

Kurt W. Rothschild

Economic Imperialism

Abstract: Economic Imperialism is the claim of some economists that the methodology of neoclassical economics has superior scientific qualities and should be adopted by most or all social sciences. The paper first shows why such a dominant claim could develop among economists but in no other science and then goes on to point out the shortcomings of this claim of methodological superiority. These critical remarks are also relevant for methodological controversies within economics between a mainstream and heterodox economists.

There are only very few cases where a label attached to a certain object of investigation can have such double meaning as the term ‘Economic Imperialism’. Its first meaning had its birth at the turn of the 19th century with its use by Hobson and Lenin for describing the economic exploitation of colonies and underdeveloped countries by the big ‘imperial’ nations. The second meaning, which is to be discussed in this paper, had its origin in the second half of last century. It was triggered by the work of Gary S. Becker (Becker 1976)¹ and refers to the claims and attempts to show that the *methods* used in neoclassical economic theory should be exemplary for *all* social sciences (Lazear 2000; Radnitzky/Bernholz 1987). This proposition is based on the assumption that the methods of neoclassical economics are more ‘scientific’ (or the only ‘scientific’ ones) than those used by other social sciences irrespective of the subject matter. In many cases it is suggested that they should always obtain priority. This demand is also directed towards so-called heterodox economists who use other methodologies (Keynesians, institutionalists, evolutionary economists, Marxists etc.). There is no question of a give and take, a mutual learning process from different methodological needs and approaches.

In fact one can distinguish between two forms of Economic Imperialism (EI). A milder form, sometimes called the ‘economic approach’, which recommends the application of the neoclassical method in all social sciences but admits that other basic methods may be useful too, and ‘economic imperialism’ in a narrower sense which looks at the economic method as the only or at least most dominant path for scientific discovery. In the latter case neoclassical economic methods are

¹ The 17 volume International Encyclopaedia of the Social Sciences published in the year 1967 does not contain a reference to this type of economic imperialism.

regarded as the standard to be adopted by all.² But what the milder ‘economic approach’ and the more ‘aggressive economic imperialism’ have usually in common is their belief in the superiority of the ‘economic method’. It is regarded as the only method applicable to all social sciences—psychology, sociology, political science etc.

The exact characteristics of this method which are or should be applied are not always defined in the same way, but they all rest on the traditional methodological elements of neoclassical economics. Thus for Radnitzky and Bernholz the decisive fact is that human action is directed towards maintaining ‘life’ in its widest sense, and this demands choice and action in a world of scarce resources.

“Acting rationally, using appropriate means to achieve one’s ends, involves essentially taking into account ‘costs’ and ‘benefits’, whereby ‘costs’ and ‘benefits’ are taken in its widest sense. Since resources are always scarce—last not least our life-time—rational conduct is governed by principles of economics. Hence, it is plausible that new and important knowledge can be gained by applying the perspective of economics, the methods and tools of economics—some of them suitable generalized—to fields of enquiry that have traditionally been thought to lie outside the competence of economics.” (Radnitzky/Bernholz 1987, VIII)

For Lazear EI is justified because only economics has a rigorous methodological framework which is centered around three basic themes: (1) rational maximizing individual behaviour, (2) equilibrium, and (3) efficiency (Lazear 2000, 100). Reder defines EI rather widely as the general adoption of a set of analytical procedures connected with the neoclassical RAP (Resource Allocation Paradigm) and its associated econometric techniques (Reder 1999, 344). It is stressed that the rigourness of the axioms excludes the use of ad hoc argumentation.

The endeavour to preserve the dominance of the neoclassical methodology generally and particularly in economics itself is illustrated very clearly in a recent review of a book on *Behavioural Economics* (Diamond/Vartiainen 2007) in the *Economic Journal* of June 2008 (118/529). In a friendly and appreciative review of the book (Binmore 2008) Ken Binmore agrees that behavioural economics offers interesting and important contributions, which are of course often—like contributions from other heterodox economic theories—diverging from and contradictory to neoclassical approaches. But then he goes on to warn that “the solution is not to throw away the successes of neoclassical economics and revert to the naïve [sic!] psychology of the economists of the Victorian era. We need to hold on to neoclassical theory when it can be shown to work in practice *and to refine it where it does not*” (251; my italics). Nobody will object to holding on to neoclassical theory when it can be shown to work in practice, but why should that not also hold for behavioural economics and its refinement?

² “The most aggressive economic imperialists aim to explain all social behaviour by using the tools of economics.” (Lazear 2000, 103) See also Stigler (1988) where he stresses the superiority of the economic methodology (191–205).

Discussions and quarrels about methodological questions relating to science³ in general and to specific branches of science in particular have a long and lively history. Philosophers, methodologists, and practical scientists have debated and continue to debate the contents and quality of methods which should be permitted and applied in order to regard the results of studies as ‘scientific’.⁴ These debates can be very heated—classically shown in economics in the famous ‘Methodenstreit’ between Schmoller and Menger—and though not necessarily leading to generally accepted results help the acting scientists to be aware of the cognitive aspects of their work. This awareness is sharpened by the interchange and mutual stimulation of ideas. In this ongoing methodological discussion EI occupies a special and unique position. It is the only methodological prescription emanating from a special field which postulates *exclusively* for itself to be applicable and often preferable in *all* branches of social science. Psychologists, sociologists, biologists etc. would never dream of such ‘imperialistic’ claims.

How can the emergence of this special position of a certain type of economic methodology be explained? To answer this question one has to roam about a bit over a somewhat wider field. The study of economic phenomena is dealing with the contents and consequences of human actions in a restricted field. In this respect it is in the same boat as all social sciences which differ only with regard to the special field with which they are concerned (politics, society etc.). When ‘economic’ is understood in its widest sense, viz. referring to all actions connected with the production and consumption of goods and services, ‘economics’ would cover a very wide field indeed. For instance the actions of housewives would be partly ‘caring’ (e.g. dealing with children), partly ‘social’ (e.g. charitable activities), and partly ‘economic’ (e.g. cooking). Economic motives and activities would act side by side with other aspects and motives. There would be no reason to regard economic action as something special to be treated as outside and/or dominant in the study of social facts. There would be no need to have in some universities a ‘Department of Economics and Social Sciences’. ‘Department of Social Sciences’ would suffice.

But the situation became different with the emergence of a more or less universal dominance of anonymous markets and market processes regulated by competition and prices. The term ‘economic’ ceased to refer to all individual productive and consumptive activities and became restricted to the description and analysis of market processes (in the widest sense). In the analysis of these processes the main problem was to discover and explain how anonymous markets and the impersonal pricing process could bring about socially acceptable and even efficient macro-economic results. Adam Smith’s ‘hidden hand’—the pricing process—opened the path for the development of a special place for economics in the field of social sciences. This ‘Smithian revolution’ found a reformulation and partial revision in the so-called ‘marginal revolution’ of economic theory in the seventies of the 19th century which provided the basis of what we call ‘neoclassical economics’. It was simultaneously and independently introduced in three variants by Menger in Austria, Jevons in England, and Walras in Lausanne. It

³ I use ‘science’ in its wider sense comprising both natural and social sciences.

⁴ Or in a more demanding formulation as a path to discover ‘truth’.

is the Walrasian approach and the Walrasian methodology which has become—with many modifications and refinements—dominant in present-day neoclassical economic theory and which lies behind the EI-postulate. To this background we now turn.

In order to understand what Walras was driving at it is useful to remember that the 19th century had seen an enormous expansion in the development of the natural sciences in general and of physics and chemistry in particular. This growth in knowledge and its successful application in practice had created great prestige for ‘Science’ in its narrower sense of natural science. This led to a desire among many social scientists to achieve similar theoretical foundations as the natural sciences and a comparable exactness in their conclusions. The achievements of mechanical physics acted as a particular attraction. This background had a profound influence on Walras (Mirowski 1989) and its stamp is left on later developments of neoclassical economic theory.

We now turn to those aspects of the structure of Walrasian neoclassical theory which are relevant in connection with the EI-problem. Looking at the economic process as a whole (and trying to explain it) one can divide it into two interdependent parts. On the one side we have the individual actors with their decisions regarding consumption and production within the market and on the other side we have a complex interrelationship of all prices (including wages, interest) which results in a certain ‘equilibrium’ in the competitive markets. The individual decisions influence the production and pricing processes and are in turn influenced by them.

To analyse this complex relationship one has to deal with decision processes of the individuals on the one hand and the working of the interrelated price effects of the market mechanisms on the other. As far as the first aspect is concerned economics is confronted—like all social (or ‘human’) sciences—with the actions, the motives, the idiosyncrasies of human beings. The situation is different when one deals with the interrelationships of prices and quantities on the markets. These are dependent on objective (‘physical’) interdependencies shaped by production processes in a world of scarce resources (raw materials, human labour, time). In a fully employed economy every economic act of obtaining additional goods or services for consumption or investments (‘benefits’) entails necessarily (because of the scarcity problem) a renunciation of some means of production for other elements of consumption or investment (‘costs’). To obtain more motor cars (or military equipment etc.) one must give up some part of the production of butter, or schools, or ... ‘There is no free lunch’. Thus as far as market processes are concerned there exists a complex network of interrelations between alternative benefits and costs based on objective interdependencies which are made comparable by the possibility of measuring them under a single common aspect: the prices established in competitive markets.

It is this latter part with its ‘mechanical’ aspects of market interrelationships which is a specific characteristic of economics which enabled Walras and his tradition to develop an axiomatic theoretical structure with an affinity to the ‘exactness’ of physical science. The creation of such a rigorous formal model for the study of a complex network of interrelated markets was and is without doubt

an ingenious achievement which has its uses in many fields of economic analysis. But it is not—as some claim—a sufficient or suitable methodological basis for economics as a whole, let alone for social sciences in general.

Two aspects have to be noted in this connection. One is the fact that this ‘mechanical’ picture is only one part of the total analysis of the economy, and the second is that this part is a specific element of economics. As far as the first item is concerned we are faced with methodological problems which are connected with the difficulty of combining the market mechanism with the individual actions which influence the market events and are influenced by them. When this important question has to be incorporated the human element with all its diversities and difficulties enters and threatens to destroy the exactness and determinism of the market model. All the difficulties and uncertainties with which psychology, sociology etc. have to fight in view of the many-sidedness of human nature would enter and disturb the formal rigour of the neoclassical economic model and its results. The way out of this difficulty taken by the neoclassical approach was the adoption of an extremely abstract and simplified picture of human motives and decision-making when acting in the market sphere. This picture is embedded in the representative ‘*homo economicus*’, the rational and informed individual who aims at and usually achieves an optimal result from his market-based actions (‘maximization of utility’ and ‘maximization of profits’). The fact that human beings differ with regard to their wishes and preferences is set aside by taking these differences as *given facts* which are not and/or cannot be ascertained. All that is necessary for the completion of the neoclassical model is that the rational actors base their actions in the market sphere (i.e. their purchases and sales in the widest sense) on the common aim of optimising their given individual preferences. In doing this they are constrained by the budgets at their disposal. Any expenditure to obtain preference-satisficing goods or services involves a reduction of some purchases of other goods or services, i.e. the ‘benefits’ obtained by the purchase involve ‘costs’ (‘opportunity costs’) of renouncing some other possibilities. The assumption of optimising behaviour involves for all market actions the weighing of such benefits in relation to costs⁵ and this calculus is dependent on the ruling market prices of all goods and services. The logic of the model is now closed. Human actions and the mechanical productive processes are interlinked through a price system which is determined—in the environment of competitive markets—by a balancing of costs and benefits in a world of material and budgetary constraints. An ‘equilibrium’ is achieved when the price structure (or alternatively: demand and supply) corresponds to the constrained aims of the individuals and the interrelations of scarce goods and materials.⁶

Before going on to a critical look at the priority claims of neoclassical methodology I want to make a short remark on the concept ‘*homo economicus*’ in order to prevent possible misunderstandings. Some people resist the use of this

⁵ Jevons, a contemporary of Walras in laying the foundations of neoclassical economics, talks of a calculus of pleasure and pain.

⁶ The picture of different ‘forces’ influencing each other and leading to a clearly defined ‘equilibrium’ illustrates the affinity of the neoclassical model to the laws of mechanical physics.

concept on moral and psychological grounds because they see in its assumption of optimising (maximizing utility) behaviour with regard to one's preferences the characteristics of a perfect egotist. This is a misunderstanding. Optimising the satisfaction of one's preferences does not say anything about the contents of such preferences. These can be altruistic as well as egotistic so that altruistic actions will be preferred to some egotistic advantages. Thus the objections to the Homo Economicus on moral grounds are not justified. The problems lie behind the assumption of 'optimising' as a unique and clear-cut strategy which rests on the assumptions of clear and stable preferences, rationality, knowledge of (all?) alternatives, and of the 'benefits' and 'costs' connected with them. It is this demanding collection of requirements which alone would make 'optimising' strategies a doubtful fact for describing and understanding human action, even if restricted to market environments. Added to this is the growing evidence (1) that preferences are not stable and do not only influence events but are also influenced by events, and (2) that motives are not 'rational' in the narrow sense of fixed consequences based on given preferences, but are influenced by the past, by surrounding circumstances, habits, traditions, institutions etc.

All this means that the gap between the theoretical '*homo economicus*' and the economic individual in the real world is considerable. That a gap exists is of course no reason for rejecting a theory. Theories rest on abstractions from a complicated reality. But these should be carefully chosen and two conditions should be fulfilled: One should be fully aware of the abstractions and connected with this one should be careful when one applies the theory to real problems. This creates already a problem for the question of the status of the neoclassical model within the field of economic science and—as we shall see later—these difficulties are intensified when we turn to social sciences in general. As far as economics is concerned the neoclassical approach with all its limitations has certainly a role to play. To deal with problems which affect in particular the working of the complex market mechanisms it is helpful to neglect the diversity of individual reactions in order to make the analysis more manageable and effective. Neoclassical economics has therefore a considerable field for application. But there are also many economic problems where the reality of 'irrationality' of consumers and producers plays an important role, where we have shifting and conflicting preferences, limits in information, uncertainty about the future, imitative behaviour etc. which all can be particularly prominent under certain economic conditions and relevant for problem-oriented analysis. This fact is mirrored in the existence of several alternative economic models and theories (e.g. Keynesian, Marxist, institutionalist, behavioural, evolutionary, feminist economics etc.), each with its own methodological apparatus and with its own limitations and fields of applicability. This 'multiparadigmatic' situation can be regarded as regrettable, but it is unavoidable when one has to deal with an extremely complex and dynamic economic reality.⁷

⁷ In a paper presented in Japan in 1931 Schumpeter said: "No method is good for all problems, but everyone has a place and it is for this reason that I think so little of methodological controversies." (Swedberg 1991, 285)

The trouble with neoclassical theory is therefore not that it has weak points and is not generally applicable. These characteristics it shares with all existing theories. The trouble is that some neoclassical economists claim a superiority and ‘scientific’ exclusiveness of their approach vis-à-vis all the other approaches which is based on their capacity to present—thanks to their simplifications and abstractions—a coherent picture of competitive markets and the price system which resembles the achievements of the exact natural sciences. Other economic theories which point out and introduce other relevant factors do not and do not want to accept the strict axioms used by the narrow market- and price-oriented neoclassical theory. To capture the influence of human diversity and other ‘non-economic’ factors they necessarily use other methods which cannot be forced easily into the deterministic neoclassical framework. But they have to be considered if one wants to get nearer to the problems of a dynamic and ‘fuzzy’ reality. Instead of acknowledging the need for the coexistence of these different theories side by side with the neoclassical tradition and its methodology there is a tendency to draw a sharp line between the neoclassical school and its ramifications on the one hand and all the other basic theories on the other. There is no other social science which has such a sharp division between a ‘mainstream’ which demands and obtains a leading position in research and teaching, and ‘heterodox’ theories covering all the other (non-neoclassical) theories.

While the claim for dominance of a given methodology is not justified even *within* a certain discipline, it can at least be excused as an attempt to make it more widely accepted. But the demand becomes absolutely unacceptable when it is extended to all social sciences, i.e. when it becomes EI. This claim is based, as already mentioned, on the use of a deterministic and axiomatic methodology which has an affinity to the methods used in parts of physical science and is *therefore* regarded as superior. “The power of economics lies in its rigour”, writes the well-known US economist Edward Lazear. “Economics is scientific; [it] succeeds where other social sciences fail because economists are willing to abstract.” (Lazear 2000, 102)⁸

There are several aspects which undermine this argument. They will be here indicated without going into all the details connected with them. First of all it must be stressed that the claim that the rigidity of the neoclassical model is the optimal guaranty for its ‘scientific’ character and for reaching reliable results cannot be maintained. Rigidity of theoretical foundations is certainly a desirable quality but it cannot be reasonably maintained when the complexity of the subject matter does not permit such a restriction and demands openness for methodological diversity. This is not only true for the social sciences but for some branches of the natural sciences as well where—as in the social sciences—complexity and dynamics are considerable and experiments impossible or difficult (e.g. meteorology, climatology). In fact it can be shown that progress in the fields of natural science has often benefited from methodological diversity, from ad hoc additions, and from plausibility considerations (Feyerabend 1975) which are all abhorred by EI advocates. Their ideal is influenced by the special

⁸ It must be kept in mind that in Lazear’s paper ‘economics’ is equivalent to mainstream (neoclassical) economics.

aesthetic and functional qualities of theoretical physics where a high degree of rigidity is obtainable.⁹

The fact that the special methodological qualities of theoretical physics are not (exclusively) capable or efficient to explain subjects in *all* natural sciences is of course even more true when we turn to the social sciences. It has already been pointed out that one problem these sciences have in common is the human element with its wide diversity. And it was shown that in the study of prices and actions in competitive markets this problem is settled in neoclassical economics by reducing the human element to a rational maximization process under given preferences and budget constraints. This together with the matrix of the market network and competition provides the basis for a general cost-benefit driven ‘equilibrium’ result. Irrespective of the question how useful or restricted this approach is when dealing with economic problems it cannot be applied easily one-to-one to other social sciences which are dealing with other aspects of social reality and the related human actions.

The main difference is perhaps that the picture of the rational maximizing *homo economicus* cannot be (easily) fitted into social sciences dealing with non-economic spheres (e.g. psychology and sociology). One aspect springing immediately to mind is that a principal task of psychology is to explain *differences* between people, their motives, and their actions. Useful as the assumption of the standardized *homo economicus* may be in some economic studies, it cannot be a sufficient basis for the study of human diversity. This consideration is rejected by EI-ideologists with the comment that what human action has in common in all spheres is the problem of choosing between alternatives in a world of scarce means (in the widest sense: money, time, reputation etc.). The unifying advantage of EI is therefore that with its assumption of rational and informed choice behaviour it provides a universal basis for all social sciences. But this claim cannot be maintained for several reasons. First of all even if one accepts the assumption that general rational maximizing behaviour in a world of scarcities is a central aspect for all social sciences, there remains the question *why* different people act in different ways and *why* they change their actions. In other words what psychology and other social sciences need to explain is not (or not only) the choice process as such, but the preferences and the change of preferences which explain individual behaviour. The methods for attacking these questions can be far more important than the EI approach (which rests on the assumption of stable given preferences¹⁰).

But more important is that the choice as such becomes increasingly questionable once one leaves the idealized world of neoclassical market theory. The careful weighing of alternatives for choosing an optimal result may be to some extent plausible and acceptable when we deal with choice decisions in cases where budgets provide a tight and measurable strait-jacket and where most al-

⁹ “Economists insist on a physical-science-style equilibrium as part of the analysis.” (Lazear 2000, 101) This is most clearly mirrored in explaining ‘equilibrium’ as the exact result of a balance of forces (demand and supply, costs and benefits).

¹⁰ ‘De Gustibus Non Est Disputandum’ is the telling title of a paper by Becker/Stigler (1977).

ternatives have market prices which provide an obvious common measure for making comparisons between alternatives. The weighing of costs and benefits for each alternative becomes possible and an optimal choice can be achieved. Indeed Cost-Benefit-Analysis can be regarded as a shorthand description of the ‘economic approach’. It is the approach which is regarded as applicable and recommended for use in all social sciences.¹¹ An immediate and fundamental reservation against this recommendation can be based on the extended attacks on the use of the ‘homo economicus’ even in economic analysis on the grounds that the assumptions regarding ‘rationality’ of choice are too far away from reality. Psychological research in particular has contributed much to point out existing gaps (Ariely 2008). Even if such reservations could be disregarded in economics they are decisive when one deals with non-economic sectors where questions of motivation are dominant and/or measurement is difficult.

When the economist speaks of rational choice he has in mind—quite realistically—the decision to achieve a given alternative in the most efficient way, i.e. by renouncing a necessary quantity of other alternatives which are of least importance to the person concerned. How much has to be given up—the ‘opportunity costs’—depends on the prices of all the alternatives. A *good* choice is an *efficient* choice and the ‘economic approach’ regards this as a good picture of human choice both in the positive (real) and normative sense. But in many other fields of human action (marriage, getting children, education, health, democracy, crime etc. which all have been subjected to the ‘economic approach’¹²) this question of efficiency is not the only or normal motivational factor. Not only the question of what one *wants* is important, but also the question what one *ought* to do turns up, i.e. moral and cultural factors are influencing decisions. This does not only point to the fact that they are to be considered as a background; they also change the decision process. The ‘wants’ and the ‘oughts’ can come into conflict and actions involve not only an efficiency calculus but also ‘moral’ doubts and decisions. To study these the mere reliance on cost-benefit considerations is hardly satisfactory. One can, of course, argue (and something like this is sometimes happening) that the final actual action is always the result of an optimising cost-benefit process in which the observance or breaking of moral or reputational rules enter as ‘benefits’ or ‘costs’ respectively. Adding them to the ‘material’ benefits and costs yields the final result. But such an argument would not *explain* the choice process as the result of an optimising process, it would make that process a predetermined assumption. In other words, in many social fields a ‘good’ choice in the normative sense is not only or even not at all an ‘efficient’ choice but is just a ‘good’ choice.

Again neglecting all the difficulties already mentioned and looking at non-economic processes in which moral and other special motivating factors are not important so that beneficial and cost aspects can be compared we are still con-

¹¹ “Man is a chooser. All rational choices involve the weighing up of benefits and costs [...] [t]he key concepts of Cost-Benefit-Analysis can be *generalized*. Not only in business dealings but also in daily life we operate within the CBA-frame, most of the time.” (Radnitzky 1987, 285/86. Italics in the original)

¹² For an indication of some examples see Radnitzky/Bernholz 1987 and Lazear 2000.

fronted with a measurement problem. Many elements and particularly those on the cost side will be non-market phenomena like time, health, life expectancy, 'pleasure and pain' etc. which can be enumerated but have no secure basis for an exact and/or agreed valuation which could serve as a basis for reliable comparisons and the achievement of optimum and 'equilibrium' results.¹³ The attempts to find 'reasonable' valuations for such non-economic factors are sometimes ingenious, but necessarily subjective and can differ widely in some cases (e.g. valuations of dangers to health, reputational loss etc.). This problem arises occasionally also in economic Cost-Benefit studies, but there it is usually restricted to a few items for which no actual or shadow prices are available. On the whole economics has the advantage of prices as an objective measuring rod which one can accept or not but which provides a firm basis that is missing in many fields of the other social sciences.

In view of these and some other minor difficulties one can understand that doubts regarding the EI priority claims are expressed by scientists in non-economic social sciences and by many economists¹⁴ as well. Even a well-known political scientist who is in strong favour for 'learning' from neoclassical economic methodology reserves half of his book to point out the limitations of it (Rhoads 1985). Yet in spite of such doubts and criticisms the EI ideology and papers inspired by it survive. How can this be explained?

A motivational factor among neoclassical economists can of course play a part. Who would not like to see his approach to be regarded as the most perfectly 'scientific' approach, his science as the queen of social sciences. But while such motives probably exist I am far from suggesting that it refers to all or even many economists, and—at any rate—this could not by itself explain the persistence of EI. The explanation rests probably on a fact that has already been mentioned in connection with the discussion of the methodological divisions within the economic community. There are problems and constellations in many spheres of human relations which suggest similarities and analogies to situations met in market processes and which permit—without being forced to bring in outlandish assumptions¹⁵—the use of some sort of Cost-Benefit-Analysis. In such cases the application of economic methodology may not only be possible but sometimes

¹³ A forerunner of such attempts of Cost-Benefit-Analysis was perhaps the philosopher Leibnitz of whom the following anecdote is told. When he considered marrying a lady for whom he had some sympathies he sat down and wrote a list of all the advantages the marriage would entail, and side by side he set a list with all the disadvantages involved. Seeing that the list of disadvantages was longer than the list of advantages he decided to give up the idea of marriage.

¹⁴ As an example I want to quote a passage from the Thünen-Lecture of the Nobel laureate economist Reinhard Selten (my translation). "A theory of bounded rational behaviour cannot be built on the assumption that decisions are based on consistent preferences and probability judgements. Consistency cannot be expected [...]. The target foundations of the traditional micro-economic theory, utility and profits, can be called *optimisation targets* (italics in the original). In practical decision situations it is not even possible to aim at optimal targets. A theory of bounded rationality will have to describe decision processes which are not optimising, not even approximately. Nothing exists which could be optimised. Several factors are considered, but this is not done through maximizing some function, but in a manner which is fundamentally different [...]. There is no function to be maximized." (Selten 2000, 152/53)

¹⁵ As a recent example of the questionable nature of costs and benefits see for instance the study of the economics of infidelity by Elmslie/Tebaldi (2008).

even superior. This is shown by several papers written in this spirit which have opened new vistas on special aspects which were not taken into account by the traditional methods used in the respective social science. But these success stories do not support the EI ideology with its claims for universality and superiority. They rather support the view that in the complex world in which we live we need several theories and methods as a box of tools from which one has to choose according to the nature of the object and the questions asked. Analogies and heuristic elements can and do play a role in this process. But there is no reason to assume that one method (which is particularly suited for a certain branch!) is a superior ideal to be adopted in all cases. What is required is a give-and-take relationship and this is also true for economics which benefits from the research results of other social sciences obtained by different methods (Frey 1993; Himmelstrand 1992).

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