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Towards a Theoretical Foundation for a Multidisciplinary Economics

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Abstract

This article analyses the primary motives that set people in motion, namely the economic, the social and the psychic motive. By integrating the three basic analyses, we formulate an integrated paradigm and analysis that can function as a theoretical basis for a multidisciplinary economics.

Orthodox economics analyses the force that results from the confrontation between humans and their natural environment. In such a situation humans are driven to maximise the utilities they derive from consuming scarce goods.

Orthodox sociology analyses the force that results from the confrontation between (different groups of) humans. In such a situation humans are driven to maximise the status they derive from their position in the social structure, under the constraint of the norms that are set by the prevailing culture.

Orthodox psychology analyses the force that results from the confrontation between the 'I' of a person and his 'self'. We distinguish between an actual and a true self. The 'I' is a rational decision making centre that is assumed to minimise the difference between the actual self and the true self, thereby maximising the respect of the true self for the actual self (self-respect). The drive to maximize self-respect is constrained by the limited power of the will.

This article integrates the three orthodox approaches into one analytical process on the micro level and one on the macro level. Individuals operate in a cultural context, which is determined on the macro level, but have some discretionary room to take their own decisions.

Keywords: Economic, Scarcity, Social, Status, Psychic, Self-Respect, Rational, Will-Power, Multi-Disciplinary Economics, Isolated Abstraction

JEL classification: B4

1. Introduction

A very important aim of economics has always been the explanation of real life situations; this way it can be a tool in the hands of people to improve their economic situation. But to observe and explain the actual behaviour of people we need an instrument to observe and to explain. The source of knowledge necessary to develop instruments of observation is the human ratio. By thinking about the way we think and by (internal) observation of what sets us in motion, we must try to construct a theoretical apparatus by means of which we can define the objects of our research, search for causal relationships between the objects to be distinguished and find a way to observe the empirical counterparts of our theoretical objects.

In physics we lack the opportunity of introspection, but by experiment we are able to verify or falsify the fruitfulness of assumptions made with respect to the substance of objects and the forces that result from substantial relationships between these objects. Along this way, important laws like the law of gravitation are 'discovered'. Are these laws true or false? We do not know. We have never observed this force directly and unquestionably. But the theories that are based on this law appear very fruitful. So it belongs to the best of our knowledge. If some day a physicist develops an alternative that appears to be more fruitful, this alternative would be most welcome.

The same holds for social science: by thinking about the way we frame sense impressions and by introspection of the forces that set us in motion, we must build a framework of interpretation and analysis of the world that we want to observe and explain. In different social sciences such frameworks are developed indeed. Especially in economics this research strategy has had many adherents. By introspection a drive towards minimisation of scarcity has been discovered. Typical economic analysis is based on this idea and tries to isolate the operation of this economic force by assuming away all other forces that motivate people. In sociology there are some scientists who more or less followed the same strategy. Unfortunately for economists, however, mainstream sociology follows a different methodological strategy. In psychology just a few attempts have been made to analyse the logic of the psyche, on the basis of a number of drives that were assumed to force people in particular directions. But, unfortunately, most psychologists have accepted different strategies now.

One important reason why so many social theorists follow different strategies is the urgency of the problems to be solved. When we need knowledge that can be used to solve practical problems now, we do not have the time to develop theories that can meet scientific standards. Then simple empirical research and results based on significant correlations are the basis of important political decisions. Or, as is often the case in economic research, a theoretical instrument is developed upon the basis of a single force. By applying this instrument - this practice is called economic naturalism -, observations and explanations result from a typical economic interpretation of the human world only.

In this article we want to show that there are three primary forces that set human beings in motion. If we are able to develop an instrument for observation and explanation that assumes the existence of a composite force that is the result of the simultaneous operation of these three forces, we have a really powerful instrument to observe, explain and understand the human world. In the next section, we will show

why there are three primary forces, namely an economic, a social, and a psychical force. Thereafter, we will sketch a typical economic world and a typical social world, where we have isolated the economic and the social force respectively. Then we will discuss the possibility of developing a psychical world. In this way we get, besides the familiar economic analysis, a typical social and a typical psychical analysis. If we want to have an instrument to observe and to explain the empirical world, we need to integrate the three analyses. The problems with integration will be indicated. In a concluding section we will discuss the prospects of an integrated perspective and its practical use.

1. Objects have substance and properties

Science aims at defining, observing and explaining ‘things’. The object of our research is our (empirical) reality. Every object has a substance and has a series of properties, which can be observed.¹ But before we observe the properties of an object, we must first define its substance. For example, we have to define an animal, an unemployed person, a criminal person first, before we start to observe them. To analyse the functioning of the empirical part of the universe, we must make a distinction between different objects: human beings, animals, plants and natural resources, for instance. We can also distinguish between series of different atoms or different sorts of protons and electrons; or we make a distinction between different buildings or roads. But in all cases we must have a carefully formulated definition of a substance before we can observe it. Next, if we want to explain why an object behaves in the way it apparently behaves, we must develop an idea of the relationships between important objects. We must try to formulate universal laws, which describe the fundamental relationships between different substances of our objects. For instance, if some atoms meet each other, under certain conditions they form a molecule. If some molecules meet each other, an explosion may result. If a human being meets an animal, it may be the end of one of the two. If a woman meets a man, under certain conditions it leads to an increase of the number of human beings. In all these cases substances are in a causal relationship to each other. Causal means: there are forces between particular substances that set objects in motion – a motion that might be observed empirically.

If we want to find out which forces set human beings in motion – which is the primary task of social science – we must make a distinction between human beings and other objects or beings. In this distinction we can detect three sorts of relationships, namely: the relationship between a human being and other objects (1), the relationship between different (groups) of humans (2) and the relationship between a human being and his self (3).² The first is the typical economic relationship, the second is the typical social relationship and the third is the typical psychical relationship. For social science these three relationships reflect the primary aspects to be analysed. Of course humans also live in a physical/chemical environment. The human body is a very

¹ This important distinction is made by Leibniz. See Scruton (2002) for a more detailed discussion of his analysis.

² A relationship between different human beings in which they consider each other as a resource only, is an economic rather than a social relationship. If we visit a shop for the first time and very probably also for the last time and buy a cola, the seller could have been a vendor machine. In such a situation the person who sells the cola to you is not much more than a scarce resource. Only if he creates trouble the relationship becomes a social relationship as well. Then social norms start playing a role in solving problems.

important part of that environment. But in social science this environment is taken as given. But the growth and importance of medicine and of environmental sciences illustrate the relevance of the interactions between humans and their physical/chemical condition.

The three primary relationships in social science reflect the interactions between different substances. As already said, relationships between substances are characterised by the forces they create. Orthodox economics is about the relationship between a human being and his natural resources. By introspection orthodox economists discovered that this relationship – interpreted from the human perspective – is characterised by the human drive to derive as much utility from the natural resources as possible. The behaviour of natural resources towards each other and towards humans is taken as given and expressed in production functions. Orthodox sociology is about the relationship between (groups of) humans. By introspection these sociologists discovered that this relationship is characterised by the drive to establish and maintain a status as high as possible. Orthodox psychology hardly exists. The analysis of the psyche (psycho-analysis) was a popular school and is still used when analysing severe psychical problems. But in mainstream psychology empiricism dominates; a rational analysis of the psyche that must function as an important part of the theoretical foundation of a social science has not been developed yet.³ If we were able to determine the three primary forces in terms of direction and strength, we could construct a vector of forces that tells us the direction and strength of the drive that results. A careful specification of the restrictions that constitute “the situation”, in which the forces operate, makes it possible to explain human behaviour.

So far the physical/chemical environment is taken as given. It affects human behaviour in two ways:

- (1) Via people's preferences or desires. The following examples illustrate this relationship: if it is cold, people need warm clothes; if people get sick because of an suboptimal chemical composition of the body, for instance, they need medicines; we need ladders because we are not able to jump higher than about a meter or so – we cannot ignore the gravitational force.
- (2) Via the technology factor in the production function. The function relates inputs to outputs. The coefficients that fix this relationship reflect the degree to which we are able to control physical and chemical processes. The more we control these processes, the lower the amount of inputs we need to produce valuable outputs.

In orthodox economics this is the way relationships between physical and chemical processes are analysed and modelled. When we are going to analyse the social and the psychical aspect and give these partial analyses a place in the economic analysis, social and psychical processes affect human behaviour along the same lines. The social motive affects the preferences of the people: we buy shoes and clothes that are appreciated by members of the same group; it identifies our selves towards relevant others. An analysis of the operation of the social force also leads to a structure that shapes and limits the types of technologies that are applied in the process that produces status. For example, particular cultures prescribe that women are not

³ Economists never asked psychologists to do that. So, when psychologists think such a rational analysis is not needed for their own goals, of course they do not construct it.

allowed to execute particular tasks, or that some tasks must be executed in very specific ways. If a queen wants to talk with ordinary people, many ceremonial obligations must be fulfilled. In some cultures it is hardly possible for an unskilled worker to talk with the boss of the company. The psychical motive also affects preferences and technologies. If a person lacks self-respect, he is constantly worried about his status in the group and about the goods to be bought. Since this person has difficulties in identifying his self, the utilities that are derived from consumption are lower than expected – consumption does not make the person happier. The state of the mind has also its effects on the technology that is used in the production process. If people get used to particular technologies, for some it is very difficult to change this technology. Modern information technologies may trigger fear, for instance. Modern ways of communication between different levels of hierarchy make some bosses nervous and very reluctant – they try to isolate themselves from lower ranks. Here the way people communicate is considered as an important ‘production technique’. Some personalities do not fit particular communication ideologies.

In the next sections we will sketch the typical economic, the typical social and the typical psychical world.

2. The economic world

Orthodox economists have constructed an economic world in order to isolate the operation of the economic force from the operation of the other forces.⁴ The economic world consists of two kinds of substances: human beings and natural resources. If humans become aware of the availability of natural resources, it triggers in them a force that drives them to estimate the satisfaction-generating capacities of these resources. The big problem, however, is their omnipresent scarcity. Scarcity is defined as the ratio between human needs and the resources available that can satisfy these needs. Since there are no other forces at work, all human energy is used to maximise the net utilities acquired from the production and consumption process. So the basic axiom in the economic world is: *human actors face the omnipresent phenomenon of scarcity and are driven by a force that aims at the maximisation of utilities derived from the consumption of goods*. To isolate the operation of this force, a few other axioms are adopted. Therefore economists typically assume that *all human beings have solved their psychical problems*. They know their selves and have accepted them as they are now. They enjoy the consumption of the goods of their choice – these are the only emotions that play a role in the economic decision making process. Other sorts of emotions, such as a permanent doubt about the desirability of particular choices, are under perfect control without any effort. They rationally collect information about their environment and especially about the satisfaction-generating capacities of the different sorts of natural resources that are found. This is the second axiom, the axiom of *the perfect rationality of the economic actors*. A third axiom states that *social relationships do not exist*. All the relationships in the economic world are of an economic nature. Social relationships emerge as soon as people

⁴ This strategy has been proposed by Mill (1874), Menger (1890) and Robbins (1932), for instance. It has become the dominant strategy within economics. The idea of an economic world is intensively discussed in Mäki (2001) and in Mäki (2002). Dow (2002) also pays much attention to the problem of economics to become an empirically relevant science. The title of Hausman’s famous book (1992) – *The inexact and separate science of economics* – as well as the title of Lawson’s book (1997) – *Economics and Reality* – shows clearly that there is a big problem here. An exposition of the method of isolated abstraction, as is used here: Mäki (1992).

recognise each other as belonging to the same ‘group’, namely ‘humankind’. So, people express their identity via group memberships. Members of the same group show their solidarity with each other, while members of different groups rival with each other. The social motive inside all of us drives us to maximise our status (position in the hierarchical ranking) within our group and to maximise the status of the own group relative to rivalling groups. The typical social processes are characterised by grouping and ranking. They are driven by the notion of status and take place within a set of rules that constitute the culture that is common to the different rivalling groups. Orthodox economists abstract from these social facts and focus on exchange relationships that are completely voluntary and end as soon as one party considers the relationship as too costly. A fourth axiom says that *classical logic can be applied* without any problem. At first sight this axiom sounds logical and self-evident. But when we consider the set of axioms that are the foundation of classical logic, we find a serious problem. For example, the first axiom that is used is the law of identity. It says that $a = a$. As long as we do not apply this law, our intuition says that this is true. But as soon as we apply it to phenomena in the real world, we must acknowledge that there can be one object that is named ‘a’. However, every other object is not perfectly the same, and can not be characterised as ‘a’ too. For instance, if we take a basket of apples and we characterise them all with the symbol ‘a’, then we assume that all the apples are identical – which is never the case. If we do research with respect to the functioning of the apple market over a long period, then apples now may be very different from apples twenty years ago and very different from apples about twenty years from now. When we want to calculate inflation figures we compare the prices of goods with the prices of goods that were bought ten or twenty or hundred years ago. But the basket of goods bought by people changes significantly over time. Still we assume homogeneity in the basket, which is not realistic.

These four axioms are the building blocks of the so-called economic logic. In the next section we will discuss the axioms that constitute the social world.

4. The social world

The idea of constructing worlds that represent just one aspect of human behaviour is not as popular in sociology as it is in economics. Of course, all theory is based on an analysis that is developed upon the basis of a particular perspective. Perspectives never reflect all aspects of a particular phenomenon.⁵ In a sense all sociological theory has a ‘social’ character. Fortunately, there are a number of very famous sociologists who explicitly talked about the social aspect as one of the aspects to be studied by sociology.⁶ Later Homans composed small groups of people to see what the members would do in various circumstances.⁷ In order to complement the economic logic with

⁵ See Karl Popper; for instance his “The Poverty of Historicism”, Routledge, London, New York, 2002 (originally published in 1957).

⁶ See for instance Talcott Parsons, Action Theory and the Human Condition, New York: Free Press, 1978.

⁷ G. Homans, Social Behavior, Its Elementary Forms, Routledge, New York, 1961. The so-called Homans’ Law says that a small number of people who have regularly face-to-face contact and perceive each other as equals develop a common culture. Kidder reports an experiment done with astronauts in long-distance flights: systematic recording of the trainee behaviour showed that an unspoken body of rules developed during their confinement. Modern experiments also show the empirical relevance of this law: see De Cremer, D. and Van Vlugt, M. (1999). It would be interesting to see whether Internet contacts also lead to the development of cultures, although the conditions might not meet the criteria set by the theory of Homans.

an analysis that represents the social logic we will develop an analysis with a structure that is highly comparable with the typical economic analysis.⁸

Our social world can be characterised by a number of axioms. The first is the ontological statement that *humans are social beings*. This means that relations between people are of a social character.⁹ The term ‘social’ means that humans recognise each other as members of the human race, which has implications in terms of rights and duties towards each other. A logical implication of being social is the propensity of individuals to group together. A number of individuals are a group in the social sense of the word, if they share a common culture. Culture refers to the framework of interpretation or worldview of the group. It includes a set of values and norms. A society or a group of societies is characterised by a particular social structure, which means a ranking of groups according to the status they have towards each other.

So far we have presented a picture of the social world that is logically derived from the axiom that humans are social beings. This picture shows the social situation. Now we can state, on the basis of introspection, that (groups of) people are driven by the *desire to maximise their status*. Individuals do this by showing a maximum of loyalty to the group; it means a maximum of adherence to group views, values and norms and to work on an improvement of the social performance of the own group. Social performance is expressed in terms of status and status refers to the position of the group in the (hierarchical) ranking. So the individual status is completely dependent on the group status and group status is maximised by these individuals by means of various sorts of actions. These actions have in common that they must show the superiority of the own group (‘us’) towards the other group (‘them’). A necessary condition for showing this superiority is the complete adherence to the own culture. The statement that individuals are driven to maximise status under the constraint of the own cultural rules is the second axiom that constitutes the social world.

In order to isolate the social force from other forces, we must assume that *there is no scarcity* in the social world. Everyone possesses an amount of natural resources that is enough to satisfy all the needs. This is the axiom of complete satiation, implying that all economic problems are solved. Of course there is a social restriction: even if we were to spend almost all resources available to reach a higher status, we might still fail, since our rivals may be smarter in this respect. Another axiom is needed in order to ignore psychological problems. So we assume *humans in the social world to be rational*: well-informed about the different cultures and status producing techniques or deliberately search for information about these matters. A last axiom is the assumption that *classical logic applies*. Also here there is a perfect parallel with the economic world. The two worlds differ ontologically: humans are seen either as economic actors or as social actors. But they agree with respect to the rationality and the logical aspects of the two worlds. In the next section we will see whether it is possible to construct a psychological world, which is the world of the mind.

⁸ See also: Piet Keizer, A Socio-Economic Framework of Interpretation and Analysis, International Journal of Social Economics, Vol. 32, No.1/2, 2005.

⁹ It means that we are focusing on the social rather than on the economic aspect of the relationship between people.

5. The psychological world ¹⁰

We will construct a psychological world that is quite similar in structure compared with the economic and the social world. When analysing the mind, we cannot consider the human person as an individual anymore. 'Individual' means a unit that cannot be divided. But analysis means a distinction between different parts of a whole. These parts may have their own drives and aim at the achievement of their own goals. Now we imagine that there are multiple 'selves', who live in one and the same person.¹¹

Let's call these parts 'sub-selves'. In what respect do these sub-selves differ from each other? We must be aware that the psychological world is surrounded by the economic and the social world, where all problems are assumed to be solved. The person is completely free to determine his preferences, without being confronted with economic and social constraints. Now we distinguish between various selves on the basis of the different tastes they have. A human person that has solved the economic problem of scarcity and the social problem of status, will thereby enjoy different aspects of life. Since the sub-selves are entities that are driven to satisfy particular needs, the result of all these forces drives a person towards a particular appreciation, under the time constraint¹².

Now we make a distinction between the 'I' of a person and his 'self'. The self consists of many independent sub-selves. These sub-selves compete with each other in their attempt to determine the behaviour of the person. The 'I', however, is a decision making centre; it formulates an ambition with respect to the self. This ambition can be called the true self or the soul of the person. If the person appears to be able to achieve his ambition, the person has maximised his respect for the self, his self-respect. In the psychological world, which is isolated from the economic and the social world, the 'I' has no economic and social problems. So, it must only control the different forces in such a way, that the person maximises his total of psychological utilities. As soon as we integrate this psychological world with the economic and the social world, minimisation of scarcity and maximisation of status become important inputs in the 'production function of 'self-respect'.

¹⁰ Since we want to analyse the psyche, we are interested in the analyses from psycho-analysts. Other parts of psychology are not searching for the logic of the psyche. Most parts of psychology search for empirical regularities in the behaviour of persons. In the prestigious economics journals there is growing attention paid to the role of psychological factors; see for instance Rabin (1998), Elster (1998) and Tirole (2002). Unfortunately, no analyses on the ontological level are presented so far. In our research strategy we first need to formulate a psychological world. Thereafter, we look for an analysis and the establishment of correlations between properties of a person and properties of his or her environment. There are three famous psycho-analysts, namely Freud, Jung and Adler. Freud adopts the typical biological view on the functioning of the psyche, Adler adheres to the typical social view and Jung can be considered, in our respect at least, as the orthodox psychologist: he analyses the functioning of the psyche itself and did much on its ontology. So Jung is very important for our goal. If we want to integrate the psychological world with the social world we can use Adler. If we want to connect the psychological world with the biological world (the body), Freud may be important, although modern neuro-science has a lot to say about the body-mind problem too.

¹¹ See Richard Stevens (1996) for an overview of the psycho-dynamic approach. See Anthony Stevens (1994) for an exposition of the approach by Carl Jung. He makes a distinction between 'I' and self and a distinction between different selves. Margolis (1985) uses the idea of multiple selves already, to explain phenomena like selfishness and altruism.

¹² If we would not assume a time constraint, a person who has solved his social and economic problems can simply satisfy all needs and has no psychological problem either. The existence of time already is a problem, since everyone must establish a time preference. This may be a problem for persons who are less than perfectly rational, since many strong emotions force the person to immediately satisfy many needs at the same time; he must choose!

We have stated that there is a constant tension between the ambitions of the 'I' and the identity of the own self. In other words, *the nature of a psychical problem is the tension between the desired and the actual identity of the 'self' in the eyes of the judging 'I'*. Suppose there are two sub-selves. Sub-self 1 is a force with a voice saying that life must be lived according to a set of standards A. Sub-self 2 is a force with a voice, saying that life must be lived according to a set of standards B. Sometimes the 'I' takes decisions according to the tastes of self 1, but then self 2 is dissatisfied, which makes the 'I' unhappy. Then the 'I' takes decisions according to the tastes of self 2, but then self 1 is dissatisfied, which makes the 'I' unhappy. The result is a low status (respect) of the self (composite of sub-self 1 and sub-self 2) in the eyes of the 'I'. In this psychical world *the 'I' tries to integrate the different sub-selves in such a way that the difference between the desired identity and the actual identity is minimised*. Then the status or respect of the self in the eyes of the judging 'I' is maximised. In other words, human beings maximise their self-respect. Lack of integration between the different sub-selves and between the sub-selves and the 'I' create disutilities. A perfectly integrated person has, by definition, maximised his self-respect.

A last question must be answered now. Does the 'I' have the power to keep some control over the (emotive) forces of the sub-self? We assume that it has and we call it will-power. If the 'I' considers his power as too weak, it can increase it by letting the mind do exercises. So a mental force is trained to support the will in his battle against different sub-selves. Now, our picture of the psychical world is complete: the 'I' maximises self-respect under the constraint of the strength of its will-power.

We have constructed a psychical world that consists of several 'selves' and an 'I' that tries to minimise the differences between the different 'selves' (which means an integrated person) in such a way that the respect of the 'I' for the self is maximised. This psychical motive drives the 'I' to do this job. This ontological statement is the basic axiom that makes the world a typical psychical world. Internal tensions make a person unhappy and the 'I' tries to solve this tension by using its will-power. If the 'I' has solved the typical psychical problem completely, the actor has a perfectly integrated identity or personality. He knows exactly who he is and what he wants, he will rationally search for information that serves his goal of utility maximisation.¹³ Then the person is perfectly rational, as is assumed in the economic and in the social world. Emotions only play a role in the determination of the true self. But all the instruments used to reach the state of true self are rationally chosen.

If we integrate the psychical world into the economic and the social world, social and psychical forces will affect the emotional battle between the different selves. Then only some selves will be supported, since their tastes fit with economic or social necessities.

Now we have sketched the three worlds we will discuss some ideas about the integration of these worlds.

¹³ Both the economic and the social world assume actors to be rational. It implies that they have solved their psychical problems completely. In other words, these worlds assume perfectly integrated persons.

6. The psychical-economic-social world

In order to discuss the interrelationships between the different worlds, we first want to picture the basic relationships in the three isolated worlds. Thereafter, we try to connect these pictures.

The economic world is characterised by scarcity and rational actors who try to reduce their lack of scarce resources as much as possible. Scarcity is the ratio between needs and the resources required to satisfy these needs. Since economists prefer the term preference to needs, from now on we use the term preference here. The following scheme pictures this economic process¹⁴:

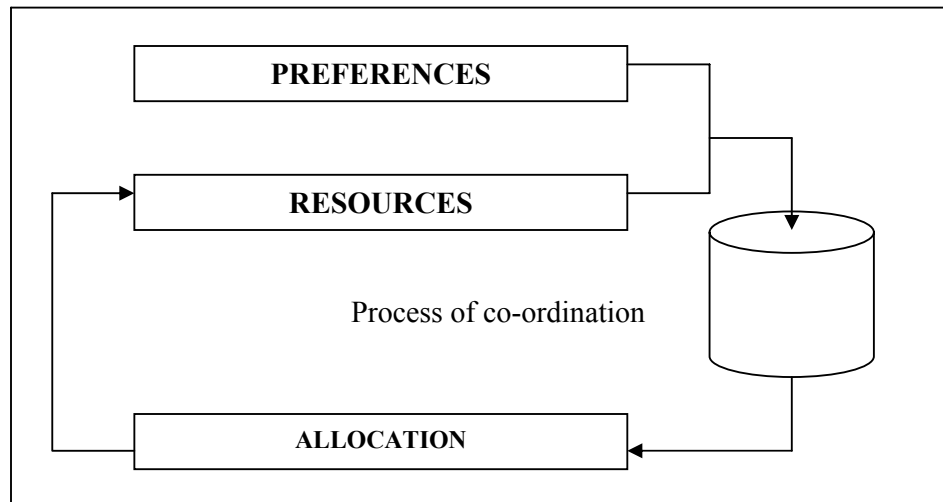
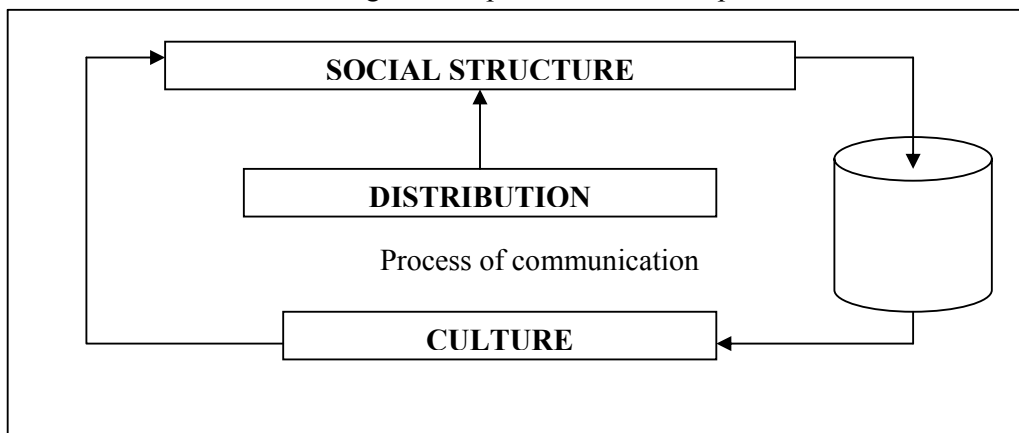


Figure 1: the economic process

The social world is characterised by a status battle and by rational actors, who maximise their status under the constraints of the frames, values and norms as set by the prevailing culture. At any moment in time there is a social structure, which is determined by the distribution of those resources that are socially important. Via a process of permanent communication consensus is reached with respect to the cultural characteristics. The following scheme pictures this social process.¹⁵



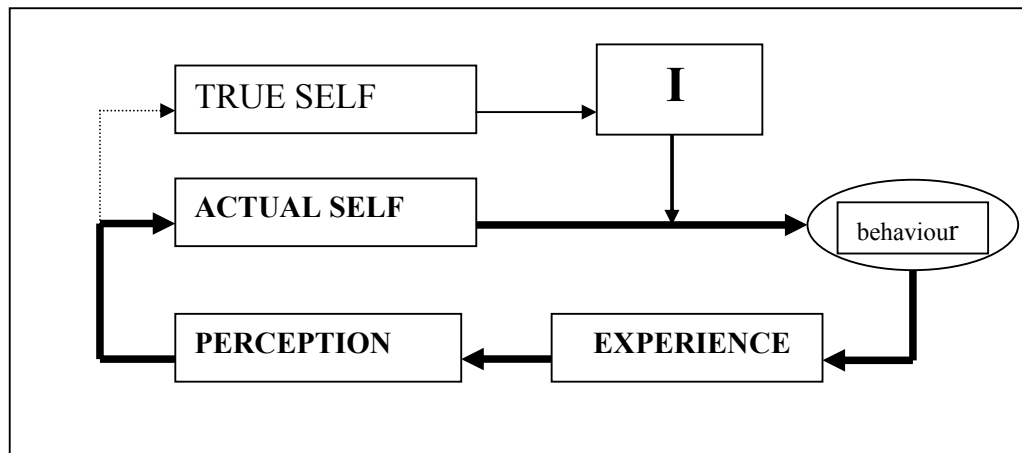
¹⁴ See for a more detailed explanation of this picture: Keizer (2005).

¹⁵ See for a more detailed explanation of the social process as presented in the following picture: see Keizer (2005).

Figure 2: the social process

The psychological world is characterised by the tension between the 'I' and the self. A self consists of a series of sub-selves. Each sub-self wants to dictate the identity of the self, but the 'I' uses his will-power to integrate the different sub-selves in such a way that the identity of the self is as close as possible to the true self. The following scheme pictures the analysis of the psychological force that results from the tension as sketched.

Figure 3: the psychological process



Now we have pictured three isolated processes. Since these pictures reflect different forces that operate simultaneously, we must integrate them. It is important to recognise that the social process takes place on the level of a group or society – that is a macro level -, while the psychological process takes place on the level of the individual – that is the micro level. The economic process takes place on the micro level, but can easily be aggregated to the macro level. Three connections are responsible for the integration of the three processes on the micro level:

1. The self, which is governed by the 'I', is influenced by the cultural context in which it operates. So the perception of the daily experiences has a cultural component.
2. The self is a force that drives the individual to prefer some actions to other actions. So the preferences are influenced by the self. Moreover, the self affects the perception of the resources available.
3. The allocation resulting from actions implies a particular position of the person in the distribution of scarce resources. This position affects the position of the person in the social structure. Since the social position affects the cultural boundaries of the status battle that every person must fight, the economic performance affects, indirectly, the relevant cultural frame.

In the figure 4 we present this micro picture.

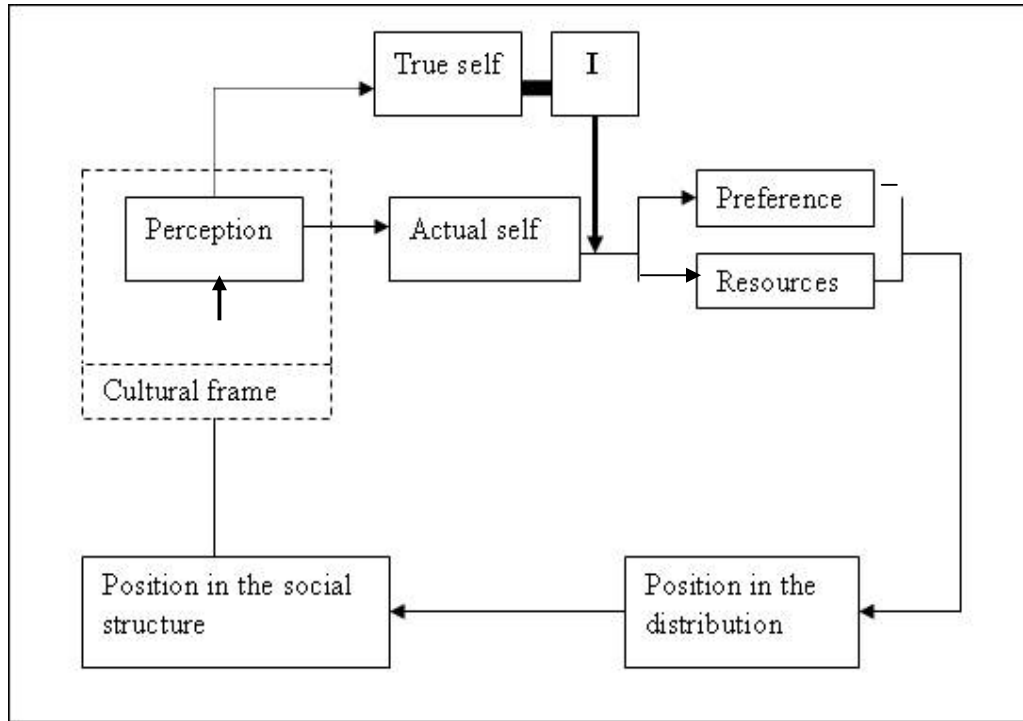


Figure 5 Integrated analysis on the micro level

A short text helps to interpret this micro-picture. We see that a person lives in a particular cultural context. The prevailing culture has an effect on the identity of the actual self. To a certain extent, the cultural context of a person also influences the true self. This effect, however, is small and significant in the long run only. The person does not only have two selves, namely the actual and the true self, but also an 'I', who decides to act in a rational way. It accepts part of the desires of the actual self. But it tries, by means of will-power, to influence behaviour. This influence is the rational part of the behaviour of the person. But the 'I' does not control the actual self completely and therefore actual behaviour is not identical to the rationally taken decisions. Part of our behaviour is the result of forces from the actual self that are not accepted but still moves the person in particular directions.¹⁶ Perfect rationality is reached if the 'I' has perfect control over the actual self. In our picture preferences and perceived resources result from a bargaining process between the 'I' and the actual self.¹⁷ This actual behaviour determines the allocation of the scarce resources of the person. This allocation affects the position of the person in the distribution and in the social structure. This position implies a particular set of frames, values and norms that are derived from the cultural context that belongs to the social structure.

On the macro level the following two relationships are connecting the different worlds.

¹⁶ In psycho-analysis an 'unconscious' is conceptualised. The self consists of a conscious and an unconscious self. Especially the unconscious part is responsible for behaviour that is different from rationally taken decisions.

¹⁷ This bargaining process takes place in the inner space inside each person. So we assume that every person is constantly bargaining with the self/selves about the strategy to be followed.

- (1) Culture affects the preferences of the aggregate of the selves as well as the aggregate of the perceptions of the selves with respect to the scarce resources available.
- (2) The distribution of the scarce resources affects the social structure.

In the picture below we have presented these macro relationships.

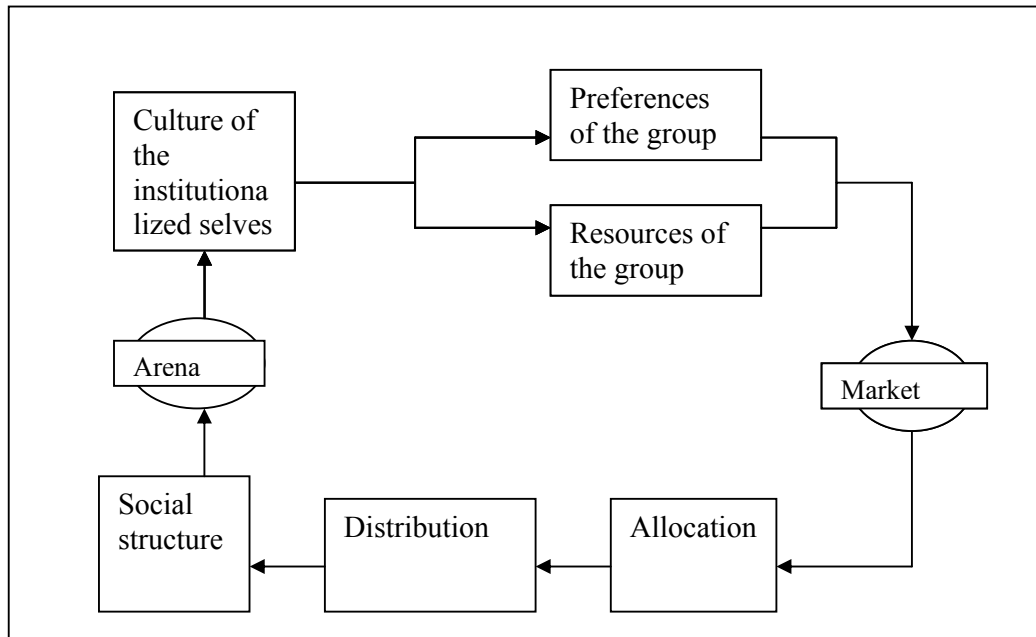


Figure 5 Integrated analysis on the macro level

The macro picture shows that culture affects the preferences and the perceived resources of the persons who live in our society. The allocation of scarce resources results from the coordination of the behaviour of all these members of society. Their distribution, which is the consequence of this allocation, affects social structure. Culture results from a process of communication which is significantly affected by social structure. So, on the macro level processes of communication and coordination are decisive in the development of society as a whole. In our approach, in contrast to typical macro or holistic approaches, culture does not completely determine preferences and perceived resources. There is discretionary room for individuals. Every individual has an inner space, where he is free to use his will-power in a unique direction. So can he create a niche in the market and in the arena, which makes him an entrepreneur. In the following periods others may imitate economic or social entrepreneurs. In this way novelties in the economic and social process emerge, which might mean progress for society as a whole.

The two levels, the micro and the macro level, are connected in two ways.

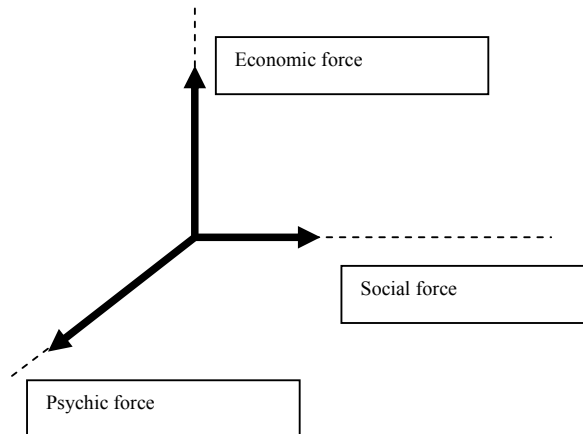
1. The process of culture formation and of cultural change takes place on the macro level. This culture frames the minds of the persons who operate on the micro level, to a certain extent at least.
2. The choices made by persons on the micro level are aggregated and determine the allocation and distribution of the scarce resources on the macro level. Now

we have a complete picture of the micro and macro relationships and their interrelationship.

The pictures show analytical, not empirical processes. It means that they do not take time.¹⁸ It is just a sketch of the factors that determine a particular unit of behaviour. Next moment the same process takes place, but the result is different. If the differences between the subsequent moments are very small, we can abstract from it and describe it as a stationary process. But a historical process is never a perfectly stationary one. It affects experiences; people constantly learn and adjust their policies. By means of will-power people can also decide to make some forces stronger, while making other forces weaker. So, even the resulting force that drives persons is a historical variable.

As we have seen, on the most general level, humans are set in motion by three primary forces. Empirical behaviour is the result of the simultaneous operation of all these forces. What is constant over time, however, is the fact that there are three primary forces, which potentially affect empirical behaviour.¹⁹ In some situations one or two of these drives can be very weak. Then we can abstract from them. But potentially there are three, and at every moment in time, latent forces can develop and become manifest. When trying to formulate universal and eternal laws – the primary task of science – they must tell us something about the three primary forces and under which circumstances they grow in force.

In figure 6 we have pictured the three forces.



¹⁸ So it is not a time sequence but a logical sequence.

¹⁹ In his critique of historicism Popper stresses the relevance of a carefully formulated ontology. We can only talk about change, we must know what exactly is changing. In our language: we can only talk about changing properties, if we have formulated and defined of which substance the properties are changing.

7. Conclusion

In this article we have sketched the theoretical foundation of a multi-disciplinary economics.²⁰ If we were to use this foundation for the development of a series of interrelated specific analyses, the system will become extremely complicated. A solution to this problem of complexity is the following. First we establish the practical problem to be analysed. Then we decide whether one of the aspects – the economic, the social or the psychic problem - can be ignored in this case. If we ignore, for example, the imperfect rationality of the actors when analysing the apple market, we know that we are not making a serious mistake. Nobody really cares about people who, unjustified, are eating apples while pears might have been a better choice. But when we analyse the heroin market, the story is different. If we ignore the social aspect, while analysing the effects of a change in the welfare regime, a number of effects might be unexpected. When analysing the market for ice creams, for instance, we do not need to pay attention to the social aspect of the problem. But now we are at least aware of what we ignoring. The strategy of isolated abstraction, which led to the construction of isolated worlds, has been replaced by a strategy, in which we deliberately abstract from factors that are less important and focus on the most important ones. Therefore our integrated theoretical constructions are more suited to function as an instrument to observe and explain empirical phenomena.

²⁰ In an appendix we have summarised a series of characteristics of the three worlds that are analysed and integrated.

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Appendix

This overview summarises schematically a series of characteristics of the three worlds that represent the three primary forces in social science.

Aspect	Economic	Social	Psychical
Location	Market	Arena	Mind
Type of interaction	Co-ordination	Communication	Bargaining
Goal	Prosperity	Status	Self-respect
Instrument	Resources	Signals	Will-power
Human nature	Homo Oeconomicus	Homo Sociologicus	Homo Psychologicus
Ontology	Economic world	Social world	Psychic world

Basic axioms	Economic; Non-social; Rational; Logical.	Social; Non-economic; Rational; Logical.	Psychic force; Non-economic; Non-social; Logical.
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