1 WHOSE MISUNDERSTANDINGS?

In human relations misunderstandings are a fairly frequent phenomenon. A considerable part of them is the consequence of the inaccurate formulation of thoughts by one or more of the participants in a debate, whether in spoken or in written form. In an article honouring Professor Hennipman and dealing with misunderstandings it is highly unlikely, if not excluded, that these misunderstandings will have been caused by an inaccurate formulation by Hennipman. This statement may be checked by carefully reading one of the rare book-length publications of this leading economist, available thanks to two of his former students and present colleagues, Van den Doel and Heertje (1977). Having chosen my subject, I tried hard to find an occasion to quote Hennipman directly in the context of my pre-chosen topic, but I did not succeed. It required an effort even to find an example of difference of opinion — something possible even without inaccurate formulations being involved. And it remains doubtful whether the example I am going to quote constitutes such a difference, since it is not based on an explicit pronouncement of our esteemed author. My example concerns the relevance of fixing frontiers of economic science — frontiers beyond which we have left the territory of economic science. I for one think frontiers between various traditionally defined sciences (or disciplines) are not relevant; what is relevant is to leave the territory of science or scientific thinking generally. The sentence which might imply Hennipman’s disagreement with the statement just made contains the expression “non-economic value judgements” which are contrasted to “economic science” (Hennipman, 1977, p. 42).

The misunderstandings to be dealt with in this essay are not attributable, then, to Hennipman, but to others, including myself; and my way of honouring him is to attempt to approach my “promotor” (in the Dutch sense) in accuracy.

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The way I propose to deal with my subject needs some explanation. Considering the theory of income distribution policies as part of the science of economics and the latter as part of science generally, I am going to search for misunderstandings not only in income distribution policies (as mentioned, for brevity's sake, in the essay's title) but all the way down to scientific thinking in general, as far as is deemed relevant to my subject.

2 MISUNDERSTANDINGS ON VALUE JUDGEMENTS IN SCIENCE

Many authors like to defend the thesis that science cannot be "objective" or "free from value judgements." In my opinion this thesis is incorrect and Hennipman (1977, pp. 82, 83) has succeeded better than other economists in drawing the dividing line between positive (value-free) and normative statements, i.e. statements subject to value judgements. Correctly, in my opinion, he accuses Little of a needlessly complicated and misleading statement when the latter writes "given our value judgements, it must decrease the economic welfare of a particular individual if we force him to work where he does not want to." The dividing line may also be illustrated by (1) positive statements about an individual's preferences which on many occasions can be observed and the observations checked and (2) value judgements as soon as a social welfare function is chosen. The only point of doubt about the possibility of positive scientific statements being value-laden may be in the choice of subjects dealt with, as set out by Myrdal (1930, 1972).

Observations regarding an individual's preferences are generally accepted to be possible in the form of finding situations or states of equal welfare (or utility). Differences of opinion occur when it comes to measuring the level of welfare; here we have economists who deny the possibility of measurement and other economists who do not deny that possibility (cf. Van Praag, 1968; Kuipers, 1979).

The role played by observation in the process of testing a scientific theory is vital, and probably the most impressive example of that role is given by physics. A popular misunderstanding around empirical testing seems worth being discussed for a while. It is not always understood by laymen that testing is a one-way activity in the sense that a theory can be shown to be erroneous (it can be rejected), but it cannot be "shown" to be correct. The possibility for other, competing, theories to fit the facts must be left open. In other words, additional reasons for accepting one of two competing theories are needed. Often such additional reasons may be further elaboration and testing; this is even the routine behaviour of many scientists. There is
room for a different approach, however: for instance, the adherence to an additional principle. A famous example is the rejection, by Albert Einstein, of stochastic theories; another his preference for simple theories.\footnote{Wheeler, in his Memoir on Einstein (1979) quotes the latter as having said repeatedly: “I still cannot believe that the good Lord plays dice.”}

An example referring to the measurement of utility by Van Praag (1971) is that so far an equally good fit of his observations is obtained with the aid of two functions: (1) the integrated log-normal distribution function, preferred by him and (2) the logarithm of income (corrected for compensation of effort) which I prefer. Van Praag's preference is based on the applicability of a number of mathematical operations, whereas my preference is based on the economic condition that the function's second derivative should be negative for all values of corrected income. This condition is not fulfilled by Van Praag's function.

Another popular misunderstanding, not restricted to laymen, is that in order to eliminate an undesired phenomenon or development one has to “know its causes.” In order to avoid difficulties in the definition of the concept of causes, let us choose a simple interpretation and assume that by causes we mean the factors which together can explain the development under discussion from a time $t_0$ until the present time point $t$. The point I want to remind the reader of is that knowledge of causes which cannot be changed is irrelevant. What we need to know, however, is what impact on the development under debate can be exerted by factors which can be changed, often called policy instruments.

Let us now return to my thesis of the irrelevance of frontiers between sciences given different names. Hennipman touches upon this subject again in the source already quoted (1977, p. 85), where he quotes — evidently with agreement — Peter (1949), who stated that normative judgement of economic phenomena requires the cooperation of ethics, sociology, and economics. The relationship with my thesis consists of the doubt one may feel about the character of ethics. If ethics is not a science — which I tend to believe — then we are facing a frontier that is relevant: the frontier with ethics. The frontier between economics and sociology remains irrelevant if we consider both to be sciences — as I do.

Finally, in this section, the question should be mentioned whether there is a difference in character between the natural and the social sciences, as maintained by Pütz and Neuhauser (1980). I, for one, do not agree with opinions expressed by several economists (from the German cultural area in particular), that, for instance, measurement and the use of mathematical tools cannot
be applied to sciences dealing with human beings. I do admit that a difference may exist with regard to complexity, that is, the number and nature of variables and relationships involved. This may make it much more difficult to discover the invariants — the essence of scientific activity. Even so, the economist sometimes does encounter remarkably constant reaction patterns over long periods, such as the price elasticity of demand for beef or anchovy (Tinbergen, 1941; 1979).

3 MISUNDERSTANDINGS WITH REGARD TO ECONOMIC SCIENCE

As a next step, let us concentrate on economic science in its positive or analytical form. A number of arbitrarily chosen examples will be dealt with, related to income distribution policies, as announced.

1. Not unusual among economists is the opinion that production functions are "purely technological" relationships, indicating how much product is obtained from the combination of given quantities of production factors, such as natural resources, labour and capital. By now it seems to me to have become clear that psychological factors also come into play; the organization of a production process, such as the hierarchy of decision makers, may well affect labour satisfaction, and, through it, an individual's contribution to production. Claims for participation in the decision process are one expression of this state of affairs; attempts to reorganize decision-making structures by using forward-looking managers constitute another.

2. Turning to income distribution, an example of misunderstanding the complexity of the phenomenon called tertiary distribution has correctly been stated by Wolfson (1979) in a critique of the present author's quoting measurements of that distribution. In these measurements, the consequences of changes in the price system due to public expenditures have not been taken account of.

3. Considering now the misunderstandings around the explanation of observ-

2 Even so, among the natural sciences meteorology is also characterized by an enormous number of variables. Moreover, some fundamental phenomena remain relevant even in very complicated mechanisms and often can be understood more easily with the aid of a macro-model than with the aid of a micro-model, where one "cannot see the forest because of the trees." One example is the identity of the balance on current account with foreign countries and the gap between expenditures and income of a nation. Another example is the role played by non-tradables in the analysis of the gap just mentioned.
ed income distribution, a first example concerns my own misunderstanding that all income differences may be explained by a "market theory," that is a theory using the demand for and the supply of each type of labour distinguished as the only determinants. In such a market theory, demand factors and supply factors would be the only variables explaining income differences. Both Pen (1978) and Huppes (1977) have rightly pointed out that an additional role is played by power. A good example can be found in the incomes derived from social security systems which have been created by legislation once a political majority in parliament had become favourable to such systems. Later I was converted to similar ideas, stating that manager compensations are the result of a "market" where the same sociological group is acting on both sides. What I use to call the "organizers of production," who vis-à-vis wage earners act on the demand side, is the group that is also acting on the supply side when bargaining on their own compensation takes place. This creates a "monopoloid" situation, containing an element of power.

On one detail in Huppes' treatment I disagree with him, so we may hit upon another misunderstanding. In my opinion Huppes' Figure 5.1 neglects an additive constant in the formula used as a proxy for the supply of academically-trained manpower. In addition, I have doubts with regard to the measure of technological development used by Huppes. His yardstick of the level of technology attained is taken proportional to industrial production (p. 80). But it is well known that higher technological levels cause a shift from industry to services.

A similar error I think I made myself when testing my original theory appears in Table 31 (Tinbergen, 1975, p. 32) where I took as the main demand factor for university-trained labour the percentage of population in manufacturing. It should have been the percentage in services.

4. As a fourth subject in this section, the measurement of utility or personal welfare will be considered. It is healthy for economists to study the results of Levy and Guttman (1975), who found that among the variables which are able to explain a considerable portion of the variance in welfare, economic variables play a modest role only: 13 percent of total and 16 percent of explained by the six most important factors.

Then, my own belief that utility depends negatively on what I called the "tension" between degrees of qualities required for one's job and actual degrees (Tinbergen, 1956) had not been borne out by most attempts I made so far to test it (Bouma et al, 1976 being one of them).
Continuing the process of focussing increasingly on income distribution policies, let us consider next the theory of economic policy. It is commonplace to consider the aims or targets of economic policy as exogenous variables. The most general aim dealt with in the traditional setup of the theory may be considered to be maximizing social welfare $\Omega$, whose choice constitutes a value judgement. One well-known choice for $\Omega$, recommended by Bergson, is that $\Omega$ is a function of the welfare functions of all citizens, hence $\Omega(w_j), j = 1 \ldots J$, where $J$ is the total number of citizens.

Here the question may be asked whether additional elements have to be added to the $w_j$. A well-known additional element is a "correction" of $w_j$, occurring in the shape of government opinions on consumption of merit goods or of goods deemed damaging to their consumers. Damaging goods have been taxed since ancient times, the best-known examples being alcoholic beverages and tobacco products. In the Netherlands — and probably in many other countries — also sugar has been taxed for a long time, but the official justification in the nineteenth century was that it was considered a luxury good. Today we are hardly inclined to consider it as such, but in the meantime the effect of consuming too much sugar on the quality of our teeth has been quantified: it has been found that dentists are spending 25 percent of their work activities counteracting those bad effects. One of the most important merit goods is compulsory schooling.

A complex of popular misunderstandings is to be found concerning corrective action customary in most countries. Part or all of it is considered by quite a few citizens as "paternalistic" and "hence" undemocratic, all of which is "bad." It may be useful to formulate a criterion in order to state whether or not the type of corrective action discussed is indeed undemocratic or leading to a state of affairs which does not maximize the citizen's welfare. One criterion may be that to prevent citizens from doing something they would themselves deplore afterwards in fact constitutes a contribution to their welfare. The criterion makes sense if citizens are shortsighted, which is not an unrealistic assumption.

It seems useful to add this criterion to Hennipman's treatment of the subject on p. 60 of the text quoted before. At the same time, it should be admitted that a considerable volume of empirical work remains to be done in order to give concrete content to the application of the criterion.

Introduction of $w_j$ as components of the aims of economic policy implies, as observed correctly by Hennipman in the same text (p. 44), that not only
satisfaction – real or imagined – from consumption but also satisfaction or dissatisfaction from productive effort enters the picture. Positive job satisfaction may even be called psychological income and may explain why in situations with negative money income certain types of producers, especially so-called small independents, are willing to continue production.

Here we are touching on a subject mentioned by Vos (1980), following Rawls (1971), concerning the role of freedom as an element of satisfaction. No doubt part of the satisfaction derived from labour is related to being independent or “free.” But can we speak of the distribution of freedom, which according to Vos should also be fair? This requires measurement of the degree or level of freedom attached to each position in society. I am not opposing this idea but inviting its advocates to come forward with a system of measurement.

The construction of a social welfare function by a policy maker is analyzed by Helmers (1979), who uses a concept of “social weights” given to the welfare of more homogeneous social groups. He formulates a number of assumptions in order to arrive at the evaluation of, for instance, an investment project with given increases in incomes of various groups. The essence of the workable method he proposes consists of four assumptions as to how practical content can be given to an optimal income distribution with the aid of marginal utilities of the incomes of some standard social groups (fully employed unskilled workers, highly trained technicians, and people living at subsistence level).

A last example of a misunderstanding in the general field of welfare definition: sometimes the statement is made that in tropical countries needs are less than in cold or temperate climates. This statement seems to neglect the disagreeable aspects of hot weather and the need for air conditioning. My guess is that optimal weather conditions do not prevail in tropical, but rather in sub-tropical or temperate surroundings.

So far we have discussed, under the heading of the theory of economic policy, the aims or targets. The main problem to be solved by this theory is to determine the combination of changes in policy means (or instruments) by which a given set of aims or targets can be attained. The solution to this problem can be obtained with the aid of so-called policy models as illustrated in an authoritative journal, the Journal of Policy Modelling. It is slightly ironical that I am among those who accepted the choice of that name, since I once stressed the fact that the same model can be used to solve analytical and political problems by changing the variables chosen as exogenous (Tinbergen, 1956, p. 9, 123). This is a question of semantics, however, which need not cause misunderstanding.
By far more important is the rapid development and increasing sophistication the subject matter we have shown. This may be illustrated by contributions from J.A. Hartog, Nijkamp and Spronk (1979). Some of the innovations will be briefly mentioned. Instead of one policy maker ("the government"), there are many (for instance, "the ministers"; or more realistically the ministries, or, say, the directors-general of the ministries possibly working in combination with members of parliament). Each may have its own social welfare function, and the process of policy making consists of a set of steps, comparable with the steps of oligopolists as supposed by Cournot and later authors on monopolistic competition. In fact, the theory of games is the instrument to describe such processes (Von Neumann and Morgenstern, 1944). A possible misunderstanding that might arise here revolves around the fact that the "steps" referred to by the authors mentioned are often themselves working hypotheses concerning the behaviour of the actors involved and should in fact be tested in the same way all reaction equations have been tested before.

Another innovation is that policy makers as a rule are not aware of their maximizing effect on a welfare function; they do not see the functional relation the economist constructs out of a limited number of "states" about which policy makers know and which they prefer over other states of affairs. So they may be told by the experts (the planning agency staff) what (limited) choices are open to them and they may go through a chain of choices leading to a preferred state. The similarity between these actions and the chains of actions taken by actors in a market will be clear.

Finally, "satisficing" may replace maximizing, introducing an additional degree of freedom.

5 MISUNDERSTANDINGS CONCERNING INCOME DISTRIBUTION POLICY

Among the aims of economic policy, a change in income distribution may appear. This change itself may be quite different for different policy makers. The aim may be changes in the income of some groups of the population. Some parties will be in favour of, for instance, raising farm incomes. During the Great Depression this target played a role in several countries. At present in the European Community it is topical again.

Marxist parties as a rule want to eliminate private income derived from the ownership of capital. A famous misunderstanding connected with this aim has been that for quite some time Marxist governments concluded that in the calculation of prices of products no costs for the use of capital should be
included. This led to the well-known situation that capital-intensive goods were relatively cheap and labour-intensive goods relatively expensive.

An alternative aim of income distribution policy has been the establishment of an “equitable” income distribution. The definition of equity then becomes an important issue. Several definitions have been offered in the literature. The definition I prefer is that equity in income distribution is attained when all individuals considered are deriving from their jobs and their incomes equal satisfaction (or welfare, which I consider synonymous). This definition makes sense only when welfare can be measured; accordingly I belong to the group who think it can. Several alternative definitions are adhered to. One, often called liberalist, is that equity implies equality between an individual’s income and its contribution to the national product. Another is that equity requires only that a number of minimum needs can be satisfied by all. A third definition requires that all incomes be equal. Elsewhere (Tinbergen, 1978) I tried to show that under certain circumstances any two of the four definitions may lead to identical income distributions.

Yet, in my opinion, the liberalist definition, whenever it does not coincide with one of the others, is based on a misunderstanding. To illustrate this statement, we may consider practically all situations which so far have prevailed even in highly developed countries. The overwhelming majority of individuals endowed by nature with high levels of intelligence or social intelligence derive from this endowment incomes considerably higher than most other incomes, with the exception of the owners of large amounts of capital. To consider these high incomes derived from natural endowments as equitable rests on the misunderstanding that natural endowments are distributed equitably over humankind. Nature is not equitable, but, on the contrary, at times very cruel.

In earlier publications I adhered to a definition sometimes called the “swapping principle”: a situation of equity being defined as one where nobody wishes to swap places with anybody else. The misunderstanding which undermines this definition is that of the feasibility of swapping places. It is possible to let A have B’s income and vice versa; to let A live in B’s house and even have him offered the training course B went through, and vice versa. But it is not (yet?) possible to let A have B’s innate qualities and B A’s qualities, as would be necessary for a complete swapping of “places” in the sense relevant to our problems.

A misunderstanding seems to exist also when G. Leduc (1977), in a discussion of C. Morrisson’s paper read in the Institut de France (1977) observes that “M. Tinbergen . . . a soutenu . . . l’idéal quant à la justice sociale, est que chacun ait autant que son prochain.” The impression created by this
statement is that equal income or equal wealth is meant. Only if the statement had been about equal welfare would M. Leduc have been right.

Again another type of misunderstanding regarding the definition I favour is one which concerns the time at which equity can be attained. Defining equity does not imply the opinion that such equity can be established right away. Pen (1979) even — although co-author of our joint effort (1977) — seems to make his readers believe that I consider an equitable income distribution possible in the Netherlands in 1979. Elsewhere (Tinbergen 1975, 1975a), I made it clear that equity "here and now" would only be possible if a lump-sum tax on innate capabilities were possible — quod non.

A last misunderstanding about possible targets related to income distribution is the specification of an optimal income ratio between highest and lowest incomes of, for instance, five to one. The misunderstanding consists of the formulation of this ratio without specifying what percentiles of the incomes recipients have been chosen. Clearly a five-to-one ratio between the upper and lower one percent of income recipients is much less unequal than a five-to-one ratio between the upper and lower ten percent groups.

An equitable income-and-job distribution is not, however, the only possible target of income distribution policy. Even if an equitable income distribution were attainable — i.e. if the tax just mentioned were feasible — the situation of equity might imply a total social welfare lower than possible. If an equitable income distribution is not feasible, the income distribution will in any case have to deviate from it, and the income distribution target must be seen as part of the total set of targets considered, in combination with the instrument variables' values, to correspond to an optimal solution of the policy problem. Elsewhere (Tinbergen, 1977, 1980) I developed models in which some features relevant to income distribution policies have been given closer attention than before (1975). Thus, I generalized about some of the assumptions limiting the validity of previous work on the optimal income distribution. In more recent work the number of job characteristics and personality traits has no longer been limited to a few. The production function need not be specified. Education costs have been introduced as variables into a newer model used for the Netherlands in 1962. Thus some of the limitations rightly criticized by Haveman (1977)

3 I am using the terms "targets" and "instruments" which I prefer to restrict to quantitative aims and means and not to use for qualitative aims and means. This implies that in the present essay I deliberately restrict myself to changes within a given structure. In most examples of misunderstandings listed in this essay this restriction is not necessary, however.
have been reduced. Even so important limitations remain. Some of these have been removed in an admirable way by Ritzen (1977). Among the latter are (1) the constancy of physical capital; (2) the neglect of the costs of other than formal training and (3) the distribution of capital over individual owners.

Alongside all the misunderstandings identified in this essay, it seems appropriate to finish by stating that, as usual, no misunderstanding prevails about the need for further research. *Ars longa, vita brevis.*

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MISUNDERSTANDINGS CONCERNING INCOME DISTRIBUTION POLICIES


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Summary

MISUNDERSTANDINGS CONCERNING INCOME DISTRIBUTION POLICIES

In this essay in honour of Professor P. Hennipman the latter's clarity and precision of expression are chosen as an example of how to avoid misunderstanding of his publications. As counterexamples some twenty-odd misunderstandings are set out by the essay's author in the field of income distribution policies,
ranging from that specific subject to the theory of economic policy, to economic science and to science as a whole. Several of these misunderstandings are due to the essay's author, while others seem to prevail either among the general public or among scientists.