian in their academic capacity. The mathematician treats time as a space, or as one dimension in space, in which all points have an equal status or importance or validity together, within one and the same vision of the world. All points have simultaneous validity, each of them means the same to him when he thinks about them all in one thought. At which of these instants does the mathematician place himself, at which does he take his stand? At none of them; he is an outside observer, not part of the system he is describing, and for him all the instants are, in the instantaneous logic of his own thought, equally and simultaneously valid and meaningful. Like the mathematician, the historian also considers the long process of history as a single panorama, as a unity, every part of it as real as every

other part. He is an outside observer, not himself part of what he describes. "With this outside, detached, sophisticated view of time, I want to contrast the inside view which each of us has in the very act of living, the time in which we sense-perceive, feel, think, imagine, and decide" (Shackle, 1989, p. 15). This inside view of time is what Shackle calls the "solitary present" or the "moment-in-being". The experienced moment, the moment-in-being, is for the individual person the only thing there is, the only actuality. Time from the inside is the time in which we think, whereas time from the outside is the time about which we think. The former one is actual in the sense that it represents the presence and pressure of the fleshly existence of events upon the mind, while the latter appears as the content of those events that pass upon the mental screen of memory and imagination. Hence, for any one person "no two distinct moments can be actual together, the actuality of one denies and excludes the actuality of any other" (Shackle, Op. cit., p. 15). Memory and imagination are both of them part of a person's present experience, they belong to the essence of the moment-in-being, they are in it and of it. The content of the subject-matter of their images does, indeed, bear a label with a date other than that of the moment-in-being, but this fact no more allows us to treat these images as effective substitutes for the actuality.

It is worth underlining that in Shackle's approach the distinction between the inside and the outside views is not the same as what the realist philosophers acknowledge as the distinction between the inside world of the observer based on mental representations of the world and the external or objective world existing independently of the observer. This is because Shackle regards both the inside and outside views as based on thought-experiments. There are surely other types of classification between the inside and the outside views which are not forcibly less interesting than the one proposed by Shackle. However, we do not adopt them because they are frequently established on a sharp distinction between thought-experiments and the external, objective world. For instance, in his recent book, the realist philosopher J.R. Searle (1995)^{iv} introduces two senses of distinction between "subjective" and "objective", and subsequently defines the internal and the external views. For Searle, the first sense of distinction is an epistemic one : "Epistemically speaking, "objective" and "subjective" are primarily predicates of judgements" (Searle, 1995, p. 8). Those judgements which depend on certain attitudes and feelings of the bearers of the judgement and cannot be settled objectively are named "subjective". In contrast, those judgements which are independent of anybody's attitudes or feelings about them are "objective". For example, "Rembrandt is a better artist than Rubens" is a subjective judgement, while "Rembrandt lived in Amsterdam during the year 1832" is an objective one. The second sense of distinction is an ontological one : "In the ontological sense, "objective" and "subjective" are predicates of entities and types of entities, and they ascribe modes of existence" (Searle, 1995, p. 8). For example, pains are subjective entities, since their existence depends on the feelings of the bearers of the pain. Whereas mountains are ontologically objective, because their existence is independent of any observer. Following these two senses of distinction between objective and subjective, Searle contends : "there is a distinction between

those features that we might call intrinsic to nature and those features that exist relative to the intentionality of observers, users, etc." (Searle, 1995, p. 9). The intrinsic features of nature whose existence are independent of any perceiver or any mental state, are called objective or external. In contrast, those features of reality whose existence depend on being felt by subjects are called subjective or internal. For Searle, the institutions such as money, property, government and marriage, are a particular kind of social reality (Searle, p. 26), that exist only because we believe them to exist (Searle, p. 32). The mental representation of an institution is partly constitutive of that institution (Searle, pp. 27-28), since an institution can only exist if people have certain sorts of beliefs and mental attitudes. In other words, institutions are always created by the intrinsic mental phenomena of their users or observers, namely by the collective intentionality of the agents. Institutions as mental phenomena, are, like all mental phenomena, ontologically subjective. However this ontological subjectivity does not prevent claims about observer-relative features from being epistemically objective. In fact, "all institutional facts are ... ontologically subjective, even though in general they are epistemically objective" (Searle, p. 63).

Having introduced the distinction between the two senses of "objective" and "subjective", Searle elucidates his standpoint on the usual distinction between the internal and external points of view. He states : "in this book we are interested primarily in the internal point of view, because it is only from the internal point of view of the participants that the institution can exist at all. The anthropologist from outside the institution may see the potlatch, for example, as performing functions of which the Kwakiutl participants are totally unaware, but the whole feast is a potlatch in the first place only because of the collective intentionality and the imposition of status-functions by the participants, and this, whether conscious or unconscious, can exist only from the internal first-person point of view" (Searle, p. 98). Here, the distinction between the internal and the external points of view derives from the distinction between the ontologically subjective existence of the institutions for the participants and the epistemically objective existence of the institutions for the anthropologist. It is a distinction between a world of "thought-experiments" for the participants and a given, objective, human world which seems to have an existence independently of what an anthropologist might be thinking. This distinction is essential for a realist philosopher, since it allows him to clearly demarcate the borders of the "physical" world (or the world of sheer physical facts) from those of the "mental" world (or the world of institutional facts). If brute physical facts can exist independently of human mental representation, the institutional facts can only exist as the outcome of our collective intention, convention and agreement.

The merits of such a distinction inspired by realist philosophy notwithstanding^v, it is irrelevant to the question that interests us. For this distinction does not account for time in the process of the formation and evolution of social phenomena. In Shackle's approach, the distinction between internal and external is related to time and to the relation between the action and the formation of thought in time. Accordingly, the difference between the historian's or mathematician's perspective and the producer's

perspective does not amount to a distinction between the “subjective” and “objective” character of their respective judgements. For both perspectives share in common the fact that they are “thought experiments”. The difference between the internal and external points of view with regard to time lie in the distinction between the time in which we think, and the time about which we think.

Shackle’s epistemic classification of two conceivable classes of economic dynamics corresponds to his ontological distinction between these two views of time (Shackle, Op. cit., p.17). It is plainly the outside view which gives us an economic dynamics in the accepted and orthodox sense. For in that sense we consider a sequence of moments to belong to one and the same actuality, and that actuality must therefore be that which is seen from the outside by an observer. Were he to include himself in his view of it, all moments except the solitary present would lose their actuality. This exterior dynamics falls further into three kinds : 1) deterministic or calculable dynamics; 2) inertial dynamics; 3) ceteris paribus dynamics. The first kind of dynamics is deterministic in the sense that the future is regarded to be nothing but the reproduction of what has already happened in the past. In its strict and calculable form the current values of all variables are made to depend on some set of their previous values, so that, if over some sufficient interval or series of dates the values of a self-contained set of variables are known, all subsequent values can be calculated. In such a deterministic dynamics, there can of course be decision in the empty sense^{vi}. For Shackle, however, inspired decision is precisely an "unpredictable initiative" (Shackle, Op. cit., p.25).

Shackle calls the exterior dynamics of the second kind, inertial dynamics. This kind of dynamics describes the short-range guesses of people on the basis of inertia in affairs and the people’s subjectively bounded uncertainty. Shackle explains the role of inertia as determining the evolutionary path of economic changes in a way which can be compared to the concept of hysteresis^{vii}. He contends : "However far a decision may depart from being an obvious reflection of obvious circumstance, its effect will take time to work through the economy, which meanwhile will swing along a path at first largely shaped by its antecedent states. It is, perhaps, only a relatively few key individuals at any time whose decisions can simply contribute to this course anything that can ever lie imputed to them by our outside observer, though we must suppose, perhaps that any man's decision can set off a chain reaction that will amount to a great effect" (Shackle, Op. cit., p.25). Each agent is deciding in a world of subjectively bounded uncertainty. For Shackle, this means that for each action open to the agent, she (he) discerns a great range of possible ultimate consequences, but a range which, within any finite horizon, is bounded. All this may give the sequence of states seen by our detached observer a sort of continuity of texture which will enable her to make short-range guesses about the future. The principal difference between a deterministic or calculable dynamics and inertial dynamics is that the former one is in a certain sense paradoxically timeless, while the latter one “is by its whole purpose predictive, though in a tentative and undogmatic way. The writer of 'inertial' dynamics invites his readers to watch for departures from the

inertial course of events, he continually suggests what could happen if this and if that unpredictable impulse should strike the system from outside its defined boundaries of internal interdependence" (Shackle, Op. cit., p. 27). In this use of the term if, the author of inertial dynamics is moving away from the role of prophet towards the task of scientific description. "To describe the orderliness of nature : this is all that it lies within the power of the scientist, as such, to do" (Shackle, Op. cit., p. 27).

Finally, in Shackle's viewpoint the third kind of dynamics can be defined as follows. "We can in a certain manner combine the first two kinds into what I would call a *ceteris paribus* dynamics" (Shackle, Op. cit., p. 25). We assume that at a particular instant a number of economic agents all take decisions simultaneously, and that thereafter during a certain interval everything that happens is the direct or indirect consequence of these initial decisions. By a direct consequence Shackle means an act which precisely executes the initial stages of a decision. By an indirect consequence, he means an act which is the automatic response merely to events which themselves derive directly from the initial decisions, or from the interplay of acts directly stemming from those decisions, without any new decisions in the non-empty sense. In this manner we can simultaneously "bring fully into our analysis the inseverable structure of expectations and decisions and yet allow ourselves to trace consequences from antecedents on the supposition that no essentially new initiative interferes" (Shackle, Op. cit., p. 26).

Contrary to exterior dynamics, interior dynamics of the individual's solitary moment-in-being can be constructed only by each person for himself, since he alone can have insight into his own mind. For Shackle, the psychic solitary moment consists in the creation and use of expectations, i.e. the imaginative creation of the set of possible action-schemes and, for each action-scheme, a bounded range of its possible outcomes. We focus our attention on "certain expectation-elements of each such bounded range", and we select "one action scheme out of all those open, whose focus-elements of expectation will serve as the basis of anticipatory experience" (Shackle, Op. cit., p. 26).

There are several differences between exterior and interior dynamics. An exterior dynamics is public and objective : the thing studied by one outside observer can be studied by another, since it exists in some sense independently of the existence of any observer. It is mechanical, for it looks upon each momentary state of the system as a phase in the determinate behaviour of a machine of limited design, a machine whose whole potentialities we can in principle know, so as to be able to tell, from information about what has happened up to now, what will happen next. And an exterior dynamics will be aggregative, for it deals with the totality of the actions of many individuals to each of whom the observer's own relation is the same : that of aloof and detached study. And above all, exterior dynamics will claim to be predictive.

II.2. The Normal : Interior Dynamics or Inertial Dynamics

How can the concept of the normal be reinterpreted in terms of interior and exterior dynamics? To which type of dynamics does it belong? Readers familiar with Marshall will know that he does not

articulate his thought in this way nor make any express distinction between the two viewpoints of time and dynamics on the lines advocated by Shackle. Nevertheless, in our view, Shackle's classification is extremely important to clarify the relevance of Marshallian concept of the normal. It is true that the Marshallian period, whether short or long, is something seen by the businessman ex ante; it is a period which must be estimated and planned for in advance, and we may understand Marshall most easily by treating all his comparisons, whether so described or not, as comparisons of alternative plans. The length of the period which such plans are for is, as Marshall constantly insists, a continuous variable, ranging from a day to several generations. But between the extremes of this range, and even between interior values, the differences between the relevant plans are so great as to be qualitative, and can be studied in the guise of types, the market period, the short period, the long period. In this respect, the Marshallian period can be interpreted as part and parcel of "inside" time and "interior" dynamics. Shackle has invented the expression "some calendar interval" (Shackle, 1965, p. 30) as a vehicle for Marshall's thought. This expression allows us to distinguish clearly between two different Marshallian concepts which Marshall himself does not clearly distinguish, namely the futurity and the length of the supply-interval. The framework of time ideas involved in the notion of the "calendar interval" comprises the date from which the producer, whose conduct we are studying, looks at this interval; the time-interval separating this date from the beginning of the interval (which corresponds to Marshall's concept of the futurity); the length of the interval (which corresponds to Marshall's concept of the length of the supply-interval); and the location of all these things in the real historical context. Regarding the concept "normal", it represents the state which a producer (and not necessarily the observer) could look forward to reaching if his preparations were able to take advantage of some stated futurity^{viii} of the date when production was to begin, and of some stated minimum of total sales of the production after that date; and if he could ignore all possibilities both of more improvised and immediate production and sales, and of more carefully and lengthily distant production and sales. Take, in other words, a named calendar interval, specified with regard to its beginning and its end in the real historical calendar, and also its futurity. Let the producer concentrates all his energies on the activities within that interval. Then his operations in that interval will approximate to some cross section taken from that "stationary state" which Marshall eschews as an analytical tool. All this is on the understanding, however, that all the rest of the economic environment has likewise taken this interval as its sole object of preparation (Shackle, 1965, pp. 27-43).

Yet this conception of the normal must be reconciled with the fact that no producer can have anything like a complete knowledge or picture of possibilities that will open up as he traverses in practice the time-distance separating him from the named calendar interval for which he is supposed to be preparing. The question is whether the Marshallian concept of the normal reconciles this *ex ante* viewpoint of the businessman with the emergence of new possibilities during the calendar interval taken

to be sufficient for the realisation of all tendencies to their full effect. According to Shackle, the Marshallian long-period supply curve combines both viewpoints (ex ante, that of the businessman; and ex post, that of the observer) into one statement and one diagram (Shackle, 1972, p. 290). Shackle writes : "Marshall shows us the long period from two viewpoints, that of the businessman who stands, as it were, upon the calendar axis and looks, by imaginative construction based on suggestions offered by the past and the present, along it to future dates, and that of the detached and knowledgeable observer who stands outside the participant's axis and can view all its distinct dates as co-valid" (Shackle, 1972, p. 289).

It is not evident that the the two viewpoints are reconciled in Marshall's work. There are two reasons for this. First, the objective of the normal as a theoretical construction is the appraisal of regularity in ongoing economic changes under the ceteris paribus hypothesis. The emphasis is therefore on the normal values as those which would be ultimately attained, at the end of calendar interval, if the "economic conditions under view had time to work out undisturbed their full effect" (Marshall, [1890] 1961, p.vii). The adjective "undisturbed", referring to the ceteris paribus clause, is crucial for describing the normal. In this respect, in Marshall's work, the normal is similar to a ceteris paribus dynamics (exterior dynamics in Shackle's terminology). Second, contrary to Shackle's conception of time, Marshall contends : "The explanation of the past and the prediction of the future are not different operations, but the same worked in opposite directions, the one from effect to cause, the other from cause to effect" (Marshall, Appendix C, p. 773). The symmetry of prediction and explanation obtains only in an idealised world, where the data on which reason is to work are complete and certain for both purposes, or the data assumed to be non-changing or "undisturbed". In an inertial dynamics, the symmetry of prediction and explanation as suggested by Marshall, is justified (given that the hysteresis shows a linear character, with full and not selective memory). However in an interior dynamics, this symmetry makes no sense. For, as Shackle argues in his criticism of Marshall's induction and deduction procedures ("History, Theory and World Picture", Shackle, 1972, pp. 345-353), this symmetry assumes that the selection of data has already been performed, in a manner which is guaranteed (whence and by whom remain obscure) to be correct.

Although the Marshallian concept of the normal embraces the two viewpoints (ex ante and ex post), the reconciliation of the two is not achieved (Robertson, 1956; Harcourt, 1996, pp. 7-8). There remains a tension between two possible interpretations of the normal. It may be interpreted as the businessman's action-scheme as one out of all possibilities open to him, which he selects on the basis of what he expects might occur over the relevant time period. That is the interpretation given to this concept by Shackle. However it may also be interpreted as the regulatory mechanism of a changing system in some given calendar interval as seen by an economist or an outside observer ex post. "Regulatory mechanism" refers to some kind of "order" or a tendency to equilibrium in a changing economic system. The existence of "order" representing something constant or permanent amidst changing events is

independent of individual actor's will, intention, or consciousness. However an economic order is dependent both on inertia in affairs and on the outcome of contending expectations. In this perspective, a regulatory mechanism is not just a theoretical construct the economist imposes on a system in order to make sense of that system, it is a real tendency or order deriving from the inertia that exists out there in the business world, as well as from the subjectively bounded uncertainty of actors. In this second version, the concept "normal" would be part of inertial (exterior) dynamics, and will claim to be predictive. In our opinion, Marshall's own formulation is closer to this second version, although an ex ante vision of the concept is not excluded either. The development of this second version of the normal, as we will try to show in the next section, has been accomplished by Janos Kornai.

II. 3. Prices as Convention

Shackle systematically applies his inside viewpoint of time to prices. Instead of the distinction between market prices and normal prices, he suggests a unified conception of prices as convention in a dynamic world. As against the neo-classical value theory which describes the interaction of tastes and known circumstances (and includes in the latter everything relevant to choice), Shackle contends that prices depend not only on tastes with their reasonably presumed stability, and on endowments with their short-period constancy, but also on thoughts, the formal contents of the mind, swiftly composing, combining and dissolving themselves from moment to moment (Shackle, 1972, p. 221). The causal relation between thoughts and prices stems from the dependence of the prices on the historical context, that is, on the particular point of development which technology, business organisation and the total social environment have reached : "... price depends on the quantity to be produced, the time available for producing it, and the specific historical starting point" (Shackle, 1965, p. 35). The effect of thoughts on the formation of prices can be captured through the expectations or what Shackle calls "epistemic circumstances" and their influence on economic decision (Shackle, 1972, pp. 220-229, p. 267; Shackle, 1989, pp. 82-102). In an ex ante viewpoint of normal values, prices are the businessmen's expectations, judgements or evaluations of the way the production or supply as well as costs and sales will evolve during a calendar interval^{ix}.

Without mentioning the Marshallian concept of normal price, Keynes analysed the relevance of expectations or businessmen's guesses on the asset valuation in his General Theory. As a matter of fact, Keynes' account of businessmen's methods of asset valuation and ways of deciding on investment could be described as normal when adopting the interior perspective, in the particular environment which Keynes is analysing (Keynes, 1964, Chapter 12; 1990, pp. 141-157). Reviewing Chapters 12 and 17 of the General Theory, Shackle considers the concept of "conventional valuation" as the "ultimate thesis" of Keynes (Shackle, 1972, p. 224; 1989, pp. 207-220). That ultimate thesis declared that economic actions, and most of all, the commanding activity of investment in durable facilities, were governed in their scale, character and timing, by expectations, and that expectations can be transformed, and the "confidence"

which gives them their ascendancy can be dissolved, by a simple suggestion from "the news", so that the size of the stream of general output, and the quantity of employment, rest upon the most mutable and elusive of all economic elements. Shackle asks : "Where, in such a vision, is any place for theory which assumes that conduct and policy can be rational, calculated, efficient and sure of success?" (Shackle, Op. cit., p. 224). In fact, for Keynes, according to Shackle, "the word conventional, applied to a market's valuation of assets, combines two ideas. These concern respectively the manner in which the valuation is arrived at, or the principle on which it is based, on one hand ; and on the other, the characteristics of a market judgement arrived at on the principle in question. The principle itself is that of the search by the market for the opinion of the majority of its own members; not, indeed, the opinion they hold at this moment, but the opinion they will hold tomorrow, next week or month. For when a majority holds the view that asset prices are about to be higher than at present, they will buy and drive up prices. The conventional judgements are those which, by some more or less by accidental coalescence of ideas or some natural but hidden means of communication, are adopted by a mass of people who cannot find, and are not really concerned to find, any "solid", "objective" and genuinely meaningful basis for any judgement" (Shackle, Op. cit., p. 225). The central idea is that all prices are influenced directly by expectations. Expectations work upon prices via the "liquidity premium", that is, through those uncertainties which account for the existence of a rate of interest (G. Shackle, 1972, p. 226). The measurement of a stock of diverse capital goods by valuation can have latent in it great changes in the basis and meaning of such valuation if the rate of interest changes, and the "revaluation or distortions of meaning will be unrelated to any physical or technological change" (Shackle, 1972, p. 47).

Neo-classical value theory declares that prices should be fluid, because it argues that at any moment there is a notional set of prices which would reflect rationality, and that actual prices should move freely in pursuit of the rational equilibrium. It is this notion of the existence of a meaningfully determinate equilibrium, in any setting except that of the timeless world, that a Shacklian interpretation of Keynes calls into question. In any other world, prices are convention. They depend upon expectations, which are the source of novelty. Put it differently, "in a non-momentary world prices are convention" (Shackle, 1972, p. 267).

The concept of "normal" price, viewed in its ex ante version, leads to Shackle's interpretation of prices as convention. But prices as convention cannot be reduced to prices as the expression of relative scarcity. Furthermore, in this theoretical framework, institutional changes cannot be explicated by prices, since prices as convention are themselves determined by an institutional matrix. This idea undermines the very foundation of neo-classical value theory.

III. Kornai's Contribution to the Concept of Normal : ex post Vision

Janos Kornai first employed the expression "normal state" in his joint article with Weibull on "a queue model" (Kornai and Weibull, 1978). The concept has appeared repeatedly in Kornai's writings

since then, particularly in Kornai (1980, 1981a, 1981b, 1982, 1983, 1992, 1995a, 1995b). In his Economics of Shortage (1980), he clearly acknowledges Marshall's and Shackle's contributions in theorising the notion of "normal state" (Korani, 1980, p. 144). Kornai also underlines the analogy of economics and medicine in their endeavour to describe the normal state (Kornai, 1982, pp. 206-207), and reminds the reader that the term has spread in natural science and in the theory of general systems inspired by the natural sciences (Koehler, [1938] 1969). Despite his original inspiration by Marshall's and Shackle's writings, Korani formulates an interpretation of the normal state which, in our view, can be characterised as a systemic approach applied in social science.

Contrary to Shackle's conception, Kornai advocates an ex post version of the normal state as part of the co-ordination mechanism of economic systems. Kornai's idea of normal value also diverges from that of Marshall's with regard to the relation of normal value and average value. While for Marshall, normal value is different from average value in a dynamic state, for Kornai the two are unconditionally identical by definition. The differences with Marshall's interpretation notwithstanding, we will argue that Kornai's conception of the normal state is a sort of development of Marshall's theory in some (but not all) respects.

III. 1. Normal State, Equilibrium, and Regularities

As Kornai acknowledges (1980), his book Anti-Equilibrium (1971) was not sufficiently precise in its interpretation of the word "equilibrium". In that book, he did not distinguish between the broad and narrow, general and special interpretations of equilibrium. In economic theory, a narrow and special interpretation is attached to the concept of equilibrium according to which the market or economy is in equilibrium if supply meets demand. Many call this a Walrasian equilibrium (Kornai, 1980, p. 145; 1992, p. 254). While denying this narrow interpretation of equilibrium, Kornai admits that "there exist in each system deeply rooted intrinsic regularities which constantly reproduce the essential properties of the system" (Kornai, 1980, p. 147). For Kornai, these "intrinsic regularities" constitute the normal state of a system and as such can be considered as a broader interpretation of equilibrium. Hence the normal state is a concept related to equilibrium. And equilibrium in this broad sense, is an "objective reality", a "tendency", which can be justified if "the relevant state variables of the system clearly shows, in fact, an invariance at least as a tendency and if there exist, in fact, such internal forces and regulatory mechanisms which drive the system back to equilibrium, if it has departed from it" (Kornai, 1983, p. 150). In Kornai's conception, abstract economic systems have a normal state, or, regarding their dynamics, a normal path. The mechanism of control by norms channels the system back towards the normal state or the normal path, should its actual state differs from that corresponding to the norm. As a matter of fact, like Marshall, Kornai calls the normal state the "long-term equilibrium" of the system (Kornai, 1981a, p. 29). For Kornai, the Walrasian equilibrium is one narrow subset in the set of normal states. His interest is not restricted to this distinguished point or subset, for he also tries to capture the

non-Walrasian normal states. The key role of normal state can be grasped through a study of organisational structure.

According to organisation theory, every organisation consists of two abstract units : a real unit and a control unit. The first is the carrier of the real processes, the second that of the control processes^x. Kornai considers norms as regulatory mechanisms and consequently proposes to classify them as control processes. A norm is a behavioural variable's (time-series or cross-sectional) average, but not every behavioural variable has an average which can be treated as a norm. We can only speak of norms if some control process is operating in such a way as to push actual behaviour back towards norms (Kornai, 1981a, p. 114). By insisting on the systemic character of norms as control mechanisms, Kornai enlarges the sphere and the scope of application of the normality concept. Compared to Marshall interpretation of "normal state", Kornai does not solely speak of normal prices as opposed to market prices, but to the normal state or normal path of the whole economic system. In this sense, he gives a more objective, aggregative and predictive character to the notion of normal state. In Shackle's terminology, Kornai's notion of normal state may be classified as inertial dynamics. Kornai himself distinguishes wider "secular dynamics" from narrower, "historically limited dynamics". In the latter case, the control sphere controls the real sphere, while the real sphere feeds back into the control sphere merely through observations. In the former case, the changes in the real sphere actively modify the control sphere, the regularities asserting themselves in it, the response functions, types of communication and so forth (Kornai, 1981a, p. 25). Kornai maintains that control by norms is historically limited dynamics, whereas the emergence and evolution of norms are secular dynamics. The norms are the result of interwoven spontaneous and conscious processes. There is no general pattern to determine the proportions in which these two effects combine. Contradictions between them are certainly possible. Everything depends on the specific system, and within that, on the specific control process. However, "a norm cannot continue in effect for a prolonged period unless it performs satisfactorily its role in reproducing the total system" (Kornai, 1981a, p. 118, my emphasis). Norms as regulatory mechanisms assure the reproduction of the total system. Hence the norm can also be viewed as "feedback regulation which will always drive the actual value back to the neighbourhood of the normal value" (Kornai, 1981b, p. 401, my emphasis). It has been repeatedly emphasised by Kornai that the category of normal does not imply a value judgement of the researcher analysing the system, but points out an immanent property peculiar to the system (Kornai, 1980, p. 144; 1981a, p. 115; 1981b, p. 401; 1983, p. 150; 1992, p. 254). In this context, a possible terminological misunderstanding must be dispelled. The expression "normative" is mostly used in the sense of "to be recommended", "desirable", confronting, for instance, descriptive with normative research : the former only establishes the facts, while the latter makes proposals. In Kornai's writings the term norm is not used in this latter sense.

III. 2. Norms and Co-ordination Mechanism

For Kornai, norms affecting a wide sphere of and acting over a prolonged period, as well as the control mechanisms for such norms, belong to the category of social relations. They cannot be deduced from the technical endowments of production or from its physical input-output ratios. To explain norms it is essential to understand the decision-makers' ownership relations, power relations, interests, motivations, their conflicts and compromises (Kornai, 1981a, p. 120). An individual usually accepts the socially asserted norm in a more or less ready form : he inherits it from his predecessors and learns it from his contemporaries by emulation. By himself, he is not even capable of changing such a socially valid norm. As a rule, the general social conventions and traditions establish the norms. In many cases the norms receive legal sanction : they are prescribed by law or governmental order, and sanction is applied to those who do not comply with them (Kornai, 1981a, pp. 118-119). The rules of a concrete economic system are expressed through the most important and widely applicable norms asserting themselves over long historical periods. Norms have three distinctive features : (1) habitual or routine behaviour; (2) stabilisation effect; (3) system specificity.

(1) Habitual or routine behaviour : Kornai underlines the similarity between control by norms and the concept of habitual behaviour in economic psychology (Katona, 1963). In contrast to genuine decisions which are preceded by lengthy deliberation and a careful weighing of the circumstances, "habitual behaviour is based on custom, habitual routine, repetition, perhaps on very simple rules" (Kornai, 1981a, p. 121). The housewife is behaving habitually when every Saturday she buys her customary quantity of foods in the customary store, while it would perhaps be possible to choose another day, another store, other commodities, and other quantities. This point brings Kornai to stress the advantageous effect of control by norms : "simplification in decision preparation. The system saves thinking capacity. Were there no norms (or, more generally, no routinized, habitual behaviour), then society would be composed only of Hamlets, and become paralysed in meditation" (Kornai, 1981a, p. 121). It is noteworthy that Kornai grasps the crucial role of habitual behaviour, its contrast with deliberate choice, its economising effect in thinking procedures, and its dependence on social context before the publication of one of the major modern evolutionary documents, namely An Evolutionary Theory of Economic Change written by Nelson and Winter (1982). For these evolutionary authors, the concept of routines is analytically similar to the genes in biological theory, or the memes or culturgens in socio-biology. As Nelson contends : "The term 'routine' connotes, deliberately, behaviour that is conducted without much explicit thinking about it, as habits or customs. On the other hand, within these (evolutionary-M.V.) models routines can be understood as the behaviours deemed appropriate and effective in the settings where they are invoked. Indeed they are the product of processes that involve profit-oriented learning and selection" (Nelson, 1995, p. 69). In an evolutionary theoretical framework, routines are inertial forces that provide continuity of what survives the winnowing (Nelson, 1995, p. 56). The concept of normal as habitual behaviour is closer to biology rather than to mechanics. Kornai's interpretation of the normal stresses the

evolutionary aspect of the concept in its original version as formulated by Marshall^{xi}. Unfortunately less attention is paid to this concept in recent evolutionary literature^{xii}.

(2) Stabilisation effect : under definite circumstances and within a certain historical period, norms may be relatively stable. According to Kornai, stability follows from the definition of the concept. Not every behavioural variable is a norm. We speak of norms only in connection with those behavioural variables which for some specific time period have an easily discernible "dense" region, a centre around which they fluctuate (Kornai, 1981a, p. 121). In a mathematically statistical framework this usually means that the variable has a relatively small variance.

The positive effect of control by norms is that it stabilises the operation of the system. A stable norm helps to stabilise the real processes regulated through it. Nevertheless Kornai pinpoints that the advantages and favourable effects of control by norms can become their opposite : "Savings in thinking can become thoughtlessness. Stability can turn into inertia and conservatism" (Kornai, 1981a, p. 122). To a large extent adaptation is guided by different control mechanisms operating on the basis of norms. However the norms can only function in the absence of major friction and shocks, or at least in circumstances which do not require fundamental changes. At the same time, attempts to maintain or return to the norms create difficulties for the system in adjusting to unprecedented shocks deviating from customary values, or to sustained and substantial changes in circumstances. "The norms and control by norms which serve the system in its daily adjustments can become a barrier to adaptation. In many cases it is precisely the norms which constitute the bonds holding the whole system in its 'vicious circle'" (Kornai, 1981a, p. 123). Since the norm is not the cause of the circle, a control mechanism moving in a given vicious circle cannot be changed merely by changing the norm quantitatively. The quantitative characteristics of the norm and the control mechanism relying on this norm belong together and they "emerge as the effect of deeper social factors" (Kornai, 1981a, p. 124).

(3) System specificity : as already mentioned, compared to Marshall's and Shackle's conceptions of the normal state, the original feature of Kornai's interpretation resides in his emphasis on the system specific character of norms. These norms "depend on the state which is permanently produced... by the system-specific intrinsic regularities" (Kornai, 1980, p. 144). In fact, Marshall was not interested in "the state which is permanently produced". Not only he considered the "normal" a thought experiment, isolating one influence among the many which determine actual outcomes, but also he was not interested in perpetuating states. He wished to see major improvements in the conditions of people, and that entailed major changes in what would be considered normal. For Kornai, in contrast, the perpetuating states are particularly important since they reveal the institutional matrix of a given economic system. Kornai's contention is that as long as the institutional framework is given, so are norms. Norms play an important role in conditioning the behavioural patterns which characterise the economic system in question, as well as in the constant reproduction of the important features of the system. For instance, in a socialist system,

shortage is not a "crisis phenomenon". Chronic shortage is the normal state of the resource-constrained economy. It is not only compatible with its normal operation and growth, but also one of the permanent features of its normal operation. Symmetrically, in a capitalist system, overproduction or unemployment is the normal state of the system as the demand-constrained economy (Kornai, 1980, p. 134; Vahabi, 1993, 1995a, 1995b). Not only can essential differences between two systems often be characterised as differences in norms, but one could also characterise changes in a system over time in terms of changes in norms. For Kornai, the transition of socialist economy to market economy can be defined in terms of change from one normal path to another one. In his article "Eliminating the shortage economy", Kornai attempts to show how the fundamental changes of institutional matrix in socialist economies lead to the elimination of their previous normal path, namely excess demand, and the appearance of a new normal path, namely excess supply : "The economy switches from one normal path to the other. The attribute normal also conveys that these are not idealised, pure theoretical models with extreme characteristics but actual historical formations containing a mixture of 'good' and 'bad'" (Kornai, 1995a, p. 162). The switch from one normal path to another one does not need to be smooth.

During the transitional period, there are areas of "no-man's land", a state described at the time of partial reforms in Hungary by Tamas Bauer as one that was "neither plan, nor market" (Bauer, 1984). Kornai (1995b), in his study of "Transformational recession", characterises a transitional period as one which although the old property forms are shaken, mature new property forms have not arisen in their place. Everything is in a fluid state : "The old institutions and organisations of co-ordination cease to function under these conditions. But the requisite new system of co-ordination institutions... have still not developed" (Kornai, 1995b, pp. 179-180). Hence a transitional period is marked by the absence of any dominant system-specific norm.

The three distinctive features of norm (i.e. habitual behaviour, stabilising effect, and system-specificity) imply a co-ordinating function. Such norms are socially defined and historically determined regulatory and feedback mechanisms of economic systems and consequently constitute the basis of their co-ordination mechanism through time.

III. 3. Normal Value and Average Value

In contrast to Marshall's interpretation of normal value, Kornai defines normal value as "nothing else but the statistical average of the actor behaviour. Depending on the nature of the control process, an average either constant or regularly moving over time" (Kornai, 1981a, p. 27). For Marshall, the normal value is only identical with average value if the general conditions of life were stationary for a long enough period to enable the economic forces to work out their full effect. Nonetheless, as a general rule, normal value diverges from average value since the general conditions of life are not stationary, and because supply demonstrates increasing returns. Kornai's definition of normal value is diametrically

opposed to Marshall's. He considers normal values as unconditionally synonym to average values (Kornai, 1981a, p. 129).

Looking for an analogy, Kornai's interpretation may be close to psychology. Relying upon a large number of observations, the normal values of the different variables of the human organism can be stated : the normal body temprature, the normal blood pressure, etc. These normal values are average values in a double sense : cross-sectionally (average of many men), and intertemporally (average of a long period). Some of the normal values are constant, others depend on further variables. As a rule, these normal values are not described by a single figure with many decimals; rather, they may be represented by an interval, either narrow or wide (Kornai, 1981b, p. 401). Each normal has a regulatory mechanism. The control mechanism examines whether the regulatory mechanism actually is functioning within the system by reacting to critical values and tolerance limits which are situated at the borders of the interval. In fact, mathematically speaking, there exist two possible ways for translating the normal value as an average value over an interval. One of the possible methods of description places this category in the conceptual framework of probability theory. According to this approach, the system is in a normal state in the stochastic sense if its internal forces do not change the distribution function of the specific state variables, i.e. its characteristic statistical attributes, such as expected value, variance, etc. Another method of description expresses a similar idea but dispenses with the conceptual framework of probability theory. This view considers the system to be in a normal state, if the value of the variable lies within a certain and not too wide interval. Therefore, in this case it is not one single point that determines the place of the normal state variable (for a given moment in time), but a set. In such a dynamic system we do not have one single equilibrium path, but a great many equilibrium paths. The limits of the interval cannot be determined arbitrarily by the researcher. Kornai suggests both methods for defining a control mechanism based on the critical values and tolerance limits (Kornai, 1983, p. 148).

In his definition of normal value as identical to average value, Kornai dismisses the central message of Marshall's normal supply price : increasing returns. It should be pointed that Marshall contends that the part paid by man in production is generally subject to increasing returns. He also includes the improved organisation in his definition of the law of increasing returns. It is important to trace this principle of progress back to Adam Smith. He justified his claim by arguing that an expansion of demand usually leads to a fall in price - because the expansion causes a further division of labour, which in turn generates improved capabilities and new machinery. In recent evolutionary literature, notably the work of Brian Arthur (1988, 1989) and Paul David (1985) on self-reinforcing mechanisms in economics, particularly technological change and path-dependency, increasing returns have become the central explicatory factor for showing why institutions matter and shape the long-run path of economies. If one takes on board increasing returns, then the normal values cannot be identical with average values. The reproduction of general conditions of a particular set of production or sales cannot be the same as the

average general conditions existing initially, if the reproduction involves self-reinforcing or increasing returns. While normal values regulate reproduction, the average values define the statistical average of the actor behaviour under the given general conditions. Furthermore, the unconditional identity of average and normal in Kornai's view is related to his neglect of the *ex ante* businessmen's expectations with regard to the normal values. In fact, in Kornai's writings the *ex ante* view of the normality concept, which to some extent is present in Marshall's oeuvre, become completely secondary. This explains to a large extent why the average and normal values are unconditionally the same in his conception.

It is noteworthy that Kornai never raises the problem of increasing returns in his treatment of the normal state and its self-reproducing mechanism. By the same token, while acknowledging the relation of the normal concept to similar concepts from mathematical theory of dynamic systems, Kornai never underlines the non-linear character of the concept. As a matter of fact, there exist a close and neat relation between the increasing returns in self-reinforcing mechanisms and the non-linearity in such mechanisms. Taking for example "unemployment equilibrium". Kornai states : "... there is a customary, steady rate of unemployment under the (capitalist-M.V.) system, in which mechanisms operate to restore the customary unemployment if it is upset" (Kornai, 1992, p. 254, my emphasis). Elsewhere, he suggests a 4-5 per cent unemployment as "normal" unemployment in capitalist system (Kornai, 1981a, p. 115)^{xiii}. Normal in this context can be interpreted either as Keynesian unemployment equilibrium or natural rate unemployment.

In both senses, we are not dealing with the general mathematical properties of systems with hysteresis, as elucidated by Krasnosel'skii and his associates (Krasnosel'skii and Pokrovskii, 1989). The study of such systems permits a sketch of the likely implications of non-linear hysteresis for time paths of equilibrium unemployment. The way employment or unemployment responds to shocks to the economic systems indicates some properties of non-linear hysteresis which are compatible with some recent mathematical findings. Although the equilibrium unemployment rate no longer returns to the status quo ante once a temporary shock is reversed (there can be hence no question about the "restoration" of the "customary" rate of unemployment), it displays remanence : "This means that the new equilibrium will not be the same as the old, but will remain displaced. The other major implication is that the equilibrium rate of unemployment retains a selective memory of past shocks : it neither forgets all past shocks, as in the natural rate hypothesis; nor does it, like the elephant, remember all past shocks, as in the case of the linear version of hysteresis" (Cross, 1995, p. 190). From a psychological viewpoint, the same conclusion can be reached (Darity and Goldsmith, 1993). As Darity and Goldsmith state there is no reason for the economy to return to some preordained equilibrium level of employment after a shock, since the existence of greater unemployment will cause changes in productivity and attachment to work that create a new possibly sustainable, equilibrium level of employment (Darity and Goldsmith, 1996, p. 122).

Despite his great contribution to the concept of normal as system specific, Kornai's identification of normal value with average value is a step backward compared to Marshall's conception, since it does not allow us to capture the non-linear character of normality. Recent evolutionary economics literature, particularly that of Paul David on path-dependency provides a more convincing understanding of non-linear character of regulatory mechanisms based on increasing returns.

Concluding Remarks

Analysis must suppose something constant and permanent at the heart of things, but in economics this essence manifests itself in a ceaseless development. Herein lies what Marshall saw as the basic dilemma which faces the economist. His aim is to construct a science, a body of principles giving insight into economic conduct, yet "the central idea of economics, even when its Foundations are under discussion, must be that of living force and movement", and "the main concern of economics is thus with human beings who are impelled, for good or evil, to change and progress" (Marshall, [1890] 1961, Preface to the eight edition, p. XV). For other writers economics has meant pure logic or simple historiography, which does not deal with expectations, novelty and real choice. But Marshall speaks consistently of the businessman as being motivated by what he expects. His conception of the long-period supply curve is expressly designed to bring into the picture of the businessman's policy problem the latter's awareness that a step-by-step expansion of his scale of operations will bring into view the practical detail of possible economies of large scale. However Marshall tries at the same time to explain the permanent, un-changing and rational tendencies at the heart of changing things. As Shackle rightly remarks : "... Marshall's peculiar triumph is his creation of a unity out of the conceptions of equilibrium and of evolution" (Shackle, 1965, p. 36). From the unity of "equilibrium" and "evolution" stems the cardinal concept of "normal" which embraces both viewpoints of time, namely the ex post or outside perspective, and the ex ante or inside perspective.

Marshall exposes himself to a charge of confusion, since he fails to make a clear distinction between a curve visualised by the businessman at one moment and looking to another moment, at which production on this or that scale can begin, and a curve which traces the firm's actual growth path through an infinity of moments between two given dates. This confusion has been removed in two different ways by two eminent authors who followed Marshall's route in exploring the concept of normal.

Shackle captured the importance of ex ante viewpoint in the creation and use of expectations, and on the basis of Keynes definition of prices as convention in chapters 12, 17 of the General Theory. By introducing the notion of "epistemic conditions", he proposes to remove the contradiction between the "normal price" and the "market price" in order to develop a subjective, individual and dynamic theory of valuation on the basis of entrepreneurial judgement, guesses, and converging anticipations. Shackle also admits the scientific character of inertial (exterior) dynamics based on an ex post viewpoint. This kind of

dynamics, in its non-calculable version, is aggregative, objective, public, mechanical and predictive. However its predictive feature is not dogmatic, for it is based on conditional contentions.

Kornai reintroduced and developed the concept of normal in the spirit of inertial dynamics; and thus according to it an ex post viewpoint. The great advantage of Kornai's conception consists in his treatment of normal as system-specific and as a co-ordination mechanism. For Kornai, norms are part of "historically limited dynamics" which describe the habitual behaviours or the regulatory, feedback mechanisms of a system. While enlarging and enriching the field of application of normality concept, Kornai undermines the *ex ante* aspect of the concept. He attaches a mechanical (close to calculable-version) connotation to the normal as unconditional equivalent of average value which is incompatible with a non-linear concept of hysteresis and the economic changes based on increasing returns. Notwithstanding his remarkable description of capitalist and socialist system as "underemployment" and "shortage" economics respectively, Kornai's insistence on an average or normal rate of unemployment in capitalist countries and an average or normal rate of shortage in socialist countries is questionable. Kornai's writings have developed evolutionary economics in its understanding of normality as habitual or routine behaviours.

The adoption of each of the two viewpoints *ex ante* or *ex post* is closely related to the position of agent as decision-maker or observer. In his analysis of supply curves, Marshall recognised the heterogenous character of economic agents, notably that of industrial and commercial capitalists. The merchant's profit depends on her ability to account for both the production period of her commodities, as well as the market period necessary to bring them to the market. That is why the merchant has an interest to adopt simultaneously *ex ante* and *ex post* viewpoints. The credit system and financial capital have enormously developed since Marshall's times. In our epoch, it is the complex network of large financial corporations which has a particular stake in following both viewpoints on the basis of a joint developed entrepreneurial knowledge of technological, managerial and financial competences. Moreover, it is in the financial market that both expectation of agents and their organisational power influence to a large extent the direction of events. In our opinion, every effort to provide a synthesis of inside and outside viewpoints has to take on board : (a) the heterogenous character of economic agents with regard to their socio-economic position as well as to their cognitive limits; and consequently their conflictual group interests, and the limits of their compromises; (b) the importance of complex financial and industrial networks; (c) the entrepreneurial competence and the organisational culture or routines embedded in the firm or in the networks. The principle of variety in Evolutionary Economics, and its insistence on routines, networks and learning can be mobilised to treat the afore-mentioned points.

To sum up : while Marshall's theory and intuition concerning the normal value has been developed by Shackle's and Kornai's contributions, the problem of combining *ex ante* versus *ex post* viewpoints has not yet been solved satisfactorily. By focusing on path-dependency, non-linear hysteresis,

and increasing returns, some recent evolutionary economics literature provide new promising solutions to this problem. The concept of norm and its rationalising action is particularly stressed by sociologists and some neo-institutionalist economists, notably Douglas North who is very close to the sociologists on this point (D. North, 1990). Further exploration of "normal" as a key concept in the historical analysis of institutional change is a challenging task for economist. In this respect, Marshall's Principles are as relevant as they ever were.

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ⁱⁱ We adopt here Shackle's distinction of the two views of time (namely the outside/ex post view and the inside/ex ante view), and the two corresponding classes of economic dynamics, namely exterior and interior dynamics. In

interior perspective, the normality can be interpreted as the businessman's expectation and action-scheme during a calendar interval. For a detailed discussion of the distinction, see below II-1, II-2.

ⁱⁱⁱ Marshall is however not thinking of what has since come to be known as perfect competition, not only because economic development requires external organisation which excludes atomistic competition, but also because people are generally not rational optimisers.

^{iv} I am particularly grateful to one of the anonymous referees who draw my attention to this recent work of Searle.

^v For instance, this distinction can be very useful to explain Shackle's position with regard to prices as "convention" (see below, section II.3). Furthermore, Searle's concept of "background abilities" (Searle, 1995, chapter 6) comes close to Kornai's idea about "habitual or routine behaviour" (see below, section III.2), as well as to Nelson and Winter's evolutionary theory of competences. It may be noted that Searle himself underlines the close relation between his concept of "background abilities" and that of "habitus" (Searle, 1995, p. 132) on the one hand, and the evolutionary biology on the other hand (Searle, pp. 141-146).

^{vi} By "decision in the empty sense", Shackle means choice under perfect foresight (Shackle, 1989, pp. 21-22). Since if one feels that she knows completely and for certain all the consequences, of any practical or emotional concern to her, that will flow from each given act in the range of acts open to her; and if she feels that she can rank these various ranges of consequences according to her preference; then for her the act of choosing between these acts will be purely formal and automatic, her "decision" will be "empty". For Shackle, real and not empty, "decision" means the choice in face of doubt and ignorance. Yet it cannot be choice in face of chaos and anarchy; for one who thinks that any act can have any sequel whatever, and that there is no possibility of excluding anything as incapable of following from any stated course of action, would believe any one act to be just as wise and efficient as any other, and decision would be pointless. Consequently, decision "can only be non-empty and non-futile, in a world of bounded uncertainty. Let me state my definition : Decision is choice in face of bounded uncertainty" (Shackle, 1989, p. 22).

^{vii} The term 'hysteresis' was first coined by James Alfred Ewing in 1881 to refer to effects which remain after the initial causes are removed, the context being the behaviour of electromagnetic fields in ferric metals. In the eighties, it became fashionable to invoke such hysteresis effects to explain why unemployment remained high after the temporary shocks experienced at the beginning of the eighties (R. Cross, 1995).

^{viii} By "some stated futurity of the date", we mean the time-distance separating the date from which the producer looks at the calendar interval and the beginning date of the interval.

^{ix} Shackle's theory of "epistemic circumstances" or "conventional" character of prices in a dynamic world, can be reinterpreted in light of J. Searle's theory of the construction of social reality (Searle, 1995). Since for Searle too, the existence of price as an institutional fact depends on our common belief that something like money exists. In other words, part of being money is being thought to be money. As a general rule, "for social facts, the attitude that we take toward the phenomenon is partly constitutive of the phenomenon" (Searle, 1995, p.33).

^x In the real sphere there exist physical stocks and physical flows. The variables of the real sphere are stocks of material goods and resources, production, consumption, turnover etc. The regulation of the real sphere takes place in the control sphere. In this sphere there are definite operators, called response functions. These describe the regularities in the behaviour of the participants, decision-makers of the system. The inputs of the response functions of the control sphere are the **observations** formed in the real sphere as well as the outputs of some other response functions. The outputs of the response functions of the control sphere constitute the decisions for the real sphere. These outputs interfere with real processes, and provide information for other response functions of the control sphere (regarding the concept of information in the Neo-classical Economics, see Vahabi, 1996).

^{xi} Searle's concept of the "Background" as the "set of non-intentional or pre-intentional capacities that enable intentional states of function" (Searle, 1995, p.129) is relevant to the analysis of habitual behaviour (see Searle, 1995, chapter 6). Drawing upon the work of Hume, Wittgenstein and Bourdieu's on the "habitus", Searle underlines the centrality of the Background in explaining human cognition. Furthermore, he correctly notes the close relation between "rule-described behaviour" and "rule-governed behaviour". Habitual behaviours are a set of dispositions that make the agent sensitive to the rule structure (Searle, 1995, pp.132-146).

^{xii} Among evolutionary authors, G. Hodgson pays particular attention to Marshall's oeuvre as part of evolutionary economics' theoretical background (G. Hodgson, 1994, pp. 13-20). However, in his review of Marshall's Principles, he does not even mention the concept of normal and its evolutionary aspect.

^{xiii} Kornai's reference to the "normal" rate of unemployment in advanced capitalist countries is particularly inspired by E. Phelps' works. However, it may be noteworthy that in his recent contributions Phelps himself acknowledges the pitfalls of his theory to explicate the structural slumps in Europe (E. Phelps et al., 1994). Presently, Phelps tries to **endogenise** the "natural unemployment rate" which he defines now as the **current** equilibrium steady-state rate, given the **current** capital stock and any other state variables. In his new theory,

then, “the equilibrium path of the unemployment rate is driven by a natural rate that is a **variable** of the system rather than a constant or a forcing function of time. The endogenous natural rate becomes the moving target that the equilibrium path constantly pursues” (E. Phelps, 1994, p.1).