

INTERDISCIPLINARY ECONOMICS

BY

JACQUES J. SIEGERS*

1 INTRODUCTION

'Interdisciplinary Economics' is a risky title for an inaugural lecture. To many, the adjective will sound like modish modernism. In what follows I shall try to show that interdisciplinary economics can, on the contrary, look back on a solid tradition.

Economists are concerned first and foremost with the relations between individuals and between groups of individuals, in so far as those relations are expressed in transactions brought about through the mechanism of a market. However, this does not alter the fact that a shift has taken place, particularly since the 1930s. The publication in 1932 of the book *An Essay on the Nature and Significance of Economic Science* by the British economist Robbins played an important part in this.¹ Robbins defines economic science not in terms of *what* it studies but in terms of *how* it studies it. Economics, says Robbins, is the science that studies human behaviour in so far as it is concerned with the relation between goals on the one hand and scarce means which have alternative uses on the other.² Now misunderstandings are more easily created than dispelled, so it is not surprising that experience has shown that it will be a good idea to elucidate a number of elements in this definition a little more closely.

To begin with, let us look at the concept of goals. As Robbins sees it, economics is neutral *vis-à-vis* the goals after which people strive.³ Economic analysis is useful not only when it is a matter of material welfare, *e.g.* in the form of goods and services purchased on the market, but also when it is a matter of goals such as free time, social status, or having children. After all, the

* Professor of Economics at the University of Utrecht (Economic Institute/Centre for Interdisciplinary Research on Labour Market and Distribution Issues (CIAV)); Associate of The Netherlands Interdisciplinary Demographic Institute (NIDI) in The Hague and the Interuniversity Center for Social Science Theory and Methodology (ICS). This article is an adapted version of my inaugural lecture.

1 In what follows I have use the second, enlarged edition of 1935. It should be noted that Robbins did not so much initiate the shift as document it (see Robbins 1935, p. 22, and Hennipman 1987, p. 151); this does not alter the fact that his book had an important function as a catalyst.

2 Robbins (1935, especially p. 16).

3 Robbins (1935, *e.g.* p. 25).

realization of these goals too calls for the application of scarce resources which have alternative uses. To say that these resources are scarce is to say that they are insufficient to satisfy all our needs. We want a lot but we have only limited resources, and we shall therefore have to make choices. No wonder economics is sometimes called the science of choice. This also ties up with the expression 'alternative uses' which, when applied to resources, means that they can be used for more than one goal so that we have to choose to the realization of which goal we wish to apply them. Here it is important that, barring exceptions, application to one goal is usually at the expense of the realization of other goals.

2 GENERAL CHOICE THEORY

The definition of economic science given by Robbins was introduced to The Netherlands by Hennipman in his doctoral thesis published in 1945.⁴ Hennipman went into some detail on the subject of the concept of *homo economicus*. In the classical sense of the term, *homo economicus* is a person who strives after maximum welfare, welfare in this context being taken to mean solely material welfare, or, even more narrowly, financial interest.⁵ *Homo economicus* is deemed to serve that interest in the right way. In the course of time the concept of *homo economicus* has undergone a shift, not least under the influence of Hennipman and, in his footsteps, the work of such writers as Van den Doel and Heertje. They substitute for the concept of material welfare what Hennipman calls the 'formal' or 'indifferent' concept of welfare.⁶ Welfare is then defined as the degree to which needs are satisfied in so far as this satisfaction results from the application of scarce resources which have alternative uses; the science of economics as such being indifferent in respect of the question of which needs are involved. Or, to quote Hennipman (here in translation): 'Economic action serves all sorts of goals, which are themselves meta-economic and can be neither deduced nor judged by economic science, but must be accepted as given.'⁷

The question now arises whether alongside 'welfare' there is also room for a wider term that embraces not only welfare but also the satisfaction of needs in so far as this is achieved without the need to use scarce resources which have alternative uses. In everyday speech one uses terms like 'well-being' and 'happiness' and one also constructs oppositions like 'welfare as opposed to well-being.' The answer is that certainly in theory there is a place for such a term, but that its practical significance would be negligible if any.⁸ In any event, it is

4 Hennipman (1945).

5 Hennipman (1945, *e.g.* p. 55).

6 Hennipman (1977), Van den Doel and Heertje (1977, p. 10).

7 Hennipman (1962, p. 50).

8 *Cf.* also Hennipman (1977, p. 133).

only with some difficulty that one can think of an example of satisfaction of needs which not only comes free of financial charge but also does not call for expenditure of time and e.g. psychological energy. Robbins cites the example of going over recollections of a holiday, as opposed to enjoying the holiday itself.⁹ Apart from the artificiality of the example, which itself sets one thinking, it cannot be denied that the activity concerned must in any event take time. Wolfson gives another example,¹⁰ 'fine weather,' which also appears to be inadequate, to judge by the numbers of people who go on holidays or go into retirement abroad. It is not just a matter of the weather being fine, wherever it may be, but also of enjoying it: and that, if not in terms of money then at least in terms of time, is not something we get for nothing.

It would be mistaken to imagine that these are just questions of linguistics or terminology. The suggested opposition between welfare and well-being, in particular, still plays an important role in politics. Thus Heertje and Polak have recently pointed out that in the political debate surrounding the question of the ideal size and composition of Holland's transport system material welfare aspects are virtually the only things that seem to matter.¹¹ Business travel and goods traffic are given priority and the mobility of groups such as the elderly and handicapped are given little or no weight. In the same way, the economic importance of transport is often gauged exclusively on the basis of quantities such as the national product, employment or the state of the balance of payments. Road safety, on the other hand, is often regarded as not belonging in an economic context, instead being considered to come under the heading of what is sometimes termed 'the government's wider goal of well-being.'¹² Heertje and Polak rightly observe that such a material interpretation of the concept of welfare stands in the way of achieving what, from the social point of view, would be the ideal size and composition for the country's transport system.¹³

If we establish that the use, alongside the concept of welfare, of a wider need/satisfaction concept, such as well-being, would have no practical significance and might even lead to misleading conclusions, the question arises what the practical significance of the term *homo economicus* is. This is a question which economists too have asked themselves, and it is illustrative of their answer that, in the words of Albeda, 'only sociologists and theologians still refer to *homo economicus*.'¹⁴ *Homo economicus* in the classical sense of the term, according to which his actions are guided by a specific economic motive such as money or wider material welfare, has been driven out of economic

9 Robbins (1935, p. 25).

10 Wolfson (1988, p. 13).

11 Heertje and Polak (1991).

12 J.G. de Wit and H.A. van Gent, *Vervoers- en verkeerseconomie*, Leiden/Antwerpen, 1986, p. 225; quoted by Heertje and Polak (1991, p. 202).

13 Heertje and Polak (1991, p. 202).

14 Albeda (1987, p. 223).

science by Robbins and Hennipman. Due to them the very term *homo economicus* itself has evaporated, since if we follow Robbins and Hennipman and use the concept of indifferent welfare, there is effectively nothing to distinguish *homo economicus* from, for example, *homo psychologicus* or *homo politicus*. Economic science has, and here I quote Hennipman, 'conquered *homo economicus* by freeing itself entirely from the concrete motivation which underlies action, by constructing a universal theory of action under the influence of rival goals, a theory which applies regardless the nature of those goals.'¹⁵ This universal theory of choice actions, Hennipman continues, 'applies everywhere where goods are scarce compared with the need for them. This condition is fulfilled everywhere and at all times; the theory is therefore universally valid.'¹⁶

This last conclusion implies that in principle all human behaviour is open to being studied by the application of economic theory. The question is whether economists have actually done this. In 1945 Hennipman still hesitates: although he concedes that this universal theory of choice actions 'applies [*inter alia*] to at least some aspects of the conclusion of a marriage, the organization of a football competition and the spending of free time',¹⁷ he nevertheless states that 'for our knowledge of the social satisfaction process... knowledge of the content of these actions is however of much less importance than for example the decisions of industrialists, the way in which savers react to changes in interest rates, and so on.'¹⁸

3 ECONOMIC IMPERIALISM

Some ten years later the American economist Gary Becker saw things differently. He carried out an economic analysis of the phenomenon of discrimination; for his study of this subject he received a doctorate at the University of Chicago in 1957.¹⁹ Unlike Hennipman, he does not start with a methodological treatise but with a social problem, namely discrimination against minorities and in particular against blacks.²⁰ He is surprised that economists have left this field to sociologists and psychologists and suspects that the reason lies in the fact that economists are generally unable to analyse non-monetary motives in a quantitative way, whereas in fact such motives are an essential aspect of discrimination.²¹ In his thesis Becker tries to construct an economic theory of discrimination to set alongside those provided by sociology and psychology.

15 Hennipman (1945, p. 399).

16 Hennipman (1945, p. 401).

17 Hennipman (1945, p. 433).

18 Hennipman (1945, p. 435).

19 Becker (1971).

20 Becker (1971, p. 9).

21 Becker (1971, p. 10).

He does so by taking the implications of non-monetary motives and translating them into monetary terms.²² To this end he introduces what he calls the discrimination coefficient. This indicates how much money (in terms of a higher price or a lower income, as the case may be) individuals engaged in discrimination are prepared to pay not to have to hire a black employee (in the case of an employer) or not to have to work with a black fellow employee (in the case of an employee), or not to have to buy from a black supplier (in the case of a consumer). By applying the discrimination coefficient Becker is able to incorporate the phenomenon of discrimination into the usual economic models in a way which seems so natural as to be obvious. These models lend themselves for studying discrimination not only against blacks but also against any other section of the population, and they also turn out to be a good basis for empirical research. Thus a study of the relative wage levels of men and women in The Netherlands revealed that, as Becker's discrimination theory suggests, discriminating employers in the sixties and seventies were increasingly forced to suppress their inclination to discriminate against women because of diminishing profitability.²³ It also emerges, again as Becker's theory predicts, that the move towards more equal remuneration for men and women in this country is being hampered by discrimination of fellow employees.

At the time Becker received his doctorate in 1957 the application of economic theory to a phenomenon not previously recognized as belonging to the traditional field of economic science was not universally appreciated by economists. Indeed, Becker had great difficulty in getting his thesis published in the *Economic Research Studies* series published by his university.²⁴ His later application of the theory to marriage, divorce and fertility, and politics, also met with resistance. He encountered much less opposition with his economic analysis of human capital (*i.e.* the sum of knowledge and skills upon which people can draw), and his economic analysis of time allocation was accepted without a murmur.²⁵ Evidently, there is amongst economists not only a certain consensus about whether a particular subject is part of their 'normal' field of scholarship but also about the relative distance from that 'normal' field of scholarship to subjects regarded as falling outside it. As that distance increases, resistance to the subject increases. However, this has not prevented economic theory from finding widespread application in fields traditionally regarded as belonging to anthropology, demography, political science, psychology, law and sociology.²⁶ It is almost impossible to think of a form of human

22 Becker (1971, p. 14): 'Money, commonly used as a measuring rod, will also serve as a measure for discrimination.'

23 Schippers and Siegers (1986) and Schippers (1987, pp. 184–194).

24 Becker (1971, p. 1).

25 See Becker himself in Swedberg (1990, pp. 32–34).

26 See *e.g.* McKenzie and Tullock (1975), Stigler (1984, 1985, pp. 191–205), Hirschleifer (1985), Van der Geest (1986), Radnitzky and Bernholz (1987), Swedberg (1990).

behaviour that has not already fallen prey to this economic imperialism²⁷: economists now concern themselves not only with marriage, divorce, fertility, and voting behaviour, but also with such areas as the arts, legislation and regulation, church attendance and the amount of time people spent sleeping.

How do the economic imperialists set about their work? It is useful to observe that we are talking about economists who use the usual economic toolbox, so that the question really boils down to the question of how economists in general go about their work. Put simply, it amounts to applying a scheme containing only three terms: goals, restrictions and behaviour. Take for example the explanation of consumer behaviour. We are concerned to know how much of each of a number of different goods the consumer will buy at given prices and with a given income. The first thing an economist does in such a case is to draw up a goal function. In our example this will be a function indicating how the welfare of the consumer depends on the quantities of the goods purchased. Because in this context economics customarily uses the term utility instead of welfare, such a function is called a utility function. This utility function is deemed to fulfil a number of requirements, some of which have to do with considerations of plausibility, some of which have to do with the desire to have a function that is convenient to use in calculations.²⁸ The economist then frames a restriction equation. In our example this is the budget equation, which says that the total of the sums spent on the various goods must not exceed total income. By maximizing the utility function given the budget restriction it is now possible by means of a simple mathematical calculation to derive for each good a demand function, *i.e.* a function that will tell us how the quantity of each individual good demanded by the consumer depends on the price of that good, on the prices of all other goods, and on income. Filling in the prices and income in the demand functions produces the quantities of each good that the consumer will buy. Which is the purpose of the exercise.

The model of consumer behaviour that I have described consists of two structural equations, *viz.* the utility function and the income/budget restriction. As endogenous variables (*i.e.* variables that are determined within the model) it contains the utility and the quantity of each of the goods, and as exogenous variables (*i.e.* variables that, within the model, are given) it contains prices and income. In effect, the demand functions constitute reduced-form equations, *i.e.* equations in which the endogenous variables are exclusively expressed in terms of exogenous variables.

This example is illustrative of a number of aspects of the way economists work. To begin with, it has to do with the fact that a theoretical model is constructed and that this is done in the form of a system of equations. Such a model is simply a schematic representation of reality. It is convenient because

27 For this term, see the literature referred to in no. 26 above, with the exception of McKenzie and Tullock. Incidentally, the term dates back as far as the 1930s. See Swedberg (1990, pp. 14–15).

28 See *e.g.* Odink and Schoolr (1980, pp. 24–30).

it allows us to see the wood despite the trees, but still we are always left with the question whether perhaps, with all the ballast, some essential elements of the model have not been left out. Of course, the answer to this question has to do with the question what we actually want to use the model for. Thus a square with a triangle on top is a supremely convenient model when we need to indicate the location of a house on a map. As the product of a commission from an architect, on the other hand, we would expect something rather different. One advantage of working with models that should not be underestimated is that they render visible what is and what is not involved in our considerations. This not only brings out shortcomings, it also gives us, in principle, a handle with which to improve the model and hence to bring about an accumulation of knowledge.

Economics is an empirical science and economists will therefore have to try to translate the theoretical model into an empirical estimating model by operationalizing the theoretical variables in the first model into empirical variables. Then the model can be tested using data on actual consumer spending, the prices of the various goods, and income. Furthermore, the parameters of the utility function can be estimated. This last fact enables economists to make pronouncements about how the consumer, under different restrictions (*i.e.* given different prices and incomes) swaps rival goals (*i.e.* the quantities of the various goods) for others. It cannot be stressed enough that economists use the concept of utility in their theoretical model but not in their empirical estimating model. Despite the fact that they carry out no measurements with respect to the utility function directly, they still turn out to be able to make statements about it.

The essential feature of the economic approach is that the explanation for behavioural differences between people is sought solely in the differences in the restrictions that apply to them: the same utility function is specified for all persons and the parameters of this utility function are deemed not to differ between these persons.²⁹ In the same way the explanation for behavioural changes over time is sought exclusively in changing restrictions: the utility function is deemed to be stable in time. This restriction-oriented heuristic³⁰ avoids excessively easy answers to important social questions.³¹ Why are women so under-represented in the top jobs in society? Answer: they don't want them (that is, they have a different utility function than men). Why are the ethnic minorities under-represented in the same way? Answer: they have different norms and values (that is, they have a different utility function). The economist, however, will in both cases answer: suppose men and women and

29 At the very most, one or two control variables, such as denomination, may be introduced to correct for 'differences in taste.'

30 Lindenberg (1991, pp. 34-35).

31 See also Lindenberg (*e.g.* 1984b, esp. pp. 97-99) where he speaks of 'The Warning Example of Sociology.'

natives and non-natives all want the same thing (that is, all have the same utility function), how then can we explain the differences in behaviour and the resultant social positions in terms of differences in the restrictions facing the members of these distinct groups?

As will have become evident in the foregoing, the distinction between goals and restrictions constitutes a crucial element in economic analysis. This distinction was further elaborated by Becker in a way that is of great significance to interdisciplinary economics.³² The starting point is the economic theory of consumer behaviour to which I referred earlier. Becker was the first one who developed, explicitly and with the use of models, the idea that it is not the market goods themselves that act as the argument in the utility function but the commodities produced in the household. These commodities are the result of the production processes taking place in the household, in which market goods and time are the production factors. Thus coffee, milk and sugar may be seen as ingredients needed to produce the commodity 'a cup of coffee.' One of the consequences of this approach is that an extra line of defence is created for the assumption that utility functions vary neither over time nor from person to person. After all, if a consumer who at various times is confronted with the same income budget restriction purchases different combinations of market goods at those different times, it is then possible to maintain that assumption if it is assumed that the household production functions have changed in the course of time.³³ An analogous argument can be given for the assumption that the utility functions of different consumers are the same at a particular point in time. The other side of the coin, of course, is that this very fact itself diminishes the possibility of empirical testing, unless the household production functions are defined more precisely.³⁴

A second aspect of the above elaboration of goals and restrictions is that alongside the final goals (which is to say the arguments that figure in the utility function) a distinction is made between intermediate goals (*viz.* the market goods that are needed for the production of the commodities). Thus we have a hierarchy of goals in which the goals at a lower level are themselves instruments for the realization of goals at a higher level.³⁵ The relations between goals at different levels are laid down in a new kind of restriction, to wit the production functions introduced by Becker. At the top of the pyramidal goal structure are the ultimate, universal goals of mankind. But these, of course, are not the

32 Becker (1965, see also Becker 1971, esp. p. 163, Michael and Becker 1973, for related approaches see Lancaster 1966 and 1971, and Muth 1966).

33 Stigler and Becker (1977), Blaug (1980, p. 241), Theeuwes (1979, pp. 3-4 and 15).

34 This, however, calls in principle for a series of supplementary suppositions, see Theeuwes (1979, p. 18).

35 This hierarchy differs fundamentally from the hierarchy of needs introduced by Maslow. This relates to a preference ordering which lies entirely within the ultimate utility function. *Cf.* Earl (1990, pp. 736-737).

'commodities' of Becker's theory of consumer behaviour. Which brings us back to Hennisman when he says 'Economic action serves all sorts of goals, which are themselves meta-economic.'³⁶ And the question then arises: what are these meta-economic goals?

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Becker does not go into this question.³⁷ Lindenberg, on the other hand, does. He suggests as ultimate goals: physical well-being and social approval.³⁸ He borrows this suggestion from no less a person than Adam Smith, so that here, by analogy with the expression so common in economic science, 'It is all in Marshall,' we may justly say 'It is all in Adam Smith.'

Once the ultimate goals have been formulated it is then necessary to draw up production functions to indicate how these goals can be achieved. By analogy with Becker's household production functions Lindenberg speaks of social production functions.³⁹ Thus he sees, for example, having a home as a production factor in the production of physical well-being.⁴⁰ At the same time he divides social approval into status, behavioural confirmation and affection,⁴¹ after which it is possible to establish how these three components can be produced. In this way we can descend the goal pyramid level by level, drawing up production functions; in the process, we also come across Becker's commodities, his household production functions, market goods and time. The lower the level at which we find ourselves in the pyramid, the more problem-specific formulations will be. For example, in a study of the effect of changes in the systems of taxation and social security on the labour supply of married women it will, for practical reasons, be useful to treat fertility as an exogenous variable. In research designed to find an explanation for fertility, obviously the choice will have to be different. As a rule, the degree of complexity of the model and in particular the choice of what is to be regarded as endogenous and what as exogenous will depend on the exact problem to be addressed.⁴² Thus, in much economic research into consumer behaviour it will undoubtedly be sufficient to use the simple two-equation model referred to earlier, in which the goal function only contains the relevant market goods as

36 Hennisman (1962, p. 50).

37 Stigler and Becker (1977).

38 Lindenberg (e.g. 1985, p. 100, 1990, p. 212, 1991, p. 35).

39 See note 38 above.

40 Lindenberg (1991, p. 38).

41 Lindenberg (1984a, esp. p. 169, 1991, p. 38).

42 By considering not only goals and restrictions which are generally analysed by economists but also goals and restrictions which are generally analysed by workers in other areas of the social sciences (*cf.* Turchi 1991), it is possible to steer the gathering of data towards the acquisition of information which will enable us to identify more relations within a single model than has hitherto been possible, so that more quantities can be endogenized in the model (Siegers 1990, 1991).

arguments.⁴³ Nevertheless, it has to be said that this is a hypothesis that has yet to be tested and that theory-based empirical research will have to determine when it does and does not apply.

In the heuristic that concentrates on restrictions the social production functions play a crucial role. This can be illustrated with the help of the following example. Research has shown that after emigrating from their native countries to The Netherlands women from Morocco and Turkey adjust their otherwise comparatively high fertility downwards.⁴⁴ Generally, such an adaptation is attributed to a shift in the women's preferences. However, it may be assumed that the social production functions that relate to the production of social approval include children (and possibly boys in particular) as a production factor, the relative weight of this factor being a function of social pressure from within the community. This social pressure is much stronger in the country of origin than in The Netherlands, so that even when preferences remain constant we may expect to see a decline in fertility. An analogous role is played by other factors in the area of social production functions such as the availability and cost of contraceptives and the wider opportunities for women to enter paid employment. The theoretical framework presented here enables us to study these factors as they affect one another. It is a fortunate circumstance that social production functions appear to lend themselves better for empirical research than Becker's household production functions.⁴⁵

Starting from Robbins and Hennipman and with the help of Becker and Lindenberg, we have now arrived at a theoretical framework within which the strong points of economics and sociology are combined, *viz.* the formal but relatively 'bare-bones' modelling of economics and the often so much 'richer,' in terms of social content, analysis of sociology.⁴⁶ Research currently in progress indicates that this theoretical framework lends itself well to deducing theoretical models consisting of specified structural equations and their translation into empirical estimation models for testing them and for estimating the parameters of these models. On the basis of these estimated parameters it is, in principle, possible to carry out simulation analyses to evaluate concrete policy measures. All of this I regard as an example of interdisciplinary economics.

The foregoing constitutes an answer to what I have elsewhere termed the

43 Cf. Hennipman (1945, p. 215) (translated): 'For the subjective theory the acquisition of goods is not an ultimate goal but an intermediate goal of economic action. Often it is unnecessary to explicitly refer back to the ultimate goal.'

44 Schoorl (1989, 1992).

45 Witness *e.g.* the PhD research by A.G. van der Lippe into the division of labour between men and women within households.

46 Cf. also Cramer (1986, p. 50) on economic research in the future (here translated): 'The extension of analyses to non-economic factors has priority over a further refinement of theoretical specifications' and MacRae Jr. (1978, p. 1255).

paradox of interdisciplinarity.⁴⁷ On the one hand, much is said about the desire or even need for interdisciplinary research, on the other hand very little such research ever takes place in practice due to disciplinary ethnocentrism. (I cannot, of course, refrain from observing that this disciplinary ethnocentrism can probably be explained very well by interdisciplinary economics, undoubtedly with an important role for investments already made in discipline-specific human capital.)

Now interdisciplinarity is not an end in itself, so the question arises why it should be necessary. An example will be useful. An economist who is interested in accounting for the length of time people remain unemployed will use as the most important determinant in his analysis the replacement ratio, *i.e.* the quotient of benefits and wages. A sociologist, by contrast, will look first and foremost at such things as the nature and extent of the individual's social network, since that network may be regarded as largely determining the information likely to reach him regarding possible new jobs.⁴⁸ It is not unreasonable to suppose that there is a considerable degree of interrelatedness between the replacement ratio and the nature and extent of the social network, so that in separate analyses the effect of one of these two variables to some extent also reflects the effect of the other, with all the erroneous conclusions, including policy conclusions, which it entails. This example also illustrates the fact that a multidisciplinary approach (*i.e.* analysing a particular subject separately from the point of view of various disciplines) is an alternative to an interdisciplinary one.

This argument is one of the reasons why it is not sufficient to rely on what is essentially multidisciplinary economic imperialism *à la* Becker. The second, no less important reason, is that it appears to be the case that the efficiency of using the usual economic theory declines rapidly the further away we get from the fields in which economists traditionally operate. Despite Becker's claims to the contrary, his work would seem to be primarily oriented towards verification rather than falsification.⁴⁹

5 ECONOMISTS, SOCIOLOGISTS AND LAWYERS

The interdisciplinary approach that I have outlined above is argued purely from the point of view of economic science: hence the term interdisciplinary economics. However, working out the details cannot be done without input from sociology, *e.g.* where matters such as social approval, status and behavioural confirmation are concerned. But are there sociologists who would be prepared to provide this input? Fortunately, there are. In sociology, an ap-

47 Siegers (1989, p. 12), see also Lindenberg (1990, p. 201) who refers to ritual dances.

48 See the application by Tazelaar and Sprengers (1985) of Flap's analysis of weak and strong bonds (Flap, 1976).

49 Blaug (1980, p. 248), Siegers (1985, p. 197, pp. 115-116).

proach has been developed which is closely related to interdisciplinary economics. In The Netherlands the founders of this approach are the Groningen sociologist Lindenberg and his Utrecht colleague Wippler⁵⁰; outside The Netherlands it has been developed mainly by Coleman at the University of Chicago.⁵¹ In The Netherlands we use the term 'verklarende sociologie' (which means 'explanatory sociology') and in the English-speaking countries the expression is 'rational choice sociology'.⁵² As in the usual economic approach, it is assumed here too that we are dealing with people acting rationally, *i.e.* people maximizing a stable utility function given the restrictions with which they are confronted. The two commonest objections to using this assumption of rationality are then a) that people have insufficient information to be able to make truly rational choices, and b) that people still often act irrationally because they allow themselves to be guided by other things besides purely financial advantage.⁵³ The first objection fails to take account of the fact that information itself is an intermediate goal for the production of which time and money are necessary.⁵⁴ And it is exceptionally unlikely that a desire for a maximum of being informed actually amounts to the same thing as utility maximization. Incidentally, the question of the degree to which people are informed lends itself well for empirical research, as evidenced by *inter alia* a project currently under way to investigate the effects of taxation on the supply of labour. The second objection, involving financial advantage, I regard as having been sufficiently answered in my discussion above of the ousting of *homo economicus*. Incidentally, the integration of economics and sociology not only drives out *homo economicus* but also *homo sociologicus*, *i.e.* the person who, guided solely by values and norms, has no choice to make.⁵⁵

50 See *e.g.* the contributions to Arts, Lindenberg and Wippler (1976), Lindenberg (1984b, 1985), Wippler (1973, 1987), and Wippler and Lindenberg (1987).

51 See *e.g.* Swedberg (1990), including pp. 47-60, where Coleman himself is the writer.

52 Swedberg (1990, p. 17).

53 A third common objection is that the assumption involves a tautology (see *e.g.* Pen (1984, p. 26, November 1987, pp. 12-13)). This objection takes no notice of the fact that although after the event any human behaviour can be explained in terms of the choice of goals and restrictions appropriate to that behaviour (for which in everyday speech we use the term 'rationalizing'), it is still perfectly possible to deduce falsifiable hypotheses from *ex ante* modelling, *cf.* Van Witteloostuijn (1988, p. 304) and, come to that, Pen (1982, p. 27) when he observes that the neo-classical theory has in practice proved to be a stimulus for empirical research. See Boland (1981) for the distinction between utility maximization as a tautology and as a metaphysical starting-point (*cf.* Lakatos's 'hard core').

54 Stigler (1961).

55 By way of assimilation into the goal pyramid of *inter alia* norm-conformative behaviour, this integration embraces a logical incorporation of norms into economic modelling. This conflicts with Elster's placing of norms alongside rational behaviour (1989, esp. pp. 102, 115). Elster says (1989, p. 115): 'To some extent the selection of the norm to which one subscribes also can be explained by self-interest,' after which, however, he explicitly says that he does not know where any further explanation may be found, and then proceeds to lay the task on the shoulders of psychologists.

Does this integration mean that the fence⁵⁶ between economics and sociology has now been pulled down? The answer is negative. In the first place it does not include all economics (only neoclassical microeconomics) or all sociology (only the rational choice branch of it). Without wishing to argue for unbridled scientific pluralism, I nevertheless believe that scientific progress demands rivalry between research programmes.⁵⁷ Gadourek is therefore right in objecting to the pretence expressed by Lindenberg that this sociology is not *a* new sociology but *the* new sociology.⁵⁸ In the second place the answer is negative because the vast majority of researchers will continue to opt for monodisciplinary research if only because of their investment in discipline-specific human capital, to which I referred earlier.⁵⁹ And a good thing too, because without good monodisciplinary research good interdisciplinary research is impossible.

In other places in The Netherlands efforts are also being made to link neoclassical microeconomics to the other social sciences: Rotterdam (in particular by Hagenaaers and Van Raay), Limburg (in particular De Neubourg and Vendrik) and Amsterdam (in particular by Gustafsson *et al.*).

In Utrecht, the interdisciplinary economic approach that I have described is being used in research projects on labour market and distribution issues. In particular, attention is being paid to aspects of regulation. We are concerned with evaluations of existing or possible future legislation and regulations from the point of view of effectiveness (*i.e.* will the intended goal be achieved?) and efficiency (if so, will it be achieved in the most efficient manner possible?).⁶⁰ The interdisciplinary economic approach I have described appears to offer a more balanced framework for analysis for such evaluations than the kind of law and economics so much in fashion at the moment, which is often not devoid of economism and in which *homo economicus* still all too often figures as the prototype of man. Since this analytical framework cannot be applied to legislation and regulation without input from lawyers, this may justly be termed an example of interdisciplinary economics.⁶¹

6 CONCLUSIONS

The call for interdisciplinary research often seems to be in the nature of a ritual

(note 55, cont.) For the distinction between *homo economicus* and *homo sociologicus* compare the much quoted (usually without a precise statement of the source) pronouncement by Duesenberry (1960, p. 233): 'Economics is all about how people make choices. Sociology is all about why they don't have any choices to make.'

56 See Pen (June 1987).

57 Lakatos (1970, esp. pp. 129 and 155).

58 Gadourek (1988, p. 29).

59 Cf. Hartog (1987, p. 97) (here translated): 'Rather mono, after all.'

60 See *e.g.* Hondius, Schippers and Siegers (1991, pp. 2-3).

61 Here, then, we have a practical example of the collaboration between economists, jurists and sociologists which Hessel (1990) argued was needed in such areas as the economics of law.

dance. Genuinely interdisciplinary research is still a scarce commodity. In the above I indicated how the general framework of the rational choice theory can be used to combine the strong points of economics and sociology: the formal but relatively 'bare-bones' modelling of economics and the so much 'richer,' in terms of social content, analysis of sociology. This is an approach which integrates the contributions of the economists Robbins, Hennisman, Becker and the sociologist Lindenberg. Current research shows that it constitutes a good basis for interdisciplinary research.

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Summary

INTERDISCIPLINARY ECONOMICS

Starting from Robbins and Hennisman and with the help of Becker and Lindenberg a theoretical framework has been constructed within which the strong points of economics and sociology are combined, *viz.* the formal but relatively 'bare-bones' modelling of economics and the often so much 'richer,' in terms of social content, analysis of sociology. This theoretical framework also appears to enable more balanced analyses of the effectiveness and efficiency of legislation and regulation than the kind of law and economics so much in fashion at the moment, which is often not devoid of economism and in which *homo economicus* still all too often figures as the prototype of man.