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Welfare Theory and Social Policy.
A Study in Policy Science

J. P. Roos

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Preface

This monograph is the outgrowth of an earlier work: »Hyvinvointi yhteiskuntapolitiikan tavoitteena» (1968; Welfare as an Objective of Social Policy). These two works have, however, little in common. Only after finishing that study did I become aware of the enormous dimensions of the field. Any venture in policy science will, of necessity, be only a scratch on the surface, especially as orientation to policy science goes largely through self-education. There is no »general social science» of any specificity to start with, only fragmented pieces of knowledge. There are competing paradigms, or attempts to develop paradigms, but no one generally accepted paradigm.

Had I known of all the difficulties lurking in the field, I should never have made the attempt. This monograph is not, it must be emphasized, an attempt to create a paradigm, only an attempt to collect the existing knowledge that can be considered relevant within the same covers. Important areas have been left almost completely uncovered, but the accomplishment of an exhaustive survey will have to be left for those better qualified.

In my work I have been greatly assisted by discussions and written comments from the following colleagues who have read this manuscript in whole or in parts: Professor Erik Allardt, Risto Eräsaari, Henning Friis, Professor David G. Gil, Jukka Gronow, Reino Hjerpe, S. Albert Kivinen, Erkki Koskela, Professor O. E. Niitamo, Arto Noro, Professor J. J. Puumo, Olli Perheentupa, Helena Roos, Olli Siirala, Asko Suikkanen, Hannu Uusitalo, and Academician G. H. von Wright. Special gratitude is due to Erik Allardt, O. E. Niitamo, Jukka Gronow and Risto Eräsaari for their meticulous reading and many perceptive comments. Jeremy Gould has edited the manuscript for errors in grammar and format.

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Helsinki, November 1972

J. P. Roos

1. Introduction

This monograph is about welfare (well-being) and its relation to social policy. Thus we shall be interested in the concept of welfare, the way in which concepts of welfare have been incorporated into social policies, how social welfare could be measured, and so on.

The subtitle »A study in policy science« has been given, because the problem of welfare and its relationship to social policy is one of the central questions of the »new« science of policy (or policy sciences, as Yehezkel Dror prefers to call it). It has also been given this subtitle to emphasize that we shall be occupied with problems normally belonging to many different disciplines.

In *Welfare Theory and Social Policy*, we shall thus cover problems ranging from needs to decision strategies, with the primary interest, or the leading thought of the monograph being in an attempt to see in which ways the concept of welfare could be utilized in policy.

In this context, I shall refrain from more practical suggestions, these being relegated to later and shorter papers, and instead, concentrate on an attempt to form a general framework for such ensuing endeavors.

This character of the monograph will mean, primarily, that I shall explore many different fields, theories, and so on, and secondly, that many problems must be left to very scant attention. Thus the monograph will abound with statements of the type: this is a problem we shall not go into . . . I hope this shall be understood as necessitated by the limitations of time and space. It is however necessary to attempt to make a total analysis even with scant resources, as this is exactly what is missing.¹

However, the choice of the problems to be analyzed is decidedly »subjective« and certainly does not give a complete picture of the field. On the

¹ C. Wright Mills (1959: 142) has very aptly described the conception of this monograph in a statement about the unity of social sciences: »To state and solve any one of the significant problems of our period requires a selection of materials, conceptions and methods from more than any one of these several disciplines. A social scientist need not »master the field« in order to be familiar enough with its materials and perspectives to use them in clarifying the problems that concern him. It is in terms of such topical »problems« rather than in accordance with academic boundaries that specialization ought to occur. This, it seems to me is now happening.» See also *Science, Growth and Society*: 57 for the same emphasis.

other hand, it should be emphasized that there is no pre-existing conception of the whole »field»; in fact, there is no agreement about the field at all.

The outline of the monograph will be as follows: First I will analyze the concept of policy science and policy, and its relation to the problems of welfare, followed by an analysis of the problem of rationality and goals. After this I will go into the concept of welfare itself. Thereafter, I will investigate some of the best known and most explored fields of »welfare theory», namely those of welfare economics and the Arrow theorem. But to welfare theory belong also the concepts of level of living and social indicators, which are dealt with together. This brings to a close the question of welfare analysis proper.

I shall conclude the monograph with a lengthy analysis of the general problem of social control and guidance. In this we shall seek insights into what is missing, or wrong, in the approaches analysed previously. This chapter will also include a statement of how to link welfare, in general terms, to the system of social decision-making, to conscious social control. Thus I shall end with what I hope is a rather broad view of the subject and thus related to the policy science point of view of the first chapter.

2. Policy Science and Social Policy

Lately there have been rudiments of a »new» »science» growing out of the elaborate tangle of politics, science, application, social decision-making, and so on. This »science» has been called policy science, a name coined in a book by Lerner and Lasswell (1951), and after a quiet period suddenly adopted by many researchers working with similar problems.¹

Of course the idea of a policy science is as old as social science itself. If we wished, we could go back to the classical economists, (see Myrdal 1971: chapter 1) to Bentham, More, and certainly Plato for the origin and development of these ideas. Mannheim (1936: 109), for instance, when speaking about a science of politics, was very obviously alluding to what now is meant by policy science. In this context, then, we can definitely speak of ideas already existent, but adopted into more general

¹ Dror (1968, 1970: 103, 1971a, b.), Bauer-Gergen (1968), Etzioni (1971: 11), Ranney (1968). I shall not take up the history of policy science. But it should be mentioned that, for instance, Comte and Saint-Simon were quite near the policy science tradition, as was Destutt de Tracy. A more recent approach that borders on policy science is so-called praxeology (or praxiology), and especially its Polish version. Its subject matter is more general, but the approach is comparable. Some of the historical origins of praxeology seem also highly relevant for policy science, especially those of Bogdanov, who is primarily considered an administrative science man, and Slutski (see Kotarbinski (1965) and Zielenewski (1971)).

use only after they have become socially usable through the development of the society.

But long before the concept of »policy science» was developed in the United States there had already existed a rather similar type of science in certain European countries, especially in Germany and the Scandinavian countries. This was the science of Sozialpolitik (social policy, sosiaali-politiikka) first developed by the famous »Verein für Sozialpolitik» (founded in 1872).

The 'Sozialpolitik' of the Verein für Sozialpolitik was originally congruent with current usage of policy science.¹ Later it degenerated into a 'science' of the administration of the old, sick, unemployed, and in the most promising case, of the poor in general.² This meant doing research about the problems of the 'risk' groups of society, but little else. Only very lately has there been some interest in returning to the old problem of guiding the society — of making policy. The development of policy science in the United States is in most respects in the same situation as in Europe. Historically, the origins of American policy science grew out of an attempt to integrate different areas of science and to put them at the service of the decision-maker for public policy-making and in many respects constitutes a continuance of the tradition of social engineering. Although, on the other hand, the European variant of policy science developed under the pressure of some burning social problems (die Arbeiterfrage) (see e.g., Shils 1969: 36), both traditions have essentially the same content. The only difference is in that they respond to the same problems in different conditions. While the problems of Sozialpolitik were connected with the adaptation and reformation of the developing capitalism of the nineteenth century, the problem of the 'policy science' of the 50's and 60's is to adapt and reform the ripened version of this same capitalism. (See here especially Waris 1966: 15 and 31—35, Nieminen 1955: 19—20, Kuusi 1964).

¹ See Nieminen (1955: 46—47), Ringer (1969: 146—149). My colleague Risto Eräsaari has pointed out to me that in a certain sense policy science and Sozialpolitik are not connected at all. It is obvious that there are differences: but having in mind the general functions of social policy in the 1880's it seems to me that it quite well compares with the general intended function of policy sciences now, presenting itself as solutions to the most pressing problems of society, and seeing the problem from the point of view of public decision makers.

² It is of interest to note that Max Weber, a member of the Verein, had much to do with this degeneration. The famous Werturteilstreit was concerned with precisely this question of the existence of a policy science. From the point of view of Weber and some other younger members of the Society, such a science could not, and should not, exist. Later this view prevailed, and sozialpolitik, as policy science, faded out of existence (see for instance Myrdal (1971: x, 12—13), about Weber's standpoint see Gustafsson (1971: Chapter 1, esp. pp. 31—36) and Ringer (1969: 152—158, 161—162).

While the theorists of sozialpolitik and social policy previously spoke openly about the necessity of saving capitalism, of representing the interests of capitalism against the interests of the worker (and of trying to integrate the workers into the society), their later colleagues have used more euphemistic expressions, describing social policy as a science for the good of all people, on the basis that 'class distinctions have disappeared', and so on.¹

In this respect, the American policy scientists have probably surpassed their European colleagues. Especially if one defines public policy-making in terms of its ends, it is easy to succumb to euphemisms along the lines of well-being for all citizens, etc. But in a concrete analysis one must determine as well whether the means available are such that the ends given are practically attainable. This is something that theorists of social policy very rarely do.

But what especially European social policy has been lacking is a theoretical background, an attempt to develop a science instead of merely carry out lines of practical research.² And it is here that the concept of policy science is so important; social policy needs precisely the more general type of theoretical approach at which too few attempts have thus far been made.

It is necessary to point out — contrary to the opinions of most practitioners of policy science — what policy science, the general theory of public policy-making, is not. It is not, and cannot be, an attempt to define generally what a policy-maker should do in any circumstances.³ It is not a universal solution — a panacea for all the problems of society — as some of the more optimistic policy scientists seem to think, and finally it should not be unaware of the limitations of public policy-making.

These are precisely the points that have been completely neglected in the American version of policy science, where the social prerequisites of

¹ See Dror (1971: a), Nieminen (1955: 53–55, 71–74), Waris (1966: 31–32). Waris (1966: 15) describes the social policy point of view as follows: »Before the Second World War, after internal strife, the Finnish worker movement had in practice rejected the direct Marxist-revolutionary program and the Utopian-idealistic programlessness for social reformatory evolution and development. The social policy point of view had won also in the second round.»

According to Lasswell. »The continuing crisis of national security in which we live calls for the most efficient use of manpower, facilities and resources of the American people.» Lasswell 1951: 3).

Also Dror (1971a: 53) represents a rather conservative view on the nature of policy science. See also Kalenski—Mocek—Löwe (1971: 175–177).

² Although it should be emphasized that the German developers of sozialpolitik were often extremely theoretical and abstract in their analyses.

³ As Dror (1968: 241 *et seq.*) seems to conceive it: a science about which the socialists and the bourgeois scientists can agree.

a policy have mainly been thought to consist of prevailing attitudes and norms, if any restrictions at all have been mentioned.¹

A construction of the nature of policy science must be divided into two main stages: the problem of public policy-making or social policy, and the problems of what constitutes a comprehensive, theoretical analysis of that subject-matter (see also Dror 1970: 105; 1968: 160).

For the present we shall be interested only in public policy-making (or social policy) and not in policy-making in general. This will lead to the elimination of some central problems of the nature of public policy-making and the factors affecting it.

2.1. *Definitions of Policy*

The intuitive conception of policy would be something like »a set of principles about action». This comes out in proverbs like »honesty is the best policy». ² The famous definition by Lasswell and Kaplan (1950: 71): »Policy is a projected program of goal values and practices», is clearly closely related to this intuitive conception (see also Bauer 1968: 2). But for our purpose this is a rather restrictive definition. It disregards wholly the *policy-making* aspect of policy which we want to include into the term. Lasswell and Kaplan, for example, distinguish the policy process from policy proper and define it in a way which makes it synonymic for policy-making (1950: 71). For obvious reasons this is avoided here: what would a policy science be where policy is only a set of principles? We would rather see policy as the main concept, comprising both principles and policy-making in the widest sense.³

Freeman and Sherwood (1970: 2–3) list four different ways to define social policy:

¹ Dror (1968: 287 *et seq.*) Later, Dror has arrived at a slightly more sophisticated standpoint, (1971a: 37–39).

² Gil (1971: 4) speaks fittingly of the »mystery of social policies», by which he means that nobody actually knows what social policies are even if the term is used quite widely. See also Popper (1966: 139) about the principle aspect of social policy.

³ As a matter of curiosity it could be mentioned here that Dror (1971b: 100–101) presents a method for the definition and analysis of policy first developed by Louis Guttman in several articles, beginning from 1954. This method is exactly the same as that used by this author in his previous work, »Hyvinvointi yhteiskuntapolitiikan tavoitteena» (Welfare as an objective of social policy).

This method, the use of Cartesian products of the subfield of a concept, and the analysis of possible alternatives thus achieved (see Dror 1971b: 109, 116, Roos 1968: appendix 1), is certainly quite simple, but yet a step forward from the coarse analysis of policies by their subsectors. It might also be mentioned that Suppes (1966: 294) employs the same method to study decision situations, i.e., a more general framework.

1. The first is social policy as a philosophical concept. This I would translate as policy science or social policy as a scientific concept.
2. The second definition refers to social policy as a product. Social policy thus means the decisions that are made by policy makers. Therefore, social policy would essentially be identical with a theory of public decision-making.
3. The third definition describes social policy as a process. Freeman and Sherwood mean specifically a fundamental process of stabilization and self-regulation.
4. The fourth way of seeing social policy is as a framework for action. In this sense social policy is both a process and a product¹.

The most important distinction here is that between *product and process*. If we define policy as the decisions of policy-makers, we are giving up all the qualities of policies which are important (see next page). Policy is not something that decision-makers stipulate; rather, it has certain inherent requirements. This is best brought out by seeing policy as a process, as a set of actions which fulfill certain basic requirements.

We would like to speak about policy as a course of action in which the decision maker (whoever and whatever it is) attempts consciously to secure a set of given goals or principles. In short: a conscious, co-ordinated course of action. The question of consciousness is here the central one, as it assumes the whole problem complex under which conditions the policy makers are acting.

There is a temptation to define policy — as in decision theory — as a sequence of actions where first goals are defined, then means are selected, actions valued, and so on.² This is done by many policy theorists (see e.g., Dror 1968: 163—164). As Lindblom points out, »this way of looking at policy-making is useful for some purposes, but it tends to view policy-making as though it were a product of one governing mind, which is clearly not the case. It fails to evoke or suggest the distinctively political aspects of policy making, its apparent disorder, and the consequent strikingly different ways in which policies emerge» (Lindblom 1968: 4).

The decision-type models can be defended from the point of view of, for example, a planner, because he needs a systematic sequence of steps

¹ See also Salisbury (1968: 152—153), who distinguishes three meanings of policy:

1. Policy means authoritative or sanctioned decisions by public authorities;
2. policy means general questions and general decisions about these;
3. policy is a course of action within which one tries to realise a specific goal.

² It should be noted that public policy can also be functionally divided into subsectors. This is not done here because we think it is a rather fruitless procedure. And being the classic mode of procedure in Scandinavia and Germany, it is a pretty well-exhausted alternative. (See e.g., Nieminen 1955: 44; Waris 1969: 113).

in which he can analyze a situation (see Drewnowski, *et al.* 1970: 4–5). But as a point of departure for a theory about policy-making it is not very useful because it overly abstracts the essential qualities of policy.

The most extensive Western definition of policy is probably that of Yehezkel Dror (1968: 12), which is by no means original. Although in some ways Dror's proposal is inferior to the majority of other definitions, it in any case contains all the elements of policy that have been mentioned by policy theorists (see e.g., Friedrich 1963: 79, Ranney 1968: 6–7, Van Dyke 1968: 27, Bauer 1968: 2).

The Dror definition:

»Public policy-making is a very complex, dynamic process whose various components make different contributions to it. It decides major guidelines for action directed at the future, mainly by governmental organs. These guidelines (policies) formally aim at achieving what is in the public interest by the best possible means.»

On the basis of this definition, Dror then distinguishes twelve principal characteristics of public policy-making. It should be noted that Dror has chosen to use the term public policy-making which here is shortened to policy. These components are as follows (Dror 1968: 12–16):

1. complexity, 2. dynamic process, 3. various components, 4. different contributions of these components, 5. decision making, 6. which gives main guidelines, 7. that concern action, 8. which is directed at the future, 9. mainly by governmental organs, 10. guidelines formally aim at achieving, 11. what is in the public interest, 12. by the best possible means.

Some of these components demand scrutiny. Dror emphasizes that public policy-making is a species of decision-making along side other forms of decision making like planning, and so forth. This is a valid point, to which we will return.

That policy-making is a strategy for action has already been mentioned. The interesting point in which Dror differs from other policy theorists is in that he plays down the importance of objectives. He says that the *formal* objective is general welfare (public interest) which should be reached by the best possible means. But this is only a formal objective and may have nothing to do with the actual objective. This is a much more realistic view than those of Ranney (1968) or Van Dyke (1968) who see objectives as a very important part of the public policy-making process, or those like Nieminen (1955: 43), who actually define policy in terms of its objectives.

Gil (1970: 413, 1971) had also presented a very comprehensive definition of social policy which is also of the »optimistic» type, in which it is believed that practically everything can be achieved by way of social policy.

Here we reach an important point. Is there actually a policy in any

other than a retrospective sense? This is not the place to analyze the laws of motion of a capitalist state, but it should be rather clear that when public policy is analyzed, a very important part of what constitutes policy in a capitalist society is ignored. It is possible for public policy-makers to make plans and plan policy, but it would be misleading to believe that this is the actual policy observed. This is especially true when we discuss objectives (see Nieminen 1955: 51–52).

There is an interesting dictum of Max Weber's about defining the state which applies especially well for policy: the state must not be defined in terms of what it does.¹ Essentially, what Dror's definition does is merely to define policy in terms of what the policy makers should do. If one defined policy with respect to what policy makers can do, it would be very meagre indeed. Social policy is everything and nothing: there is a vast amount of laws and measures that are called policy, but are these really an expression of any policy from any other standpoint than in a retrospective view, in other words, what in our terminology is not policy at all? From a policy science point of view, the interesting thing is to separate non-policy from policy and try to analyze how policies could be pursued instead of non-policies. But we should be aware that the existence of »real» policy in our sense is very rare indeed.

In our terminology, a policy then is a set of actions attempting at comprehensive, consistent and conscious control and guidance of the society.² We might here try to specify some of the additional requirements for a policy in this sense.

From a social policy »proper» we could in the first place require that it is »democratic», in the sense that it is related to the wishes of the people and that the people can effectively control its realization.

¹ See Runciman (1969: 35) where he also points out a mistake in the translation of Weber.

² The question of whether policy can be uncontrolled and self – regulating is quite interesting. In a private communication Hannu Uusitalo has argued for the view that, for instance, the operation of a perfect market should be considered as policy. He is certainly correct in pointing out that control cannot and should not be comprehensive. But in accordance with my outlook, this means that policy cannot be comprehensive because policy hinges on control. It is certainly a policy decision to »choose free markets» if it can be done under a choice situation. But this policy decision simultaneously implies the ceasing of making policies, as far as the decision maker adheres to a perfect market.

The second problem mentioned by Uusitalo is that such a definition of policy would make it impossible for policy science to analyze and compare situations in which the element of market is involved. This I think is not true. Of course policy science is interested in the consequences of policy, especially in uncontrolled, unexpected consequences. Thus it is highly important to observe the consequences of a policy decision to utilize markets and abandon control, and to then compare these with a situation in which control has been active.

Secondly, we could require that objectives and functions of a policy should be co-ordinated in the sense that they combine to produce the desired result.

Third, we could require that it is »scientific», in the sense that co-ordination and control are based on a scientific analysis, that is on a policy science. Here we should not forget however, our first requirement: a true scientific policy is never undemocratic.

Fourth, it should be obvious that social policies can never and should never be comprehensive, in the sense that they cover all activities of the people. Certainly in the society in which we live, social policies are only a minor, if growing part of all social activity, and their influence in this society is by no means central nor comprehensive. Even in such fields where the public policy-makers are considered to have a monopoly, as for instance in foreign policy, it is undoubtably questionable that they constitute the only factors affecting resultant foreign policy.

The requirement for a democratic basis is a central problem of any policy-making in a democratic society. In the following, it will be seen that most attempts to utilize the concept of welfare in social policy actually sidestep the issue of a truly democratic policy. Once the welfare of the people can be assessed, policy can be pursued independent of whether the people participate in it or not. This is certainly not the most desirable case.

2.2. *The Concept of Policy Science*

What I have said above about the »non-existence» of true social policy is in one sense obvious: there would be no need for a policy science if one would already know how to pursue proper policies. Thus the existence of social policy and policy science are clearly interrelated. However, we can have many different conceptions about policy science,¹ depending upon our views about policies, concerning how science and policy should be related, and so forth. The necessity and importance of policy science is recognized; it is seen that we need a comprehensive theoretical approach, a »new» paradigm for the problems of policy making (see Dror 1971a: 28, Etzioni 1971, Afanasyev 1971: 283, Boguslaw 1965: 51, and many others). Some very general features of the policy-science approach are also agreed upon, such as the interdisciplinary nature of policy science, and some of the problems it should be concerned with. The agreement for the mean

¹ Dror has here preferred the use of policy sciences although as a singular term, to emphasize the multi-disciplinary, but concurrently unified nature of the policy sciences. I shall be satisfied to indicate these qualities in the text, but to speak of policy science.

time does not extend much further. Thus, we cannot speak about the existence of a policy science, rather only about attempts to develop such a discipline.

The most obvious approach to policy science is to conceive of it as a science which simply studies the various aspects of policy-making problems. Such views have been presented by Lasswell (1951: 3—4), Freeman-Sherwood (1970: 1), and Gil (1970: 412) to mention a few. This, of course, does not say much about the actual content of policy science, which we want to explore.

Dror (1968: 8) has described policy science as »the discipline that searches for policy knowledge, that seeks general policy-issue knowledge and policy-making knowledge and integrates them into distinct study». Later he has termed these forms of knowledge as knowledge regarding meta-direction and metacontrol, i.e., knowledge regarding direction of the environment and society, as well as individual-controlling and -directing activities (see Dror 1971a: 4). This distinction between knowledge about direction and metadirection is not particularly clear, but supposedly Dror has wished to emphasize the nature of policy science as being very abstractly concerned with the principles of good policy-making (*ibid.*: 51). Etzioni (1971: 8) in turn likens policy science to something in between basic and applied research, furnishing the strategy while basic research furnishes the theory, and applied research the tactics. In his view policy science would be nearer practice than are the regular social sciences, being more easily understandable to decision makers, and operating with concepts and knowledge »not far removed from the observed world and that experienced by the policy maker». (Etzioni 1971: 11.) There would thus seem to be a difference between the views of Dror and Etzioni; while the former seeks rather abstract knowledge and does not specify how policy-makers should manage to profit from this knowledge, Etzioni imagines policy science as a mediator between the sciences and the policy-makers, as a process which distils practical conclusions from the results of social sciences.

Dror's view is, on the other hand, much more traditional. He sees policy science very simply as an attempt to transform the whole of the policy-making process, and make it purely a matter of science. This is supported by the fact that he envisions the interest of policy science centering mainly around the stages of the decision-making process (see Dror 1970: 105).

It should be mentioned that also in the socialist countries there has been a development of something akin to policy science, under the name of »scientific control (or management) of society» (see Afanasyev 1971, Spirkin (undated): 239—240, Miller 1971, Urban 1970, Soviet Economic Reform: 14—15). Particularly Afanasyev speaks very clearly of the need

for a general theory of social management (1971: 283). According to this view, policy science would be based on historical materialism, but as an independent science would solve the problems of guiding the economic, social and cultural processes (see also Urban 1970).

It seems to me that the existing Western policy science approaches, although they have been presented with much fanfare and promises about »revolutionary» development, are actually rather void of any new or useful content.¹ For instance, although Dror emphasizes very much the »revolutionary» qualities of the policy science, he however does support some very traditional notions about the nature of policy science. He has emphasized for instance that policy science is only interested in instrumental knowledge, in the improvement of the quality, but not the substance of policy-making (Dror 1968: 241, 1971a: 51). This is obviously nothing else but simple separation of means and ends, *the impossibility of which should be one of the basic axioms of a viable policy science* (see next chapter).

In addition some of his »revolutionary» notions, such as the combination of tacit knowledge and scientific knowledge seem rather impractical and unrealistic. Furthermore I do agree with the pessimistic notions of Bertram Gross (1971: 292) and I. L. Horowitz (1967: 356—357) about the existing approaches to policy science. But I would also like to emphasize that, as the need for policy science grows in capitalistic societies, there certainly will appear more fruitful and practical approaches. Thus it seems certain that the policy sciences do have a future, and it is in this spirit that we will explore the future areas of policy science.

In my view, the following aspects of policy science are critical to its development: 1. its interdisciplinary nature, 2. its relationship to the policy-making process and, 3. its relationship to the development of society, i.e., the objective processes of society.

The interdisciplinary nature of the policy science has been emphasized by all the students of policy science and related approaches (see, for instance, Mannheim 1936: 111—112, Lasswell 1951: 3, Dror 1968: 241, 1970: 103, Etzioni 1971). But there are, of course, differing views as to how policy science should actually be constructed out of the existing disciplines. It should be emphasized that there are many policy-science problems not yet explored by any existing disciplines. I shall not at this time go into the matter of the relationship between, say, political science, sociology, or economics among one another and with policy science (see, for instance, Mitchell 1969, Riker 1961, Runciman 1969, MacKenzie 1969, Barry 1970). One interesting fact is that depending on the nature of the interdisciplinary »mix» there are different alternative approaches which are all related

¹ As for promises, see Dror (1970: 105; 1971a: preface, 51—52).

to policy science. Such are, for instance, the »new political economy» approach by Mitchell (1969, see also Springer 1970: 9), the »sociological school of political economy» developed by A. and J. Marchal (see Afanasyev 1971: 67), the »Systemic Planning» of Catanese and Steiss (1970), and many others.

Depending on the various fields of interest inside policy science we shall have a different »interdisciplinary mix». For instance, in the field in which we are interested, that of welfare theory, there are relevant developments occurring in the areas of philosophy, economics, sociology, political science and so on.

Dror has emphasized that although this interdisciplinary nature is a necessity, it does not mean that policy sciences would be merely a »super-imposed term covering a broad set of studies, disciplines and professionals» (1971a: 49), but that what it needs is a methodology of its own.¹ There are many things which support this view. As our survey into the confines of welfare economics will clearly show, the results are rather meagre if we start from the normal assumptions of the economist and attempt to develop a »positivistic» theory of welfare. And there are indeed many a novel problem confronting the scientists who want to become policy scientists.

One of these problems is the relationship of policy science to the policy-making process. There are many different problems connected with this. Should policy science be simply an attempt to reconstruct and analyze scientifically what the policy-makers do, and then attempt, from the policy-maker's standpoint, to make recommendations as how to improve this process? Or should policy science assume a critical, more far-reaching stance, and make an attempt to study the overall nature of the policy and to be of active aid also to the objects of the policy-making, the people? This question has been analyzed rather scantily in the context of policy science.²

There is also the additional problem of who shall exercise control over the policy-makers, and what is the role of policy science in this. I see one of the main functions of policy science as the enlarging of possibilities for self-control by the people themselves, through the understanding of societal processes and their social consequences.

I shall return to these problems in the last chapter of this monograph,

¹ By methodology I mean here simply the »arsenal» of policy science, i.e., the different sets of practical approaches that are useful. Therefore, what we need is not necessarily new methods, but rather the new combinations of old methods: compound methods.

² Etzioni (1971) mentions that policy science should be »critical». Later, however, he emphasizes that policy science should see the world through the eyes of the policy-maker, which makes its critical nature rather frail.

where the conclusions of welfare theory relevant to policy science are drawn.

The third critical aspect of policy science is its relationship to the development of society. We cannot examine this aspect at all at the present time. It is obviously related to the previous point, but it has a very great significance of its own. In my opinion the developers of policy science have been too little aware of this aspect, although they have continuously emphasized that the burning problems of mankind necessitate the development of policy science. It is possible to specify much more clearly the exact nature of these burning problems which necessitate the development of policy science, in the capitalist countries as well as in the socialist. In socialist states, conscious social control is seen as a »natural» necessity (see for instance Afanasyev 1971, Glezerman 1969) but also in the capitalist countries economic and social development has necessitated attempts at conscious social control, one part of which is the development of policy science.

3. Rationality and Goals

3.1. *Forms of Rational Action*

Problems of rationality and goals in policy-making are closely interrelated. For policy to be rational (or, for that matter, policy at all) it must have goals. Goals are thus an integral part of rationality.¹ Here we are especially interested in social welfare as a goal. Ultimately this means that social welfare shall of necessity be a criterion of social choice, and shall form the central part of the social choice mechanism.

There are many alternative ways of making a social choice. Arrow (1963: 1—2) distinguishes only four, (namely voting, the market mechanism,

¹ But this is not true for all activities. In a study of the thought of the Greek philosophers on goals, chance and necessity, Hintikka (1964: 66, 70) remarks that for the Greeks it seemed an impossibility to imagine that rational activity could exist without goals. Aristotle, however, already saw that not all rational activity need have a goal. There are many perfectly rational activities which can be considered to be undertaken merely for the sake of activity, with no external goal in mind. But a policy is never an activity for activity's sake; it needs to have a definite goal. Barry (1970: 10) has claimed that the idea of rationality in the sense of pursuing goals rationally originates with Bentham, and that the older, competing tradition which he calls conservative, was not interested in goal pursuit.

dictatorship, and convention) claiming that in a capitalist democracy only the first two are available. Herder-Dorneich (1965: 44) accept group bargaining (collective bargaining, gruppenverhandlungen) in addition to these. It is obvious that these are not by far the only methods. Barry (1965: 85—90) mentions altogether seven, namely combat, bargaining, discussion on merits, (the difference between these two being that in the former, the result is a compromise not representing anyone's opinion, while in the latter, the parties change opinions to reach a final solution) voting, change, competition and authoritative determination, where the decision is delegated to another party. Barry criticizes the inclusion of the market mechanism as a procedure for social choice. Depending on the market structure, we have a completely automatic decision reached through the intercourse of sellers and buyers concerning both the quality and quantity of a product. But if the markets are concentrated, allowing either the seller or the buyer an oligopolistic or monopolistic position, we can speak of other types of market choice: types of choice which can be likened to »dictatorship» or to choice by one or a few, which, however, is not authoritative determination. The fourth type of choice suggested by Arrow, that of convention, is usually only a form of choice included in other types of social choice. Convention can be reached by bargaining, result from dictatorship, and so on. The methods of social choice are important when we analyze the use of welfare in social policy. It should be obvious that in all the methods mentioned here, we can use welfare as a criterion of choice. Depending on the method of choice, one may be interested in the welfare of a certain group, in the welfare of the people or, if we have a completely atomistic decision method, every decision-maker is only interested in his own welfare. The only exception to this is that decision-making by chance is not relevant in welfare considerations. One could also include decision-making by tradition, which is merely a variant of the status quo, i.e., no social choice at all. Following tradition is typical of situations in which no change is wished. We can conceive of decisions where tradition determines a revolutionary decision but these are certainly rare.

Therefore, for the purposes of welfare theory it is interesting also to inquire who are making the actual decisions? Can we claim that it is the people and the people alone? Or is it the decision-makers who do it for the people (or for some segments of the population), or must we recognize simply one group which makes decisions for itself, with all others simply ignored? The existing decision-making mechanisms in capitalist states are obviously modifications of the latter system. The »decision-makers» in the society are partially people who make decisions simply in the interests of themselves or for a very restricted group, and partially people who are supposed to make the decisions for the entire nation. But the first

possibility, that of the people making decisions for themselves, is very rare and extends to few cases, and is therefore the starting point of our analysis. We are interested in public policy-makers, most of whom are supposed to make decisions in the interests of the whole people. The central question then is how are they supposed to determine what are the interests of the people, i.e., what kinds of decision-making strategies may they resort to? This problem has received very widespread attention.

In a very general sense, the decision-makers are *rational* if they, in making decisions, do this on the basis of fulfilling certain goals. The concept of rationality in policy-making is a very problematic one. There are those who see rationality in a restricted sense and thus present alternative strategies of decision-making. Here I shall follow the Habermas (1971: 55) dictum that rationalization is a fundamental requirement of scientific control, and of a scientific approach to decision-making. But this does not free us from the problem of analyzing rationality itself.¹

Rationality may be defined in many different ways. The classical distinction is that between formal, functional or instrumental and substantive rationality (see Weber 1966: 185, Mannheim 1940: 52—53, Etzioni 1968a: 254). There are slight differences in the definitions of formal, functional, or instrumental rationality, but roughly they mean that actions are taken in order to secure given ends. Mannheim emphasizes that we may have a process of actions, a chain which must lead to a certain goal, while Weber emphasizes the calculability of formal rationality. The main idea is that whatever the goals, a formally rational decision-maker will try to achieve them to a maximum degree with minimal effort. Substantive rationality — or comprehensive rationality (Etzioni) — or action rationality (Gross 1971: 293) on the other hand, means a broader concept of rationality, where not only the means but also the ends are considered. In other words, we wish to assess rationality also in terms of the goals of some endeavor. Now, the former concept is the one which figures in most of the analyses of decision-making processes and strategies. In this we are mainly interested in developing the best possible means to reach some given ends (even Dror's idea of policy science seems to be based on this idea).

However, from the point of view of welfare, it is the idea of substantive

¹ »Whether it is a matter of rationalizing the production of goods, management and administration, construction of machine tools, roads or airplanes, or the manipulation of electoral, consumer or leisure-time behaviour, the professional practice in question will always have to assume the form of technical control over objectified processes» (Habermas 1971: 55). Thus, in order to use social welfare in societal guidance in a rational way we must be able to analyze it as an 'objectified process' as a measurable phenomenon. It is evident that this is not completely possible and should not be so. This will be analyzed in the following.

rationality which is most relevant. We are interested in the nature of the goals, not in the means to achieve the goals. And the interesting thing, of course, is that while welfare analysis is supposed to be interested in substantive rationality, the models (implicit or explicit) which it has employed have traditionally been based on formal rationality!¹

Of course there are differences even within the concept of substantive rationality. For Etzioni, the concept of comprehensive rationality which he employs, is definitely less broad than some of the concepts of substantive rationality which cover essentially the idea of studying goals in many other senses other than just their simultaneous consideration (see Etzioni 1968a: 260).

Now, we may ask whether rationality can be achieved spontaneously — through individual actions in the market, or direct democratic processes — or only through the actions of decision-makers, representing the society as a whole. This is the question put by Dahrendorf (1968: 217—218), although he is only interested in the market and the »plan«, or in social action. Dahrendorf defines market rationality, as rationality which is realized by the rational action of the individuals in the markets, and plan rationality, as rationality realized through the actions of the collectivity, society.

Actually we can distinguish many sorts of plan rationality, which would make it much more attractive than market rationality, but as Dahrendorf is primarily interested in showing that plan rationality is bad and that market rationality is good, he presents only the worst alternative within the scope of plan rationality. The essential quality of market rationality is that intrinsic to it we find no conscious social choice and control at all. Thus, it does not interest us in this context. It is obvious that social choice through the market alone is not possible, even were all markets perfect markets, which they are not.

What we are then interested in, is some form of plan rationality. Here we can distinguish many possibilities from perfect direct democracy to perfect one-man control (either delegated or not); but we can also discuss the various alternative strategies within plan rationality.

There are various decision-making strategies suggested in the literature of this field. The most general one, which figures especially in the presentations of decision theory, is what Dror calls »pure rationality policy-

¹ See Braybrooke—Lindblom (1963: 12—13); Biderman (1966a: 70—71) has pointed out, with reference to the Mannheimian distinction, that social indicators signify an attempt to move from functional rationality to substantive rationality in the analysis of policies.

For emphasis on substantive rationality instead of mere formal rationality, see Gould (1971: 16), Kaplan (1964: 57), Habermas (1971: 81), and Gross (1971: 293).

making». This model is commonly presented in studies of planning, policy-making, decision-making, and so on.¹

The following components of the pure rationality model can be distinguished:

1. establishment of goals and of the utility function relating these goals
2. establishment of other values and resources
3. preparing a complete set of available alternative policies
4. preparing a complete set of valid predictions of the costs and benefits of each alternative
5. calculation of the net benefit of each alternative
6. identification of the best alternative

If we assume that the decision-maker is not alone, i.e., he has competitors or there are other decision-makers affecting his available alternatives, we may specify additional prerequisites, such as the calculation power of the decision-makers, and so on (see Churchman 1970: 112, Dror 1968: 132).

The essential characteristic of this pure rationality model is its comprehensiveness: it presumably covers the whole decision-making situation. Presented in the above form, it is also a formal rationality model: its goals are essentially given (of course, it is possible to assume within the framework of this model that the goal-searching stage fulfills the criteria of substantive rationality), but it is probably fair to say that this model has implicitly been connected with designated goals, the primary concern being the search for alternative policies and their effects. Were this model possible to construct in reality, we would not need anything else. It would fulfill all our needs.

Now, much criticism has been directed against the pure rationality model. It can easily be seen that it is an »ideal» model in the sense that it can seldom, if never, be completely fulfilled. It has also been pointed out that it is probably ineffective and often consumes an abundance of time and energy (see Boguslaw 1965, who presents a chess example about the use of this pure rationality model in constructing chessplaying machines). In effect, pure rationality models are not possible as practical policy-making strategies (see Etzioni 1968a: 260, Dror 1968: 133, Ozbekhan 1969: 119, Braybrooke—Lindblom 1963: 45). There have been an unbelievable amount of alternatives suggested. We have strategic planning, dynamic planning, optimal policy, and ameliorative policy, to name a few (Kassouf 1970: 85—86).

¹ See Dror (1968: 132), Churchman (1970: 112), Rothenberg (1961: 5—6), Törnqvist-Nordberg (1968: 11), Chernoff—Moses (1959: 10—11), Tinbergen (1956), Ozbekhan (1969: 118), Braybrooke—Lindblom (1963: 9). It should also be noted that sometimes it is not presented as a strategy, but as a framework, but it is undoubtedly true that other strategies presented here are not applicable to this framework, which is explicitly comprehensive.

Most of the other alternatives have the characteristic that they are »open» in some sense: i.e., they do not attempt to be complete and comprehensive. This means that systematics is also sacrificed in many of them. This is driven to the extreme in the incrementalism model, which has been developed by many outstanding students of the field. Etzioni (1968a: 268) mentions Myrdal, Dewey and Hume as its developers. The name has probably been coined by Braybrooke and Lindblom (1963).¹ Briefly the idea of the incremental strategy is that the decision-makers only resort to 'small decisions' and we have a sequence of independent minor decisions with no grand objectives nor major changes (see Braybrooke—Lindblom 1968: 78, Dror 1968: 143—147). It is based on the idea of »muddling through» elevated to the station of an ideal.² As Etzioni notes, the incrementalist model is not interesting per se, but mainly because it has received wide support as a solution to the problem of social decision-making (Etzioni 1968a: 273).

Here we encounter a phenomenon which seems rather common in social science: that of necessity hailed as a virtue. In what follows we shall see how welfare economists gave up the interpersonal comparability of utility; primarily due to its impossibility, after which they noted that it was actually theoretically more »elegant» and efficient to ignore interpersonal comparison. Here we have in the incrementalist point of view, an empty model for decision-making, hailed as the latest advance of science in the study of social policy.

What is important here, however, is the fact that the incrementalist strategy is not related to welfare at all. On the contrary, its developers emphasize that within the scope of incrementalism such abstract principles as social welfare are beyond consideration.

Incremental decisions are considered not to serve abstract welfare but rather some concrete interests of the moment. It is also interesting to note in this context, that the previously mentioned 'second best' argument applies also to the incrementalist strategy. By incrementalist methods it is not possible to arrive at optimal solutions, because each decision may have a different impact if realized by itself, and not as a part of a complete policy (see Baumol 1965: 30).

A combination of the incremental and comprehensive rationality models has been devised by Etzioni (1968a: 282 *et seq.*) which he calls mixed scanning strategy. In this strategy two types of decisions are distinguished: contextuating or fundamental decisions, and bit decisions. Contextual

¹ See also their earlier works; also the name of Popper (see Popper 1965) figures very notably here.

² See Lindblom (1959) who speaks of the »science» of muddling through.

decisions are decisions which should be made on rationalist bases, while bit decisions should be according to incrementalist principles. The procedure would be such that while the decision-maker makes chiefly bit decisions, he is now and then required to check his actions by making contextualizing decisions. That is, he simultaneously covers the field thoroughly and generally. (Etzioni draws an analogy to weather satellites as representative of mixed scanning.) According to Etzioni (1968a: 289) bit decisions always reflect contextual choice, in which he is obviously wrong. This would mean that decision-making is always conscious in the sense that it has a deeper purpose. This certainly is not true for the greater part of decision-making. In itself, the Etzioni model is certainly a more realistic decision-making strategy as a simple disjointed incrementalistic model. The »goodness» of decision-making depends on how well we are able to apply our »bit» decisions to the fundamental policy we are following. There are various alternatives for mixed scanning: we can have a »social-democratic» model in which the decision-makers proclaim a set of lofty principles, which he however ignores in his actual »bit» decision-making. Again we may have radical strategies where the fundamental principle is so closely adhered to that bit decisions are practically non-existent. Also pure incrementalism, »the professional politician policy-strategy», where fundamental principles are unknown, is a special case of mixed scanning.

All of these strategies are, in our terminology, »open». They are not complete nor comprehensive. They attempt to be realistic descriptions of the working of the decision-maker.

On the other hand, we may have models which are comprehensive, but much more complex than the simple pure rationality models. Such models are the »Human Action Model» by Ozbekhan, and the Drorian optimal policy-making model. The Ozbekhan model (see Ozbekhan 1969: 118) consists of the following characteristics: in it the decision-maker selects values, invents objectives, defines goals, seeks norms, defines purpose; the decision-making organization is defined by the purpose; and the system is self-regulating and self-adaptive. It exhibits »regulation of steady-state dynamics through change and governance of meta-system's self-adaptive and self-regulatory tendencies, through policy formation»; it also exhibits goal-derived feedback.

The Drorian optimal policy-making model (see Dror 1968: 163—164) is even more perfect. Its main qualities are its qualitativity and quantitativity. It exhibits both rational and extra-rational elements, a built-in feedback system and deals with metapolicy-making (by which Dror means principles of policy-making). In short, it is an impossible model. It is also suspiciously resembles a pure-rationality, stages of decision-making model, with the amount of stages doubled. The difference between these two is

that while pure rationality models could be claimed to implicitly represent functional rationality, these models very obviously represent the idea of substantial rationality, notwithstanding the Drorian claim that extra-rational elements are also included.¹

The reason why I have dealt in such detail with the different strategies of decision-making, is due to their intimate connection with the idea of welfare in social policy. But in reality, we should be aware that it is not possible to speak abstractly of decision-making strategies. Etzioni makes the noteworthy comment that »there is no one effective strategy of decision-making in the abstract, apart from the societal context in which it is introduced and from the control capacities of the actors introducing it» (Etzioni 1968: 293). All decision-making strategies are actually concerned with social choice being made by authoritative decision. The principal problem is how to best serve the interests of those in whose name the decision is being made. This reveals the fundamental shortcoming of such strategies. The essential question should be: »How can the people best make social choices in a way that is in their interests, and improves their welfare?» This can be divided into two questions: the question of the decision-making systems, system of social choice; and the question of how are the people aware of their best interests. The less »decision-making» in the sense of autonomous, delegated strategy, be it comprehensive, incremental, mixed scanning or whatnot, the better. Thus we must start from the concept of self-control, and not from that of control that is externally exerted. This does not of course eliminate the problems of rational decision, on the contrary, but considered from this angle the problem takes on quite another quality.

But the discussion of rationality is not complete without a discussion of the problem of goals. Although goals will occupy a relatively minor position in this monograph, their role is certainly important in social policy. It is to this problem that we shall now turn.

3.2. *The Nature of Goals in Social Policy*

The problem of goals has received a relatively central position in the Western analysis of social policies.² Many of the modern policy approaches depend centrally on the definition and determination of goals for policy. On the theoretical level as well goals have been considered most interesting (see Nieminen 1955: 170, Ahmavaara 1970: 190). Ahmavaara has argued that

¹ This can be said to be a quality of substantial rationality, as well.

² For an approach in which this is especially emphasized, see Ozbekhan (1969).

the analysis of goals is of utmost importance in the analysis of society, and especially in the cybernetic methodology of the social sciences.

Ahmavaara asserts that in principle it is completely possible to clarify the goals of an individual if we are aware of his preconditions. As yet, our knowledge of these preconditions is too sparse to be able to »compute» the goals of an individual (see Ahmavaara 1970: 124). This seems to represent an extremely mechanistic notion of the nature of goals. Were we able to compute the goals of individuals (which, by the way, is the starting point of all classical and neoclassical welfare analysis), the remainder would be simple by comparison as we would probably then also know the power of the individual and all other relevant information.

Yet there does still exist the critical area all too often left unexplored: in what sense can we actually speak of goals in social policy? By definition it is obvious that there can be no policy without goals. We cannot speak of conscious policies if we cannot find goals for these policies. So in this sense the existence of goals is crucial to the whole concept of social policy. If the »goals» of society are to a large extent only illusory, then its policies must also be: there is only a set of largely unco-ordinated and unrelated actions, the analysis of which could be based on the real causes of these actions, and not on some assumed goals. For instance Israel (1970: 33) remarks that for Marx consciousness meant conscious activity, activity to achieve certain goals.

To define goal is in principle rather easy. A goal is any state of affairs which is wanted by some individual or collectivity. If the individual A for instance wants to become president, (i.e., wants to effect a state of affairs where he is president), it is his goal. It is eminently obvious that individuals can and do have goals, ranging from minor to rather extensive ones. But do collectivities have goals in the same sense and, in particular, do societies? Can we speak of a collectivity collectively interested in causing some state of affairs to happen?¹

According to Runciman (1969: 117) one may speak of the goals of an organization such as a bureaucracy or a firm, but it is much more problematic when related to societies, because a firm or a bureaucracy is contrived for some purpose, and independent of the wishes of its employees it acts to realize this purpose.

However, in many cases organizations are judged by their ends, a method which, unless we also consider how the ends are actually realized, will lead to very biased results. This is also the basic reason why ends

¹ Of course we do speak of such things: for instance Finland 'wants' a security conference; it is interesting to hear how even very minor officials often speak that Finland »wants» this or that, completely naturally, without once pausing to think what this actually means.

are so popular: they can be readily used as a smoke screen to disguise the true nature of an organization. Especially in relation to welfare this problem is acute.

We must thus not forget the problem of false, or imagined goals. An organization or an individual may signify goals for themselves which are not at all related to the actual functioning of the unit. To resolve this, Etzioni has suggested that in a given situation we define as the real goals of a society only such states of affairs toward which the resources of the organization are directed and which prevail over other goals in conflict situations (Etzioni 1968b: 15). This is especially relevant with regard to societies. It can be said that most goals of a society are false in the sense that we can show instances where they certainly are not pursued. But this is a more basic problem than simply a one of falseness: it is due to the conflicting interests of the members of society.

There is in one sense, however, no qualitative difference between the goals of an organization and those of a society. Just as we can denote the goals of a firm according to the designs of its owners, can we equally well express the goals of a society in term of the interests of those in power in that society.¹ This would imply that the most important problem regarding the actual existence of goals, is the study of the power and interest structure of a society, i.e., class analysis.

There are many who completely deny the existence of groups which can bring about their own interests at the expense of other groups in a Western capitalist society. On the contrary, they claim that the system of representative democracy accurately conveys the interests of the majority, while concurrently protecting the rights of minorities. Thus we can speak of collective goals of the society, goals which are accepted by everybody.

With regard to Western society, I contend that this view cannot be accepted. There are clearly groups with very diverging interests and goals whose realization would lead to a decline in welfare among a majority of the people. Indeed the central problem then if we are interested in goals, is the problem of class interests and power.

Olson (1968) presents an interesting rebuttal to the goal-seeking concept of society in which he argues the view that there cannot be collective goals in the sense of goals of all, but that there must always be an organization which forces its members to work towards their collective goal. In other words, the existence of collective goals has no relevance, as they cannot have any significance. Only in relatively small groups can we expect

¹ This is emphasized by Lenski (1966: 41–42) who says that it is by no means necessary that a goal of society be such that it does not harm some or most of its members.

that the group will act freely for a common goal. In all other situations, men will be expected to further only special goals (which are not in the interests of the whole collectivity). The Olson analysis is based on the concept of collective good, to which I will return later. Here it should suffice to note that the collective-good approach is extremely fruitful, and in a sense can be considered an alternative to the approach of goals.

According to Olson's analysis, then, men will not act for collective interests, and thus we cannot speak of collective goals, except as the goals of a collectivity as such. This analysis then provides a justification for all the technocratic models where decisions are made for somebody, in fact to the reality around us. This is an important problem which I shall return to at length.

Although man sets goals for himself and acts to realize them, we cannot say that goals are the primary, decisive factors of man's activities. There are decidedly more basic questions relating to the conditions of men, to the laws determining the development of societies. There are many questions which we may approach from the more general view of goals, as social processes, determined by the basic factors of man's activities. The central question here is that of welfare. We can see it simply as a goal, and try to formulate it in the best possible way, or we can regard it as a social process, determined by the basic needs and requirements of men. Although these are alternatives, they are by no means exclusive, as we shall see.

4. The Nature and Dimensions of Welfare

4.1. *What Is Welfare Theory?*¹

There exists no generally accepted and coherent *theory* of welfare, only fragments and 'overdeveloped' areas (e.g., welfare economics).

It is therefore not possible here to present a complete theory of welfare, but only a survey of the possibilities and requisites for such a theory. In subsequent chapters, the existing fragments of welfare theory will be presented and analyzed. Thus, in a way, this chapter will somewhat antici-

¹ The conceptual difficulties here are well known. In the Anglo-American usage, the concept of welfare has two different meanings: that of well-being and that of social measures for social security and assistance (i.e., a very euphemistic usage). I am here concerned with the more general sense with welfare referring to the well-being of man and »social welfare» referring to the welfare of the members of society. In an ideal society these two conditions of course coincide, but certainly not in the societies of today.

pate the ensuing discussion; but this is necessary if only because it is customary to restrict oneself to such small fragments of the whole area.

A definition of welfare theory should be, intuitively, rather easy to devise. Its subject is naturally welfare (in this discussion especially social welfare) and the factors that influence welfare. It tries to answer questions such as: What are social and individual welfare? How can social and individual welfare be related? How can social welfare be measured? and so on (Arrow 1951: 923). Although, as I have mentioned, welfare theory is rather fragmentary, there are some areas that can be said to be well-developed or at least subject to some analysis. Examples of such sectors are welfare economics, which is best known and which is usually referred to when theory of welfare is mentioned, (see e.g. Rothenberg 1961, Arrow 1951, Reder 1947: 14); the research of the level of living and social indicators, which is actually an attempt to develop methods for the empirical measurement of welfare; and cost-benefit analysis, which is related to welfare economics (see Mishan 1971, who claims that cost-benefit analysis is included in welfare economics); among others. In addition, problems that properly belong to welfare theory have been and are being analyzed under various different names in different disciplines. The Arrow paradox, for example, has been analyzed by economists, logicians and political scientists to mention a few. It is also understandable that welfare theory should use knowledge from various and diverse disciplines, which makes its incorporation a very difficult task (see introduction). But the most basic question is not that of what components can comprise welfare theory. What we must first inquire is: can a welfare theory in actuality be constructed? A science of welfare implies rather questionable attempts at scientifying such processes and things that apparently defy scientization, and which are sometimes considered antithetical to scientific investigation. These problems center around the concept of welfare. It is probably fair to say that welfare is an extremely elusive concept. Some might even suggest that it is not open to analysis at all. But it is apparent that the concept of social welfare, or the aggregate welfare of all members of a society, must be analyzed even though it proves difficult, if a society is to be called a society that directs itself (or a »rational» society, see Gould 1971: 16).

This analytical difficulty is emphasized by von Wright (1963a: 86): »The notion of the good of man, . . . , is the central notion of our whole inquiry. The problems connected with it are of utmost difficulty.» We are also aware that there are very subtle complications of a philosophical nature in the analysis of the concept of welfare. But these are not the only difficulties. When welfare is analyzed from the policy point of view, that is, with a view to concrete social problems and circumstances, clear solutions become all the more evasive.

Concrete social analyses especially have been completely ignored. In criticizing Otto Neurath for his overly optimistic attempts at defining welfare, Richard von Mises contends that the concept of welfare should not be mentioned until one can analyze its causes (von Mises 1951: 257). If Mises means a theory of society, his dictum is perfectly acceptable, but should he mean, as could be easily inferred, a »natural science -type« of analysis, his attitude is much too restrictive.

But it is not due only to such difficulties that abstinence from analysis has been recommended in the social sciences. We are dealing here namely with the problem of the scientization of politics (see chapter 2), of which the scientization of welfare plays a critical role. This problem has been analyzed cursorily in the previous chapter, but here we must concentrate on some subaspects that are connected expressly with welfare.

4.2. *The Origins of the Concept of Welfare*

The concept of welfare as an object of study is comparatively recent in the literature of the social sciences. For example, in the recent International Encyclopedia of the Social Sciences, there is not a reference word for the concept of welfare. This could be due to accidental shortsightedness, but it is deep in the tradition: there has been no such concept in many earlier encyclopedias. Yet it is necessary to point out that there was an idea of a general welfare behind much of the economic thought of the previous centuries, a concept of common good as the maxim of the whole analysis (see Myrdal 1971: 4–5). That is, welfare has been considered implicitly by economists (and sociologists) in their analyses, often using terms that under close inspection prove to be synonyms of welfare in the sense used here. We can, in fact, trace a line of development from the concept of wealth, through the concepts of satisfaction, happiness and utility to the concept of welfare (Myrdal 1971: 16, 142). Myint (1948: 229) traces two stages, the analysis of welfare at the physical level by classical economists, and analysis of welfare at the subjective level by the neoclassical (welfare) economists.

The classical economists were concerned only with material welfare, or wealth, in their analyses (Herz 1961: 134 ff., consistently translates the word 'wealth' as *välstånd* (welfare), in the texts of Smith, Mill and others). According to Myint (1948: 11, 71) in Mill's usage, however, the word wealth was not considered identical to welfare. It was Lauderdale (*Inquiry into the nature and origin of public wealth*, pp. 151–152; cited in Myint), who

considered wealth and welfare as equal, which was consequently accepted by Say.¹

On the other hand, Say had already emphasized subjective utility, or satisfaction or happiness, as the central concept of economics (Herz 1961: 127) (for an analysis of the concept of utility, see chapter 6).²

It has been customary to separate the form and the substance of welfare and to be content with the analysis of the former (see especially Archibald 1959: 319). This had led to very unsatisfactory results, as what is essential in welfare certainly relates to its substance and not its form, whatever that entails. In the conceptions of welfare economists, the »form» of welfare has usually meant such things as the conditions for maximum welfare — which is impossible to define without a proper conception of welfare — problems of comparability, diminishing utility, and so on.

A welfare theory must consider both the substance and the form of welfare. Regrettably, although the separation between form and substance is not satisfactory, this separation does exist and has had an unavoidable influence upon the definition of welfare.

Attempts to define welfare meaningfully have been extremely rare. The problem of infinite regress has been one reason: in the following I shall discuss others. Welfare is such a fundamental concept that its definition necessarily entails an entire system of concepts and relations.³

Especially the representatives of the »new welfare economics» have been known for their almost complete nihilism with regard to welfare. For them, only the form of welfare has mattered: the rules that determine the

¹ Lauderdale: »If, on the other hand, wealth is regarded in its true light, as consisting of the abundance of objects of men's desire, it would be impossible to discern why that should not be considered wealth which tends to the satisfaction of men's immediate desire, as that which is stocked and stored up for the satisfaction of future desire.»

² This development is comparable to the change noted by Myrdal (1968, appendix 1), in the concept of underdevelopment. The evolution from backward to underdeveloped to developing signified moving from reality to euphemisms, and an imaginary change of reality. In economics, the change from wealth to utility to welfare implies a similar replacement of reality with euphemisms (see Little 1951: 79). As shall be shown below, the concept of welfare in economics is completely devoid of content, actually only a synonym for choice, and it is immediately clear that the analysis of wealth is a task much more suitable for economists.

³ Kuhn (1970) notes that most important are not definitions in themselves but the theories, to which these definitions are connected. In the case of welfare, it seems of little bearing whether one begins from a theory or from a definition, as both should actually be identical.

One minor reason behind the paucity of welfare definitions is also the understandable reluctance to specify such a central concept. As there always exists the danger for a reduction to trivialities: while trying to define welfare you may actually have defined the ideal of the English shopkeeper as Marx (1967a: 603) commented about Bentham: »With the driest naiveté he takes the modern shopkeeper, especially the English shopkeeper, as the normal man. Whatever is useful to normal man, and to his world, is absolutely useful».

behavior of welfare, but not welfare in itself. Here, in fact, we can distinguish between external and internal definitions of welfare, the external concerning the rules, and the internal the content of welfare. This distinction proves quite useful in the analysis of the Arrowian concept of welfare, but it cannot be extended very far. In the following, I shall be referring to both external and internal analyses of welfare.

There are, however, two related principle reasons for this nihilism: first, is the positivist distinction of normative and positive science and the attempt of economics to be a positive science; and secondly, the problem of who is to judge social and individual welfare. Both problems have been given extremely straight-forward and simple solutions in welfare economics, despite their extremely complicated natures.

The traditional excuse for avoiding a definition of welfare, has been that this would naturally involve value judgements, and therefore could not be considered proper scientific activity.¹

Most of welfare economics has accepted this traditional view and has consequently not promoted nor attempted a definition of welfare. (In chapter 6, the few existing endeavours will be analyzed.) Indeed, Archibald's famous assertion (1950: 319), that welfare needs no definition, has obviously been approved by the majority of welfare economists. (For a typical example, see van der Praag 1968: 1—3).²

In the field of philosophy, ethics has dealt surprisingly little with the problems of welfare (see for example, general introductions to ethics: Brandt 1959, Frankena 1963), although there have been some more relevant analyses (Tenkku 1963, von Wright 1963a). But the main weakness of philosophical analysis, for our purposes, is its conceptuality. For the more central a concept is, the less of its relevant properties are brought to light

¹ e.g., Majumdar (1958: 16) claims: »... What is welfare? Any answer to such a question would no doubt involve value judgement of one kind or another and would therefore be relevant to economics only as a datum imported into the system. However, much the ends of human welfare be presented in terms of economic aggregates such as output etc., the decision to follow such an end is essentially a kind of ethical judgement which must be beyond the scope of economics.» This view has been effectively countered by Rescher (1969), Frankena (1962) and Wright (1963a); it is obvious that much of ethical research would be impossible if Majumdar's view would be accepted.

² Welfare economists are not alone in their avoidance of the question of the content of welfare. Decision theorists, for example, have almost completely ignored these problems, the most closely related to our discussion being their analyses of the behaviour of the loss or utility functions. (See the standard work of Chernoff—Moses (1959)). In the work of Törnqvist and Nordberg (1968), there is somewhat more on this problem, but not significantly so.

See, however, Gintis (1969), where the problem of individual welfare is very thoroughly analyzed.

through 'normal' conceptual study.¹ Von Wright, for example (1963a: 121), avoids many of the most pertinent aspects completely (such as the problem of social welfare), undoubtedly due to the fact that the analysis of such concepts presupposes and demands a strong background in the analysis of society. However, a wide spectrum of important principles and conceptual difficulties have been analyzed in philosophical literature which makes it a source of valuable reference material.

The analysis of welfare is a part of the analysis of goodness. The complicated nature of the latter concept will not be dwelt upon here: for a list of the various aspects of goodness see von Wright (1963a: 9—10) and Frankena (1963: 66). There are many other aspects of goodness in addition to that of welfare alone. However, many such aspects would actually be combined with welfare if understood in a wider sense: for example, the technical goodness of man, and especially health (see von Wright 1963a).

The second factor contributing to the »new welfare economists'» nihilistic attitudes towards definitions of welfare — namely, the problem of who or what is in a position to determine the meaning of welfare — seems more interesting. The undisputed dictum of welfare economics has been that the individual is the best judge of his own welfare (Majumdar 1958: 17)² and although it is naturally conceded that instances occur when the individual might be mistaken, as a general principle this axiom is still rigidly adhered to. This principle has led especially to the assertion that representatives of society lack the ability to make deductions about its members' welfare except by observing how they act or by asking them (see Lenski 1966: 36). Should we proceed to generalize on the basis of this point of view, it would appear fruitless to attempt to analyze people's welfare objectively, that is, from the outside. In its strictest sense this principle implies that welfare is an entirely subjective affair, with no objective elements. Ultimately, however, this extreme derivative would be unlikely to gain much support.

Probably most would agree with von Wright that welfare is composed

¹ In the terminology of modern semantics: a concept has four »dimensions»: semantic, syntactic, pragmatic and sigmatic. Normally philosophical analysis (for instance, by von Wright 1963a) has concentrated on the semantic and syntactic aspects and has ignored the pragmatic and sigmatic. Although it is still highly disputable whether these concepts truly endure scientific inquiry, for our purposes they appear very appropriate: it is exactly the pragmatic (i.e. problems of reality and its relationship to the concept) and sigmatic (i.e. the »significance» of the concepts), which seem to be missing from most analyses.

² von Wright (1963a: 99f) shows very convincingly that a man must be the judge of his own happiness. And this is certainly true, because, as von Wright says: »Whether a person is happy or not depends upon his own attitude to his circumstances of life. The supreme judge of the case must be the subject himself». This is all true with regard to happiness, but the same cannot be said of welfare (as von Wright notes, see p. 109).

of causal and axiological components but concurrence about what is actually objectively measurable and what is not, is extremely difficult to arrive at. Even this solution may appear too mechanical: welfare cannot be divided into 'measurable' and 'unmeasurable' components (for the opposite view, see e.g., Noponen 1971: 15).

Many sociologists and philosophers, however, have been much more ready to investigate the substance and content of welfare (see Parsons—Smelser 1965: 32 for an example) which seems quite natural as sociologists should, in principle, have better means to analyze such a concept as welfare.

Marxist economists, however, have proposed the Marxist approach to welfare as a direct counterpart to the neoclassical positivist views (see Baran 1968: 28, Bettelheim 1959: 58—65, Mandel 1968: 663). In their view, social welfare is an objective historically determined process which is unquestionably accessible by scientific analysis. I consider this an overly simplistic point of view. It seems that the correct Marxist interpretation is considerably more complex and regrettably not so »scientifically» and »easily» measurable as has been claimed. Of course there does not exist any Marxist »welfare theory», but as the well-being of man occupied such a central position in Marx' thought, we have many (conflicting) clues as how to reconstruct a validly Marxist view of welfare.

With regard to the problem at hand, however, there is one interesting Marxist concept which may be fruitful to examine here. This is the concept of false consciousness.

This problem, most vehemently ignored or lamented by welfare economists and many sociologists alike, has a central place in historical materialism, the Marxist theory of society. Recently it has become the object of some scrutiny among western sociologists (Winch 1971, Willner 1971).

What Marx and Engels meant with false consciousness is not at all clear (see Marx 1965: 132, Baran 1968: 24—28, Markovic 1971).¹

Briefly the Marxist position could be described as follows. There exists an objective and necessary historical process, the development of which, however, depends on the activity of the masses. Its correct subjective consciousness (i.e., the consciousness of a »class for itself») is represented by the Communist party, the vanguard of the proletariat itself. Due to its heterogeneous composition, the effects of the bourgeois superstructure, etc., there exists a false consciousness which prevents the proletariat

¹ One writer who demonstrates a clearly ambivalent attitude toward the problem of false consciousness is Barry (1965: 38—41, 297). While he strongly resists using what he calls ideal-regarding principles in the determination of people's wants, he nevertheless approves of the use of the concept public interest understood in a way that links it directly with false consciousness.

from realizing the necessity of the social developments that are in its own interests.

Fundamentally speaking, therefore, we can say that people endowed with false consciousness are those unaware not only of their own best interests, but also of the causal process that leads to the realization of these interests. Applied to the problem of welfare, the crucial dilemma of welfare theory has been whether or not the individual can be the judge of his own welfare.

There is general agreement that a knowledge of the causal structure, mentioned in the preceding is often lacking: people simply are not aware of how a certain action affects them. But this has been compensated for through the assertion that this aspect is not of any pertinence; the only factor of interest is whether or not an individual can judge the results of these actions as conducive to his welfare. It seems apparent that such a separation is impossible. There cannot exist a discriminant welfare 'content' of every action, rather the totality of the effects of this action is what must be considered.

Few would, on the other hand, claim that the actual perception of welfare could be misled by false consciousness. If a person says: I am feeling well, my state is one of welfare; assuming that he is honest, that is that. But in even so simplistic a situation there are still difficulties. Would the individual experience welfare if he were aware of all the possibilities, of all the alternatives to the specific state of the world in which he is experiencing welfare? This is a central problem. A part of the proletariat may be subjectively 'faring well' under the conditions of capitalism, but there is no certainty as to whether or not he might not fare even better under conditions of socialism.

How then, can we apply the concept of false consciousness? In fact, most of the standard of living and social indicators research relies implicitly on the assumption of false consciousness. But the real application of this conception lies in the theoretical structure of the problem. It leads to a wholly different approach to problems of welfare.

Contrary to the traditional approach, one must begin from the objective processes that determine welfare; but we cannot disregard the subjective aspect entirely. Social welfare is the result of a dialectical process of subjective activity and objective processes. Men create their welfare from these objective processes, but their perception of it is not solely passive.

Therefore, we cannot have a simple and mechanical division: this is objective welfare and that is subjective welfare; rather the two are completely intertwined and tangled with one another and cannot be separated. We have a set of objective factors — historical, social and other — and we have man's subjective activity and consciousness which acts upon

these objective factors. It makes no sense to speak of »objective» welfare: neither is it reasonable to contend that only the individual can be the judge of his welfare. His welfare is essentially »given» to him (by the society) but this conferral is not a conscious social act. In the analysis of welfare, we must therefore, give attention to both the social process of welfare creation (decision-making, social choice, etc.) and to the objective factors of welfare, of which the concept of welfare is traditionally understood to be formulated.

But in this we are already approaching the next problem, that of the definition of welfare.

4.3. *Problems in Defining Welfare*

As I have noted above, there has been a great reluctance to define welfare. I shall also refrain from attempting a comprehensive definition of welfare, as this is not possible until one has examined all of the building blocks necessary to grasp such a concept.¹ In this context my intention is to indicate some of the most important problems in approaching a concept of welfare.

The first such problem is the *multidimensionality* of welfare. There exists no single, unitary concept of welfare, rather it consists of a widely varying collection of aspects, components or dimensions. We can speak to a certain degree of »parts», and more specifically of the components of welfare, such as health, being well-fed, well-housed, etc.

The second problem is that of the *unit-level* of welfare. Shall we speak only of individual welfare, and if not, what does social welfare actually imply? Is it merely the somehow aggregated collection of the measures of individual welfare (the multidimensionality of which must not be forgotten), or might it be something beyond this, something more than a simple composite? (This is already tangent to the problem of the dynamics of welfare.)

The third problem relates to the *dynamic nature* of welfare. Welfare is not merely an outward and »objective» entity to be measured and recorded. It is inherently related to the *activities* of men, with the conceptions of the good life (i.e. not simply a good state of affairs). Welfare is

¹ Actually, in speaking of welfare, it is possible to utilize many different names to fulfill the same purpose. We can speak of the enjoyment of value, we can speak of the good life, health, well-being, the ends of man and society, of interest, and so on. Some of these emphasize different aspects of the concept of welfare and therefore merit attention. Some are again simply synonyms (well-being, enjoyment of value, and health, in the broadest sense) and need not confuse us.

constantly »created» by man, not exclusively something passively perceived. This is a problem of infinite complication, to which very scant attention has hitherto been directed.

In addition to this, and mainly related with the aspect of multidimensionality, I shall discuss the problem of the relationships between welfare and some related concepts, such as justice, freedom, equality, alienation, etc. This, I hope, will throw additional light on the actual complexity and comprehensiveness of the concept of welfare.

But first some general remarks. I shall here consider welfare extremely broadly, as a sort of super-concept which provides a ceiling for practically everything which is or should be considered good for man and by man. In normal usage, this is not the case: welfare is usually conceived of as a rather minor part of the whole of societal activities (see Allardt 1971a: 308).

Sometimes welfare is even identified with health, or factors conducive to health. (Barry 1965: 224: »Welfare, it will be recalled, refers to the physical conditions conducive to health». See also Lee 1967: 194). It is obvious that when health is understood in the widest possible sense, there is not much that separates it from welfare. But there are reasons to ask whether such a definition is the most practical one. Would it not be better to emphasize that health is one of the most central conditions relevant to welfare but that it is not the only one (see v. Wright (1963a, 54) where he presents such a view). Then welfare is the ultimate end of health policies, but health policies are not the only means to this end.

It seems untenable to assert that, for instance, education, power, freedom, justice, etc., would not, in actual fact, be aspects of welfare, but something external to it. This is especially so, if we begin with the assumption of multidimensionality. It is then natural to conceive of freedom as one dimension of welfare, justice as another, and so on. This approach can nevertheless be criticized. If welfare is considered very broadly, there is not much that can not be included as a part of it: and the concept itself loses its relevance. (See for instance Hicks 1969: 95 for such a criticism.)

It is my contention however that what is still external to this expansive view of welfare is quite a lot; a broad concept in any case enables us to discuss the relationship of welfare to many other things, as should also be the case (welfare is affected by almost anything, one could say).

One minor distinction, made by von Wright, is of use here (von Wright 1963a: 87–88). This is the distinction between *welfare* and *happiness*. It should be obvious that, while we may speak of welfare as a relatively stable phenomenon the changes in which are not very rapid, the subjective, monetary feelings of pleasure, complete enjoyment, etc., which may gen-

erally be called happiness, are much more transitional. It is, of course, evident that matters which obstruct the feeling of happiness may be rather minor, and of limited duration, if conditions are otherwise conducive to welfare. In the words of von Wright, »of happiness I could also say that it is the consummation or crown or flower of welfare« (*ibid.*: 88). For von Wright then, the most important factor in the distinction between welfare and happiness is their relationship to causality. According to him, considerations of welfare are essentially the consideration of how the action and incidence of various phenomena will causally affect a being. But with happiness, we need not be interested in such problems. Although this is a rather strained approach (evidently also happiness must be caused by something), with happiness, the causal connections are indeed much less relevant, as the factors affecting happiness are themselves less important.

It is mainly upon another interesting problem that this distinction throws light. This is the relationship between needs and preferences, or desires. While we can maintain that welfare is intimately connected with needs (see next chapter) i.e., some rather stable, centrally guiding factors upon human action, happiness is related to preferences or desires, i.e., some rather arbitrary and transcendental factors in man's activities (see Braybrooke 1968, Rescher 1969: 109—110, Benn—Peters 1965: 58, Nieminen 1955: 91—92; see also Barry 1965: 39—41 for a slightly different view).

This also enables us to propose that preferences and desires need not be considered except in a very superficial manner in the examination of welfare. (This is a very important point with regard to the approach of welfare economics, as we shall see.)

Otherwise, however, the distinction between happiness and welfare is not very enlightening. From the point of view of social policy, it is impossible to regard man's happiness, as such, as something very important, except as it relates to welfare. Man can be truly happy only in connection with welfare.¹

Some authors have not made this distinction at all (see Benn—Peters 1965: 62), and speak interchangeably of happiness and welfare. Although I shall not employ the term happiness, I consider the distinction itself to be rather minor, as has been noted.

The multidimensionality of welfare is rather generally agreed upon (see Rescher 1969: 54). This is reflected by the fact that the majority of students of welfare describe it with the help of different components. (This is most clearly seen in the level of living approach, about which more

¹ Russell notes that anybody who is unhappy when the basic requirements of his welfare are fulfilled, is suffering from some psychical maladjustment (Russell 1952: 1972). Although I feel that this view is perhaps too extreme, it might be appropriate to speak at least of a situation which obviously will not last long, or which is not serious.

shall be spoken later.) For instance, Lenski (1966: 37) speaks of five main ends of man: survival, health, status or prestige, creature comfort and affection, while Lasswell and Kaplan (1950: 55) enumerate the following »welfare-values: well-being, health and safety of the organism, wealth, skills, and enlightenment». Russell asserts (1952: 197) that the following things are necessary for man's happiness: food and a place to live, health, love, successful work, and respect enjoyed in man's own sphere of life. (see also Gil 1970: 415, Nieminen 1955: 91—95; it is obvious that these lists are closely related to the problem of needs which will be the content of the next chapter.)

Such lists could be continued *ad infinitum*. Although they may appear rather arbitrary, it seems clear that most comparable lists would be composed of essentially the same basic elements. Development of the level of living concept, for instance, has been largely based on this premise; the *ingredients* of the good life are, in principle, rather unchanging. Yet the matter is by no means so simple as that.

We are not concerned here only with the question of which ingredients shall compose welfare, but also with the way in which these ingredients are associated, and interrelated. This engenders consideration of such aspects of welfare as justice, equality, freedom, non-alienation, etc. But neither is this alone sufficient. We must also ascertain that this multidimensionality does not only refer to »horizontal» aspects of welfare, but also to its »vertical» aspects as well. It is necessary to speak of different levels, the level of component distinctions being only one of many.

But primarily we can speak of two levels, which might be termed the *quantity and quality of welfare*. By quantity would be meant such dimensions of welfare as health, housing, leisure, and so on. The quantity of welfare would thus be near the concept of level of living as it is commonly understood.

By quality of welfare, would be meant such aspects of welfare as justice, equality, freedom, security and so on, and their combinations. This elusive concept has been used, though undefined, increasingly in analyses of social problems. For instance Forrester (1968, see also Meadows, *et. al.* 1972), utilizes the term quality of life in somewhat the same sense, although the conception of welfare remains unclear in his system dynamics.¹

Quality of welfare is in a sense the nucleus of welfare, the most interesting and relevant sector when the »quantity» requirements have been

¹ David G. Gil (1971: 72) has given another, interesting meaning to the term quality of life:

»(Quality of life) refers to phenomena on an aggregate level as encountered by the society as a whole or by large segments of it.» This is viewed in contradistinction with the term »circumstances of living», which refers to specific living conditions of individuals and groups. Thus Gil is referring to the societal and non-societal aspects of welfare in this distinction.

met to a certain extent. But the quality of welfare cannot signify merely the aspects of equality, security and so on, but is essentially connected to the whole social structure, to the social arrangements and institutions.

The second problem, that of the distinction between individual welfare and collective, or aggregate welfare (Barry 1965: 224, uses the term general welfare), will be the subject of two chapters in this monograph. Usually the entire problem of defining welfare has been approached from the concept of individual welfare. Individual welfare is taken as a starting point with collective welfare understood as social welfare, leaving open only the problem of aggregation, that is how to derive from individual welfares the collective welfare, the welfare of everybody. (See also Gintis 1969: 4, Baumol 1965: 54–55). In this context, individual welfare is generally regarded as the state of the individual due to all of the circumstances that are relevant to his welfare. The nature of individual welfare and its determinants can best be reflected through the listing of characteristics such as: the health of an individual, his education, his diet, his employment, etc. (This is the level of living problem, see chapter 8).

Collective welfare would then be the aggregate of individual welfares as defined above in some collectivity: society, city, class, etc. The only problem we confront with regard to collective welfare is the means of aggregation. It might be a weighted sum of all individual welfares, it might be a product, or it might be some type of function (see the discussion of the welfare function in chapter 6). This problem of aggregation has been at the core of much discussion about welfare, and especially about social welfare.

But this presentation of the problem immediately shows, in the light of the foregoing, that the whole problem has been conceptualized in an overly restricted fashion. *We cannot separate individual welfare from social welfare*¹: in fact the most important thing about welfare is that it is socially determined, partly by the social activities of the individual, but mainly by factors beyond his control. And it is exactly the mechanics of social determination, the nature of this process, that I will be concerned with. Therefore, to separate individual welfare and social welfare in the abstract, is conceptually implausible.

However, it must be emphasized that I do not consider social welfare, nor will I speak of it, as the welfare of the society, assuming society to be a sort of quasi-person. Society consists of the relationships between individuals, nature, and the material objects created by the individuals. Social welfare is specifically a concept related to the individual or to a

¹ We can, of course, but not in any fruitful sense. It is hardly interesting to study individual welfare which would not be socially determined — especially in a social policy context.

group of individuals. It is possible, therefore, to speak of individual social welfare and collective social welfare meaning by this, simply that we are interested in either one individual or in a group of individuals. But social welfare, or collective social welfare is never only an aggregation of individual welfares, but a much more complex phenomenon. In fact, it is questionable whether aggregation is relevant at all (see chapter 7).

In summarizing the preceding, it can be argued that there are two fundamental ways of conceiving of welfare:

1. welfare as a composite of »good things» whatever they might be, i.e., as characteristics of man's or society's *environment* and the characteristics of man and society themselves, and
2. welfare as the combination of activity and »good things»: i.e., as related to the activities of man himself and largely determined by these activities, with the good things determined by these activities.

The second point of view implies not only the »experiencing» of welfare on the part of the subject but also »good deeds». This second sense is obviously of much more interest but is also somewhat problematic.

Although lacking in precision, Benn and Peters' definition (1965: 62) eloquently describes this aspect of welfare: »Happiness is no extra state of affairs supervenient of activities. It is a term for describing ways of life where needs are not grossly frustrated, where there is absorption of interests and where the interests are mutually compossible».

In this sense I shall proceed to analyze the concept of welfare as a complex of man's social activities. As I noted earlier, welfare cannot be an »outside» concept embodying only things (objects, qualities) in the possession of man. This is in accordance with the dictum of von Wright that welfare is not a state of affairs (although von Wright has obviously meant by this something else; see von Wright 1963a: 91) but more of a *process, or activity*.¹

One could never say that a healthy, well-fed, well-educated person having around him all the possible good things that a man may need in our society, but doing nothing (absolutely nothing, not even relaxing) would be »faring well».

Welfare includes the usage of objects around man, the use of education, health, eating of good and healthy food, etc. Likewise the relationships between man and nature, man and society, and men with each other, are an integral part of welfare. This is precisely what makes the concept

¹ For instance Gintis (1969: 5) says »... a person's welfare derives, in the last instance, from the nature and quality of the set of activities — eating, sleeping, loving, playing, praying, working, creating, hurting, dying — that he undertakes in his daily life». See also Habermas (1971: 49) and Russell (1952: 199).

welfare so interesting. Should we be able to define it merely as a collection of goods and characteristics of man, the problem would be very trivial indeed. (See Allardt—Uusitalo 1972, who have presented a similar view and attempted to operationalize it.)

Therefore, to develop a theory of welfare, we need essentially three interrelated ingredients: a conception of man, his nature and activities; a conception of society and its development; and conceptions of man's relations in and to society (and nature) (see also Gintis 1969: 1—2). This is an exceedingly exacting requirement which I shall not be able to satisfy. But some of the properties of these requirements might be mentioned.

As Marx says in an important note in *Capital*, »To know what is useful for a dog, one must study dog-nature. This nature itself is not to be deduced from the principle of utility. Applying this to man, he that would criticize all human acts, movements, relations etc., by the principle of utility, must first deal with human nature in general, and then with human nature as modified in each historical epoch» (Marx 1967a: 609).

If we substitute welfare for utility (which seems legitimate in this context), then according to Marx, we have to study human nature in general, and in particular as a historical phenomenon, to be able to make conclusions about welfare. This has led some to claim that the Marxist analysis of welfare is based upon a fixed conception of human nature, of a species being inherent in man (see Israel 1970: 25—26, Markovic 1971: 5).

Nothing could be further from Marx' actual intention. This can easily be seen in the »First Premises of the Materialist Method» in the *German Ideology* (Marx—Engels 1970: 42—43), where it is noted that before all else, man must live in order to make history. This requires the production of the means of subsistence. And it is through this »first historical act» that human nature is conceived. Through the production of material life, man produces himself, new historical needs, and his own nature. This means that in order to study human nature, we have to study human society, and especially the society in which men live at this moment.¹

¹ See Marx-Engels (1970: 115): »The connection of the enjoyment of the individuals at any particular time with the class relations in which they live and the conditions of production and intercourse which give rise to these relations, the narrowness of the hitherto existing forms of enjoyment which were outside the actual content of the life of people and in contradiction to it, the connection of every philosophy of enjoyment with the enjoyment actually present and the hypocrisy of such a philosophy when applied to all individuals without distinction — all this of course could only be discovered when it became possible to criticize the conditions of production and intercourse in the hitherto existing world, i.e., when the contradiction between the bourgeoisie and the proletariat had given rise to Communist and Socialist outlooks. That shattered the basis of all morality, whether the morality of asceticism or of enjoyment.» See also Gramsci (1967: 55—61, 197).

Human nature is formed in the interaction between objective conditions and the subjective factors of development, and this forms the basis of all welfare analysis. This includes the analysis of the relationships between man and society and between men: the class relations, the production relations, and so on. In fact, the essential thing to note is that welfare, when socially comprehended, is never general — universal — but always particular, connected with the specific nature of men's activities.

Therefore, if the society is divided into antagonistic classes, the concept of social welfare is definitely a class concept (see Narski 1970). The nature and forms of welfare actually experienced by the different groups in society are very different from one another (see for instance Marx 1964, Gorz 1971). But still, we may speak of universal or general welfare as a historical, necessary future phenomenon, to be realized at a certain stage of historical development. It is in this sense that I shall approach the Marxist conception of welfare (see also Myrdal 1971: 195).

A central concept of Marxism, that of *praxis*, is extremely closely related to welfare. Praxis is among the most difficult and important concepts of historical materialism. It was utilized by Marx in his *Paris Manuscripts* (Marx 1964), in the »Theses on Feuerbach» (Marx—Engels 1970), and in the *German Ideology* (Marx—Engels 1970). For Henri Lefebvre praxis is the synonym of sociology in its modern usage (Lefebvre 1968: 47). But I shall employ the concept of praxis in a more restricted sense, as a form of human activity. This is the way Markovic (1971: 7) has interpreted it, when he attempts to describe »ideal praxis».¹ This is definitely different from Marx' usage, for instance in the »Theses on Feuerbach», of say, revolutionary praxis, but as we shall see, there is one way of understanding the Markovician analysis which does not make it too divergent from proper Marxist analysis.

According to Markovic, »praxis is ideal human activity, one in which man realizes optimal potentialities of his being, which is therefore an end in itself» (Markovic 1971: 7). In essence, then, praxis is the activity that maximizes man's welfare, and therefore, *is* welfare. Markovic defines following characteristics of praxis (or in my terminology, welfare; Markovic 1971: 7—9):

1. self-actualization, objectification of specific potential capacities and powers of man;
2. in praxis man is aware of others: he satisfies a need of other human beings;

¹ Markovic would undoubtedly deny this use of the concept »ideal praxis» in connection with his ideas. This term was suggested with critical connotations, however, by his opponent at the International Philosophical Colloquium, Arto Noro.

3. praxis establishes valuable and warm links with other human beings;
4. praxis is universal »in the sense that man is able to incorporate in his activity the whole of nature, and to reproduce the modes of action and production of all other living beings«;
5. praxis is rational;
6. praxis is free in a double sense: from coercion, and for self-fulfillment;
7. praxis has definite esthetic qualities.

The purpose of praxis is self-realization and satisfaction of human needs, which is therefore the apex of praxis, the ultimate quality of welfare.¹

One could say that the primary point in the Markovic presentation is actually that he has distilled from the writings of Marx the end results of a development Marx saw as necessary. The essential conception here is the development of man's ability to fulfill himself, free from all the restrictions of oppressive social relations, relations no more appropriate in the stage of development presently existing. And the qualities which Markovic mentions as belonging to »ideal praxis« are essentially the qualities of man's free development.

This presentation is corroborated by Genrih Volkov (no year) who, in his book *Robot or Man*, has analyzed in depth the conception of welfare, especially social welfare. He starts from the concept of social richness which we could translate as social welfare. This, according to Volkov, was expressed by Marx in the following way: »Really, if we throw away the restricted bourgeois form, what else is richness but the universality of individual needs, abilities, consumption, and productive forces born by universal exchange? What else is richness but the completely developed power of man towards the natural forces, that is, towards both so-called Nature as towards his own inner nature. What else is richness but the expression of man's creative abilities without any other preconditions except previous historical development, . . . when man does not restrict himself as a whole, when he does not try to stay in some final, stable state, but lives in an environment of constant change?«

Social welfare can therefore be seen to be the productive capacity of men, as man's creation of himself as a whole: the universality of individual needs, abilities, consumption, and productive forces.

¹ This Markovician conception of social welfare as praxis is not generally accepted among Marxist theorists. In the symposium where it was presented, criticism was especially directed toward Markovic's distinction between ideal, negative and neutral concepts. It is apparent that this distinction does not hold water: and especially for the Marxists it is a very non-Marxist piece of analysis. But still Markovic has caught some of the essential qualities of the Marxist conception of good life, or life in a Communist society.

According to Marx, welfare is an absolute change in man. How is this welfare then concretely expressed? It is born in the upheaval (transcendence) of work into free time. As the central category in the capitalist society is work, the central category in which work is transformed in Communist society is free time (Volkov (no year): 151). The measure of welfare is free time. According to Marx: »The measure of a truly rich society is free time, because it gives freedom of movement for the individual, his abilities and gifts.» See also Mandel (1968: 679). It should be emphasized again that in historical materialism, this does not represent an independent conclusion nor free idea, but follows strictly from the theory of surplus value. The law of free time is, in a sense, the dialectical negation of the Law of Value (see Volkov (no year): 154—160). It is therefore wrong to claim, as Markovic does, that praxis — or welfare — is an ideal concept. On the contrary it must be seen as a necessary result of objective historical developments (see also Marx 1970: 593—600).

Free time is the fundamental category of production in Communism, understood as man's creative, selfconditioned activity.

The concept of welfare in Marxism is obviously strictly related to the relations of production and to the stage of development of productive forces in a given society. Ultimate social welfare is only seen in connection with Communist society. There can be no general social welfare in this sense in a capitalist society. In fact, according to Marx, the proletariat in a capitalist society is even deprived of actual needs and not only of their realization. It follows then, that there can be no social welfare in any human sense under capitalism (see Marx 1964).

Although capitalism is able to fulfill most of man's basic requirements, it has become a fetter to the continuous growth of needs, and to the development of man. This is essentially what some modern critics (both liberal and Marxist) have also remarked (see Galbraith 1958: 128—130, Baran 1968, Baran—Sweezy 1967, Gorz 1971: 84—86, Marcuse 1969, Titmuss 1969 and Roos 1972a). Therefore, the analysis of social welfare under capitalism necessitates an investigation of the essential qualities of the nature of possible welfare. This can only occur by means of the concept of alienation. As I shall not be interested at this writing in such a concrete analysis of the true nature of welfare under capitalism, I will touch the problem of alienation only in passing.

What are, then, the essential conclusions that can be derived from the Marxist analysis of welfare? It seems that in the true spirit of Marx, we would not be interested in the measurement of welfare in particular, but in analysing social relations as a whole and their importance to the possibilities for the free development of man. That is, the primary concern of Marxist research would be analyzing the creation of such political con-

ditions which would enable man to pursue »welfare-activities», or »ideal praxis»; and of course not merely analyzing, but also changing social conditions in such a direction (engaging in »revolutionary praxis») that this becomes possible.¹

4.4. *Welfare and Alienation*

The concept of alienation in Marx has recently been analyzed by many researchers (e.g., Israel 1971 and Mézaros 1970). This concept is theoretically very interesting and has many connections with the concept of welfare. What Israel says about alienation is precisely the same as what I have argued about welfare.² It would be therefore easy to claim that alienation is the direct counterpart — or mirror image — of welfare, or more bluntly, at the opposite end of the scale (see for instance Narski 1970: 405 where he suggests that »value» and alienation be contrasted). And because alienation is a much more thoroughly analyzed concept, it would be more practical to make it the starting point in the analysis. Furthermore, alienation has, in fact, been analyzed *in relation* with social processes very effectively already by Marx and many others after him (see for instance Gorz 1971: 77, Gintis 1969).

In general, it might prove to be interesting to seek an opposite of welfare, for which alienation is the most attention-demanding candidate.³

Indeed, one should probably find it much easier to describe this than welfare itself, as the characteristics of a life not worth living should be

¹ There are some interesting connections between this and so-called »constitutionalism» (see chapter 7). However, the differences are also obvious. The constitutionalist argument is very superficial, being only interested in fixing »rules» of conduct for a certain period. But more about this later.

² »I have tried to show in my analysis that the concept of 'alienation', as used by Marx, presupposes certain theories of man and his nature, theories of the society and its structure, and finally conceptions of the relationship between man and society» (Israel 1971: 308; my translation).

It is on these grounds that Israel (*ibid.*: 318) suggests the giving up of a theory of alienation in favor of a theory of reification. It seems that this implies a rather mechanical view of the nature of any theory construction. The three requirements are by no means independent and to be surrendered at will, but inseparably interconnected: a theory of man and a theory of society is in the final Marxist analysis one and the same, and thus includes conceptions about the relationships between man and society.

³ Baratz and Grigsby (1972: 123) have suggested a conceptualization of poverty, in connection with a description of the dimensions of poverty which comes very close to a definition of »antiwelfare». It seems obvious that measurement problems in this connection would not be so severe as otherwise.

much fewer and less varied. One important point is that while welfare would require a rather well-balanced fulfillment of many aspects of the good life, the opposite of welfare can be characterized by the lack of any necessary ingredient of welfare. For example hunger implies deficient welfare, but having enough to eat does not yet guarantee it (see also Ahmavaara 1970 on this point). But it is possible to take a more general view of the nature of »antiwelfare«.

According to Markovic, »Alienated (abstract) labour is the activity in the process of which man fails to be what he is, i.e., fails to actualize his potential capacities and to satisfy his basic needs» (Markovic 1971: 6). This type of alienation has, according to Markovic, four dimensions in the Marxist sense:

1. one loses control over produced commodities;
2. in his struggle for more property and power man becomes estranged from his fellow man;
3. instead of employing his capacities in creative, stimulating work, man becomes the appendage of a machine, a living tool, a mere object; and
4. as no opportunity has been offered him to fulfil his potential abilities, to develop and satisfy various higher-level needs, his whole life remains, poor, one-sided, animal-like, his existence remains far below the real possibilities of his being». (See also Struik in Marx 1964).

This is certainly a good description of the opposite of welfare. The question is, must we choose between welfare and antiwelfare as points of view, and what are the differences? It should be obvious that if our analysis is conducted from the point of view of welfare, different aspects would be pertinent than when we look at antiwelfare (for instance, alienation). With welfare, it is never enough to say: this and this effects welfare. Because of the multidimensionality of the concept there are always factors that must be revealed. With antiwelfare on the other hand, it is enough to assert that for some basic ingredients, this implies antiwelfare, whatever the state of affairs otherwise. Therefore, we have, in essence, many different sorts of antiwelfare — hunger, illness, being without shelter — which may or may not coincide in the same person or group. (In general, of course, they do coincide.) But with welfare it is never sufficient to say: this man is well-fed: therefore his state is one of welfare. Some have considered this an advantage (see for instance Ahmavaara 1970, Johansson 1970: 29–30). But from the point of view of welfare analysis it implies that we cannot do without some conceptions of welfare.

It is true that alienation in this modern Marxist sense is not as simple as the idea of antiwelfare I have presented above. It is also understood as a total concept; and the isolation of alienation from work, family, group etc. is not considered very fruitful (Israel 1971). But this makes the analy-

sis of alienation a complementary, not an alternative approach. And this complementary analysis I shall not take up here.

I do, however, foresee a theory of the level of antiwelfare which is based on alienation, and which boils down to conceptualizations similar to that of the level of living. There is ample interest to this direction already.

4.5. *Social Welfare and the Principles of the »Good Society«*

Above, I mentioned that the principles of the good society, such as justice, equality, freedom, benevolence, etc., are related intimately with the conception of welfare.¹ This relationship has been obscured by the fact that most analysts of these principles have completely disregarded its existence. This has been largely dependent upon their general aptitude to consider the principle at hand relatively broadly, so that their inquiry, in fact, covers much of the ground of welfare analysis. This applies especially well to the analysis of social justice and equality, but also to that of freedom. That the concept at hand has so much to say overshadowed related concepts so that they have remained unnoticed.

On the other hand, there exists an obvious and self-made compartmentalization between welfare theorists and especially the theorists of justice (one exception is Nicholas Rescher, who has written books both on justice and on welfare (1966, 1969) and compared both; see Rescher 1966: 29–40).

Many writers have also suggested that all these principles should be treated separately (see Berlin 1967: 144, Barry 1965: 43, Frankena 1962: 3). This is very unfortunate. It would be very difficult to think of social welfare without justice, equality, freedom, or in fact any of the fundamental ethical principles of practical social policy. Up to a point, on the other hand, it is conceivable that justice, or equality, or freedom would prevail without social welfare. This would suggest that welfare should be the overlying principle, but I shall analyze this question further.

In the classical tradition, the unity of all ethical principles was taken for granted. For instance, Mill considered justice as a part of welfare (Mill 1965: chapters 3 and 4). This was also accepted by Dalton (1925: 27, 29)

¹ The principles of the good society can also be understood as rights. Man has a 'right' to equality, justice, freedom, etc. I shall not, however, dwell upon this aspect of the problem, nor look at welfare as a right. About the nature of rights, see Marx' *Zur Judenfrage*, (On The Jewish Question) which contains some very interesting points, especially concerning whether the concept of human rights implies a conception of man as an isolated monad. Thus the human rights concept does not lead to unification of men, but to their separation. In this sense the concept of right is contrary to that of social welfare where the relationships of men are central (see also Eräsaari 1970).

where he especially noted that the differences between justice and welfare disappear if we sufficiently analyze their relationships.

But such a distinction was introduced in order to claim that welfare (or happiness, or utility in Mill) was unidimensional: that there was one single principle into which all others could be subsumed. As should be clear from the analysis above, this is not my position. I consider welfare to be a multidimensional concept, *covering*, among others, the above-mentioned principles. But what does this coverage actually mean?

A principle of a 'good society' implies that it is an ideal, a standard by which societies could be judged and social policy conducted. As has been repeatedly emphasized, it is not in this way that I am interested in welfare. I do not consider it possible to create standards (or 'canons' as Rescher calls them) of a good society independent of the society itself, independent of the considerations of what that society can achieve, etc. (see Engels' critique 1958: 550—552).

This is also expressed in the fact that it is never enough to know the principle, i.e., the ideal position, in order to determine social policy. As Rescher remarks, one needs to know more than the ideal distribution in order to determine the just distribution. Therefore, he suggests as the correct criterion a two-dimensional principle, with dimensions both for absolute idealization and universal evaluation (Rescher 1966: 7). Marxism has often been accused of merely containing ideals with no means of realizing them; see for instance Little (1958), who speaks of »socialist economics» as the economics of an ideal society. The second dimension then, is actually the link between the existing reality and the professed ideal.

In these terms, I shall start from the position that social welfare is the overlaying »ideal» for all these other principles. Even though all of these principles have independent characteristics — characteristics that enable us to speak of justice, instead of welfare — there is a »total» conception of an ideal society which subsumes all the principles of a good society: in this sense a just, free, or equal society are all identical with a »welfare society» (not to be confused with the welfare state). In sub-ideal positions, different emphasis on the different principles (or actually components of welfare) makes them differ. But this represents nothing else but differences in the nature and quality of welfare.

In the following I shall consider freedom, justice and equality. Benevolence, fraternity, etc. are so intimately connected with welfare that it is impossible to speak about them without seeming repetitious.

Usually aggregative and distributive principles are distinguished (Barry 1965: 43—44), which seems to act to separate the principles of welfare and justice, as justice would be a distributive principle and welfare an aggregative principle. By an aggregative principle we mean a principle

which is only concerned with the aggregate quantities: the total welfare of the people, and so on. But it is certainly wrong to consider welfare as a simple aggregative principle. Considerations of welfare must include comparisons of all kinds. Therefore this separation breaks down. (Note that these are also absolute distributive principles, which are only simpler and do not entail comparison in distribution.)

4.5.1. Freedom

Freedom, or more precisely *human* freedom, has been suggested as one component of the level of living concept. Freedom must be implicitly considered, therefore, as a part of welfare. This assertion is probably rather widely accepted: freedom must constitute an integral part of welfare; thus there can be no welfare in the full sense of the term without freedom. This still leaves the concrete relations between freedom and welfare rather undefined, especially considering the amorphous nature of the content of the concept of freedom. There exist very restricted views on what freedom means (see, for example, the United Nations definition of the level-of-living concept (1964)), but also such views that tend to see it as almost identical with welfare.

In a well-known paper, Berlin (1967) divides the concept of freedom into two categories: negative and positive freedom. Negative freedom implies that a person is free from something, he is not hindered from doing something (1967: 142). This concept could be called the »bourgeois» way of seeing things (see Engels 1951: 119). The relationship of such a conception of freedom to welfare is rather trivial; it is clear that to a certain extent, such freedom is a necessary prerequisite of welfare but that it does not constitute a part of welfare in itself. Although many economists do actually classify, for example, freedom of choice — which is a clear type of negative freedom — as a fundamental part of welfare, this is only partly so. It is not the fact that a person is free to choose that implies well-being: he may be free to choose from two equally odious alternatives (see Baran 1968: xii, who gives some good examples of this type of freedom).

But the second category, positive freedom is much more enlightening. This concept has elicited much more interest from philosophers and welfare theorists. According to Berlin, it means man's ability to control himself and his surroundings. »I wish to be a subject, not an object, to be moved by reasons, by conscious purposes which are my own, not by causes which affect me, as it were, from outside» (Berlin 1967: 149). Barry (1965: 135), for example, adheres to this type of freedom when he defines freedom as an ability to satisfy one's wants. This was also supported by Bertrand

Russell, according to Barry. But even more obvious is that this concept is exactly the Marxist way of defining freedom. Engels' famous passage (1951: 121) gives to freedom precisely this content: man's ability to rule himself and nature in order to satisfy his needs (see also Mandel 1968: 683—685). In this sense, as Berlin notes, »... the conception of freedom directly derives from the view that is taken of what constitutes a self, a person, a man» (Berlin 1967: 152). This is just what was noted about the conception of welfare. In this form, therefore, it is easily noted that the concept of welfare and positive freedom are very closely related to one another.

What does this mean with regard to the concept of welfare? It is obvious that an important component of welfare is man's ability to influence nature and his own actions. That is, welfare must be understood in a much more active sense than has been customarily the case. It is not only the passive satisfaction of needs, but the active creation and rationalization of needs: the production of means to satisfy needs. Although I must reject the view that welfare and freedom are equal, it would be acceptable to say that most of what is considered within the boundaries of the positive freedom concept also applies to social welfare. I would actually say that it is only the appellative — welfare — that more accurately conveys its content, which makes it more convenient to use the name »welfare» instead of »freedom».

4.5.2. Justice and Equality

In justice, we find welfare's most »formidable» contender as the major principle according to which societies should be organized. One often hears claims that if a society is not just (and free), it makes no difference whether its people are living in abundance or not. In fact, many prefer to think of justice as completely independent from welfare (Frankena 1962: 19), i.e., that it is possible to form criteria for justice independent of considerations of welfare.

However, if we look at the definitions of justice (which are innumerable), we soon see that justice independent of welfare is an impossibility. For instance, Frankena defines a just society as »one which respects the good lives of its members and respects them equally. A just society must therefore promote equality: it may ignore certain differences and similarities but must consider others: and it must avoid unnecessary injury, interference or impoverishment — *all without reference to beneficence or general utility*» (Frankena 1962: 19). Frankena would obviously divide the considerations of welfare-affecting factors into those which are based on

justice and those which have their basis in welfare. This seems to me an impossible distinction, although not without some merit. According to the defenders of this thesis, welfare may conflict with justice in many cases (see Rescher 1966: 43, 120). Rescher claims that we can equally as well assert that welfare follows from justice than vice versa, and that justice may be considered as the fundamental criterion: only under conditions of justice may something which increases welfare be realized. This might be called a conservative view: this can be used for instance to oppose the increase of welfare through expropriation of property: because it is not »just» to take from someone what he owns, we should not undertake such action.¹ But in more general terms, this is of course a rather pedestrian dispute. Whether we consider justice or welfare as central depends mainly on matters of definition. As Rescher points out, we may define justice in restricted way, as merely »fairness and equity» or then, we may define it in a broad sense, as justice which includes considerations of common good (Rescher 1966: 91). Such a definition of justice is essentially a definition of welfare. Thus our quarrel would solely involve a debate about which one of these terms best expresses the general sense of a good society. I am of the opinion that it is welfare; some think that it is justice.

However, considerations of justice and equality do entail some interesting aspects which have remained outside the bounds of the forgoing analysis.

If justice and welfare are inseparable in any broad sense of both concepts, then justice and equality must in their general usage be similarly inseparable. For instance, for Benn and Peters (1965: chapter 5) the concept of justice cannot exist divorced from a concept of equality, and they have little to remark about justice over and above equality. For Frankena, there are some considerations of justice which are not related to considerations of equality. His conception of justice can be seen as the equal treatment of all persons, »except as inequality is required by relevant — that is just-making — considerations or principles» (Frankena 1962: 13, see also 10—12). Thus, it follows that equality is the fundamental property of any just settlement of affairs, but that equality cannot be the sole consideration. On the other hand, it can be noted that the consideration of justice as a working principle entails a fundamentally congruent appraisal as to whether a simple principle of equality (such as arithmetic equality) can be sufficient. Therefore, considerations of justice and equality

¹ Rescher formulates here a Reformer's Paradox: »Given an imperfect existing initial distribution, any redistribution in the interests of arriving, from the standpoint of justice, at a superior distribution, runs headlong into the pattern of existing claims that cannot — in the interests of the very justice that provides the rationale for the entire enterprise — be brushed aside as an irrelevant obstacle.» (Rescher 1966: 120).

are hopelessly (or hopefully) intertwined, at least in the modern sense of justice.

According to Rescher (1966: 119), the most important fault of the welfare principle is its failure to answer to the problem of claims: in other words, whether two persons are really entitled to equivalent welfare. (I shall return to this in considering distributive criteria.) This is however, the fault of *principles* in general: in a society composed of active individuals, to speak about principles according to which distribution should happen is simply erroneous: as Rescher himself notes, human actions are essentially claim-modifying (Rescher 1966: 55—56). If one considers welfare itself as an activity, as I have done in the previous sections, this difference between welfare and claims disappears.

The principles of justice and equality have usually been connected with *distribution* (of goods, services, etc.) as it is through distribution that the principles of justice are thought to be observable (see, for instance, Benn—Peters 1965: 124, 132—133; Frankena 1962: 10; Vlastos 1962). This was not always the case: earlier, questions of political and legal equality were in the foreground. Only in the eighteenth century did the idea of economic equality, of total equality, including political, social and economic aspects, rise to the surface (Social policy and the distribution of income in the nation 1969: 26—27). The originator of this idea is considered to be Babeuf. Recently we have experienced a revival of the older ideas of political and legal justice (see especially Rawls 1961; also chapter 7 herein). Nonetheless, a holistic idea of justice is still dominant (although Runciman complains that the distinctions between economic, political and social justice are not observed, and all the inclusive aspects are not noted (1966: 37)). One remnant of incomplete approach is the idea of equal opportunity, so dominant in American discussion. Here distribution is not pertinent, rather the original starting points of individuals should be equal when the distributive process starts (see Benn—Peters 1965: 137—138 for a critique of this principle).

Accepting the idea that justice and distribution are connected, the practice has been to seek for some principles according to which to distribute. According to Benn and Peters (1965: 126) equal distribution requires that there be some basic human characteristic, such as human nature or needs, on the basis of which this «equal distribution» could be accomplished. Some writers have proposed that considerations of distribution are all based on the principle *suum cuique tribuens* (to each his own), but as Rescher (1966: 6) notes, this principle is inadequate if we must divide something which is not yet owned by anybody. It is therefore wrong to consider ownership as the basic requirement for justice and see justice always connected with ownership. There are various other criteria (or

canons, see above) according to which distribution should be made (see Rescher 1966: 73, Benn—Peters 1965: 157, Vlastos 1962: 35).

The list by Rescher is the most comprehensive, although not particularly discriminative nor exclusive:

People should be treated either:

1. as equals,
2. according to their needs,
3. according to their ability or merit or achievements,
4. according to their efforts and sacrifices,
5. according to their actual productive contribution,
6. according to the requirements of common good, or the public interest, or some other like principle, or
7. according to an evolution of their socially useful services in terms of their scarcity (relative to supply and demand).

Excluding the first criterion which implies the obviously arithmetic consideration of all people and therefore demands no more involved discussion, all others could be essentially divided into two groups: need-based criteria and merit- (or desert-)based criteria, with merit seen in different ways (Benn and Peters (1965: 157) add one more: that according to property ownership, but this is only a form of merit). The second and sixth of Rescher's canons could be considered need-based criteria, with the latter entailing considerations of collective needs.

It has been conventional procedure after presenting such a list to eliminate the criteria one by one, utilizing examples which demonstrate that each criterion is not adequate. It should also be obvious to everybody that these criteria, presented as parallel, independent criteria, cannot be adequate.

All merit-type distributive criteria are actually at a different level than need-type criteria. Distribution according to merit necessarily implies a standard, by which a given act or property engenders merit. This refers to precisely some criterion related to the welfare, or needs of people, should we be concerned with justice. Therefore merit-type criteria cannot exist as independent criteria. This means, in essence, that we have only one criterion, that of needs, left to analyze. (Of course it is possible to relate merit to service done to a dictator, or to the ruling class, — which are of course real criteria — but here we are concerned with justice.)¹

Some writers have also made their own suggestions for new and better criteria, which are generally composites of other criteria — such as the Rescher suggestion for a canon of claims (Rescher 1966: 81—83), which

¹ The reader should be aware that these problems are here considered rather briefly, and that there are many complications inherent in distributive principles which I have not mentioned.

is a composite of all the other criteria, although not very satisfactory, as it does not say what are the justified claims that men may have: another problem for a distributive criterion — or then is unrelated to them, as the Vlastos criterion that distribution be according to the agreements men have made (Vlastos 1962: 35). This criterion is related to the constitutionalist idea, or the justice-as-fairness principle, which I will analyze in chapter 7.

I shall, however, concentrate on the criterion of needs, as it is nearest to our problem of welfare. All the researchers mentioned here have been unanimous in noting that the criterion of need is absolutely inadequate as a distributive criterion. This is of course true, if it is considered abstractly, independent of the other criteria. The consideration of need, irrespective of existing objective conditions is of course impossible.¹

Depending on conditions prevailing in the society, certain distributive criteria are more important than others, nonetheless with ultimate regard to the criterion of need. The function of society is to fulfill the needs of its members (or better, to provide a frame for maximum fulfillment), and this is possible only through material production and services which then entail other distributive criteria, all, in the final analysis, depending on the criterion of needs.

Rescher and Benn—Peters make special note of the point that the criterion of need, is a »socialist» or a »Marxist» canon (Rescher 1966: 75, Benn—Peters 1965: 162—163). It was presented by the utopian socialists Babeuf and Blanqui and then accepted as a Marxist principle. (Social Policy and the distribution of income . . . 1969: 30, remarks that Robespierre was also in support of this criterion.)

According to the precepts of Marxism, there is no eternal standard of justice, rather justice is contingent upon the level of development of the society and of the conceptions of society. (See for instance Marx—Engels 1958: 553, Marx—Engels 1959: 14). Especially Engels criticizes the ideas of the Proudhon school, who thought that there was a principle of justice, according to which the functioning of societies could be judged (Marx—Engels 1958: 550—552). It must therefore be emphasized that the so-called »Marxist» canon of needs is definitely not Marxist. It is true that the famous dictum »from each according to his ability, to each according to his needs» was suggested by Marx to describe the Communist stage of development, but this cannot be considered as a distributive maxim. If everyone is assumed to *take* according to his needs, there would be no 'distribution' in the precise sense of the word. And no distribution accord-

¹ Rescher admits this (1966: 105), but proceeds to consider the criteria as independent and abstract principles regardless.

ing to needs would be possible in earlier stages of societal development.¹ Accusations about the inadequacy of the »Marxist canon of needs» were rendered foundationless already when Marx himself remarked that justice cannot occur beyond the level of economic and cultural development of a given society, and that in socialist society, many other criteria should be observed in order to allow for justice. In actuality Marx and Engels considered the idea of canons of justice meaningless. It is only due to a complete ignorance of the basic principles of historical materialism that one could present a separate »Marxist» canon of justice, valid in all circumstances and therefore to be criticized also in all circumstances.

Marx espoused the 'modern' idea that justice must treat people differently to ensure equality (Benn—Peter 1965: 126—128, Barry 1965: 120). Were people given complete equality, they would be in practice unequal, because they are different. Justice cannot be use of a static yardstick for all individuals, but the employment of different justice for different people. In other words, Marx emphasized the principles of relative equality. But for Marx and Engels justice was not a principle, but a property of society, and particularly a property of a classless society. The content of a socialist requirement of equality is the elimination of classes, says Engels (1951: 113). Anything that goes beyond this leads to absurdity. This assertion could be perhaps claimed to be an equality of opportunity thesis in an other form, but obviously this is not so. For the elimination of classes is fundamentally different than solely providing or completely equal opportunity. The former of course, involves constant re-evaluation for preventing the creation of classes.

For Marx and Engels, then, justice and equality were one and the same thing, but the content of equality was extremely complicated and a great deal more than a simple principle of absolute equality.²

But according to a Marxist standpoint, to approach justice as distributive justice is fallacious. Distribution has always been, as Marx notes, only a consequence of the distribution of the requirements of production, which is actually embodied in the nature of the mode of production (see Marx—Engels 1959: 17, Marx 1970). Therefore, to analyze distribution as independent from production is wrong, and thus is the whole approach of distributive criteria. Marx divides the totality of production into three

¹ See the »Critique of the Gotha programme» (Marx—Engels 1958), also Social policy and the distribution of income (1969: 37—38); also Lenin (1971: 67): »There will be no need for society, in distributing products, to regulate the quantity to be received by each; each will take freely according to his needs.»

² Lenin (1971: 63—64). See also Della Volpe (1970), who compares the views of Marx and Engels with those of Rousseau, who, according to Volpe, was the first to acknowledge the impossibility of arithmetic equality.

main groups according to its use: the economically necessary part which is needed for replacement and new production; nonindividual consumption: administrative expenses, collective consumption to satisfy collective needs, such as health and education; and individual consumption (Marx 1959: 14—15). The sectors available for distribution in the sense meant above, are clearly those of collective and individual consumption. The Marxist »criterion« of distribution demands that collective consumption (i.e., with the exception of administrative expenses) be expanded and that individual consumption diminish. This would mean simultaneously the elimination of commodity production, which is perhaps a more accurate expression of the entire process.

But it is clear that any one distributive principle in itself is inadequate to regulate all these aspects of consumption. In other words the whole idea of distribution is wrong, as it is equally necessary to consider the productive requirements and the existing mode of production.

4.6. *Welfare as a Goal*

It is rather obvious that what men want themselves can largely be described as welfare. That is to say, the goals of men, each considered separately »are« welfare. Thus it can be said, if we deny that societies can have autonomous goals — or goals which go against men's interests — that welfare should be the primary goal of society. And many seem to take it as self-evident that welfare indeed is the goal of any society, or at least of the Western capitalist societies (see for instance Noponen 1971: 1).

It should be noted, however, that depending upon our definition, it may be impossible to see welfare as an end. For instance, von Wright (1963a: 91) notes that an end of some action must necessarily be a state of affairs; welfare cannot be an end, because it is not a state of affairs. In this context, however, I am referring to the commonsense conception of welfare as a state of affairs (see above, p. 42). Von Wright also interestingly notes (1963a: 89) that the claim that every end-directed act is ultimately undertaken for the sake of the acting agent's welfare »has, to the best of my knowledge, never been defended«. Yet this depends on the fact that von Wright separates pleasure, happiness and welfare.

Thus what he is essentially arguing is that a really comprehensive conception of welfare has never figured in the analysis of welfare, which is certainly true.

Officially, most states have set out to provide for their citizens some sort of welfare (see International Survey of Programmes of Social Development 1955: 3—4. Up until 1955, 45 countries had changed their con-

stitutions in a way which included obligations about social rights and welfare). Also the recent Declaration of Social Progress and Development (1969) by the United Nations asserts in its 8th paragraph that »it is the primary duty and absolute responsibility of every government to secure the welfare and social progress of each citizen». And proceeds to specify what it means by this welfare (see paragraph 10).

Nicholas Rescher has claimed that at least the following values exist in Western societies:

1. the survival of the society,
2. the welfare of the society,
3. the progress of the society, and
4. the reality adjustment of the society (1969: 119).

More specifically, Philip Hauser, in his list of the aims of American society presents goals which collectively constitute a rather comprehensive definition of social welfare (Hauser 1968: 449—453).

Thus it can be seen that in the capitalist world and in the United Nations, social goals are seen as closely related to welfare. This is even more true of the socialist camp, where starting from Marx and Engels, the goals of society (or the fundamental law of socialism) is seen as the full welfare and development of the members of society.¹

But can we infer from this that there is, in actual fact, a concrete aim of welfare in modern societies to which all other aims are subordinated? Certainly not. Already the fact that nobody knows exactly what welfare is should substantiate this. But even this ambiguity is largely irrelevant to the problem of whether there would be attempts to realize the welfare of the people, were it known what such a concept actually consists of.²

To this latter question, the answer is rather certainly negative, at least with regard to the capitalist countries.

Marx (1970c: 851) has expressed this with respect to capitalism, very succinctly: »It is a false abstraction to regard a nation, whose mode of production is based upon value, and furthermore is capitalistically organ-

¹ See e.g., Smirnov (1971: 19), Narski (1970: 405, 396); The Report of the Central Committee of the CPSU to the 24th Congress of the CPSU: »The fundamental aim of the five-year plan is to secure the significant rise in the material and cultural living conditions of the people through the rapid pace of development of socialist production, the increase in its efficiency . . . emphasizing that the rise in the welfare of the people is the highest aim of the policy of the CPSU . . .» (p. 7).

² Note that, for instance, Zaubermann (1967: 249—250) claims that in the Soviet Union, the true aim is simply the increase of the gross national product, of which it is well known that it is not conceptually related to welfare. But this is certainly erroneous as we shall see. It should also be noted that the concept of GNP has quite another meaning under rational production than under uncontrolled production.

ized, as an aggregate body working merely for the satisfaction of national wants.»

Adolph Lowe (1969: 35—36), has pointed out that the only available goals in capitalist societies are the full employment of resources and balanced growth, neither of which are necessarily related to welfare. Although I cannot quite agree with this, as capitalist society obviously has defined for itself other tasks and thus is obviously striving to achieve other ends as well, it is true that complete well-being as an end does not seem to be possible.

Thus the problem of welfare as a goal has many dimensions. First is the question whether, in a given society, it is at all possible to have welfare as a collective goal. Then there is the question of what kind of welfare societies should be striving for and finally the question of what factors affect this welfare. I shall be concentrating here on the last two questions, which are especially relevant to the conception of welfare. I shall not try to attempt to answer the first question, which is the most difficult, but which also can best be proved true or untrue by life itself.

5. Needs

5.1. *The Importance of Needs*

In the previous chapter we noted that needs could not be used as a distributive criterion alone (and questioned the idea of distributive criteria). Needs are, however, fundamental to social policy. The reason *par excellence* for the existence of a society is that it should fulfill the needs of its members. Marx and Engels for example, see needs as the historical reason for the creation of societies (see 1970: 48—49 and earlier). In their view as well, the main goal of a classless society would be needs fulfillment, as discussed above. (More exactly, the fulfillment of normal needs, by which they meant satisfaction of all »sensible» needs regulated by the level of development of society, and in the final stage, free from even this regulation; see Rumjantsev 1969: 10—11).

But not every society is able to fulfill the needs of its members. Although it may have historically developed, and assumed a specific form in response to certain social needs, this same form may later become a fetter to the fulfillment of the same need, or of other needs (see Marx—Engels 1970: 87). From this it follows that we cannot infer that a society always fulfills the needs of its members, only that it should do so in order to have a function, that is, a reason to exist in its specific historical form. As Kiviniemi notes (1971: 1) there are quite a few comments, more or less ritualistic

in nature, to this effect (see also Gross 1966: 214). On the other hand many authors have sought to de-emphasize the importance of needs for social policy (see p. 63).

Etzioni (1968: 623) has pointed out that the use of the concept of needs enables us to speak of »deviant» societies, — i.e., societies which do not fulfill men's needs — thus allowing us to criticize existing societies in terms of their degree of needs fulfillment, rather than solely the members of society for not adapting to the social norm. But it should not be forgotten that not only must societies adapt to men's needs, but that in reality the source of the creation and moulding of men's needs lies in societal processes. Thus we cannot speak of unchanging needs, as an outside criteria, but must consider much more complicated processes. Therefore the Etzioni suggestion is essentially a type of »needs-as-a-principle» solution, not acceptable for reasons delineated above.

5.2. The Theories of Needs

There are innumerable 'theories' or classifications of needs and there is no point in trying to mention more than but a few of them.

I will here employ the following strategy. First, I shall propose a preliminary definition of need, a definition which is mainly formulated with a view to the construction of this monograph and the role of needs in this analysis. The definition of needs is unquestionably contingent on how one conceives of the role of need in social policy, or in general. In what follows, I shall discriminate three different roles for need: as a principle, as a property of the individual, or as a regulating variable. In each of these, the concept of need is seen somewhat differently.

The primary objective here is to relate needs and welfare. Needs should »explain» welfare; i.e., if we can demonstrate the existence of a need, then we may assert that the fulfillment of this need is a necessity should we wish to affect welfare positively. But it is obvious that this is not enough. We can too easily lapse into circular reasoning: what is needed is welfare; that which is welfare is also needed (see for instance Zwanikken 1963: 38, who defines need as lack of welfare). Therefore, it follows that we must find an independent foundation for needs.

One important point to which I shall return: by linking needs and welfare we can distinguish the difference between *need* and *want*, which is very important.

One possible solution would be to show that need is the link between welfare and social action. This type of conception implies a definition of the

following kind: Need is what determines and is determined by human activity. It determines welfare in that if some need is fulfilled, welfare is positively affected. (We are not now concerned with the subject of the need, i.e., who experiences the need.) Of course, it is possible make the connection to the reverse direction: that which is welfare determines what is needed. (This is suggested in Kaufman 1971.) It is plausible to think that need structure is to some extent determined by the particular idea of a good life that the subject of need holds. But what is the idea of a good life? Nothing else but an expectation which is determined by one's needs. It is obvious that this is a circle which leads us nowhere. The solution to this problem is of course found in its historical aspects. Needs are historically determined, as is welfare.

This can also be expressed by saying that needs have a *dual nature*, a duality of need. They express both man's dependence upon social and natural conditions, as well as his strivings to develop himself and society. We could here speak — in Marxist terms — of the dialectics between the objective conditions and the subjective factor. Needs are embodied in the objective conditions which regulate man's behavior, but they are also part of the subjective factor — man himself who actively attempts to control and regulate his surroundings.

In order to solve these problems we need an applicable theory of needs, which would enable us to employ them operationally. This, however, is not yet possible. We are not in a position to investigate men's needs nor the needs of the collectivities he lives in objectively and scientifically. And owing to the dual nature of needs it is improbable that we will ever be able to do so, as the final criterion with respect to needs is man's subjective activity, — the subjective processes of human cognition and awareness.

One extremely important specification is needed here. The object of my analysis is *needs* as distinguished from *wants*. This is a well-known distinction upon which many argumentations are based (cf. the famous Barry distinction between want-regarding and ideal-regarding principles; see Barry 1965). Also the problem of 'false consciousness' mentioned briefly above is related to the question of needs *vs.* wants (see Kaufman 1971, Braybrooke 1968, Marcuse 1969, Marshall 1972: 18). By wants I understand anything that men may wish to have (i.e., any kind of desires and preferences). This is precisely what Barry envisages in his conception of want-regarding preferences.

Need, on the other hand, is connected to a more basic idea: to the question of what a human being is, to the ideas of a good life, welfare, and so on. Therefore, needs are more basic, more fundamental than wants. For every need there usually corresponds a want, or should anyway (unless men are unconscious of their needs). But for every want there does not

exist a need nor certainly could there.¹ Needs constitute criteria for the desirability of wants (note that the concept of preferences is associated with wants: what a man wants he prefers, and needs do not enter into the question at all (Braybrooke 1968: 89).

Want is the central concept in welfare economics. In that field however, attention is not addressed to the reasons or justifications for a want, only to whether one exists or not. But from its very definition, it follows that want cannot be associated, except in a summary, random fashion, to welfare: whatever a man wants may or may not be relevant to his welfare. This fact is essential to the ensuing analysis. The analysis in chapters 6 and 7 is based largely on the concept of wants, and constitutes an investigation of the nature of welfare on the basis of wants. The chapters concerning the level of living and social indicators, on the other hand, concentrate on needs.

The distinction between wants and needs is analogous to the above-mentioned distinction between welfare and happiness. Welfare is related to needs and happiness with wants, and the entire utilitarian tradition has been connected with the concepts of happiness and wants; the needs approach, conversely, could be spoken of as a 'Marxist' tradition, although this is not strictly true.

It is well known that some authors (e.g., Rescher 1966, Braybrooke 1968, Barry 1967: 48) have tried to de-emphasize the importance of needs. According to them needs cannot and should not be the central »criteria« on the basis of which social policies are pursued and distribution is effected.

Braybrooke (1968: 90) has developed a curious argument about the danger of needs to social policy: because needs continually expand in the sense that previously momentary activities become transformed into life-long needs, the available space for preferences and wants is diminished. This is undesirable he reasons, because needs are less »democratic«, more »authoritarian« and paternalistic in their relationship to social choice and welfare. (This is also related to the problem of false consciousness analyzed above.) Kaufman (1971: 201) has presented an interesting argument against such claims (through it should be recognized that Kaufman is certainly not the originator of this argument). It is far better, argues Kaufman, to try to determine people's real needs than to submit to »simply satisfying wants that develop at random, as adventitious socializing processes permit and promote«. According to Kaufman, then, wants, being wholly dependent of such social processes and mechanisms, are a much more unreliable

¹ Note also that there can be false needs in the sense that they are not connected with a good life, but there cannot be false wants: that man is conscious of his every want is a tautology, and a want is a want is a want, as Friedman would say.

device than needs, which at least in some way separate the grain from the chaff.

In the previous chapter we noted that needs could not be a distributive principle by themselves but solely a sort of general regulative criterion, a foundation for the whole society, connected with the more general idea of welfare. Diametrically opposite to this, Barry has argued that need *per se* cannot be a justificatory principle, as needs always require some ultimate justification: an answer to the question for what purpose is something needed? Therefore it is not correct, according to Barry, to speak of need as a same sort of principle as, say, merit (Barry 1965: 48–49). Although I agree with Barry that needs cannot constitute a justificatory principle in themselves, and also that we cannot regard need as the same sort of principle as merit, it seems to me that Barry has built his conclusions on an erroneous foundation. Must we not make the same inquiries about merit as about need? Merit is attributed to a deed because it has furthered some cause (see, for instance, Della Volpe 1970: 104). What makes need interesting is precisely its connection with society's ultimate purpose, that of welfare.

The true reason for our rejection of need as a principle is its disregard of the social prerequisites for need-fulfillment. Needs can be fully regarded only when the society has the material, etc., prerequisites for this. Some claim that there will always exist a scarcity of goods and services, and therefore needs will never be fully satisfied, but as it has been pointed out, some societies could already easily fulfill most of the needs of their members with no material difficulties.

To sum up: needs are central for human welfare, for social activities in general. This accounts for the special position of needs for social policy. This does not mean, however, that needs could be used as a justificatory principle for aggregative or distributive purposes. The fulfillment of needs is not solved by manipulating an arbitrary principle but by observing real needs and existing resources and possibilities. Thus it is more relevant to analyze the true nature of needs than to speak of needs as principles.

5.3. *Fundamental Classifications*

There is no generally accepted theory of needs (Kiviniemi 1971: 26) nor does there exist a completely developed Marxist theory of needs, although Marx and Engels and numerous subsequent students have written about needs extensively. There are many different and contradictory classifications of needs, but we lack an analysis of the causes and origins of needs, i.e., their connection to society as well as an analysis of the actual position

of needs in social development. Of course the many existing classifications do imply certain relationships between society and the role of needs.

First, we must distinguish between the need and the subject of the need, i.e., the person — or collectivity who has a need (not necessarily experiences it) — and the object of need — i.e., the object with which the need can be fulfilled. The objects of need are not always material objects: such things as love, knowledge, etc., may also be the objects of need.¹

In the following I shall speak mainly of needs in general, but in some cases it will be necessary to distinguish between the subject and object of need.

There are two fundamental ways to classify needs, namely according to 1) the nature of the need, and 2) the origin of the need. Classifications concerning the nature of the need are those where needs are classified with regard to their fundamentality and to their content (i.e., health, etc.). Classifications according to the origin of the need relate to whether needs are individual, social or biological, etc. But in this analysis it is important to distinguish between questions concerning whether a certain need is necessitated by a biological function of man, or whether the need is actually conditioned and modified by the society: i.e., which is more relevant to the analysis of the need itself. This problem is made still more complicated by the dual nature of needs: we must consider both problems simultaneously.

5.3.1. Basic Needs

The most important distinction with regard to the nature of needs is undoubtedly the discrimination between basic and other needs. By basic needs is meant needs that are, by some criteria, considered necessary human needs. These needs are imperative for people to be able to live and develop themselves. There is some divergency about the nature of basic needs but most would agree that such needs as eating, health, habitation etc., are among the most fundamental. There are also different views of how basic needs are actually contrived, that is, which criteria should be used in analyzing and defining them. Some see them as solely biological in nature, some again as social. This is a controversy we shall have to return to later.

The distinction between basic and other needs has a long history. Pipping claims that it was first presented by Senior (Pipping 1953: 48), yet it has never been completely specified. As Robinson notes, in every society

¹ Finding the objects of need is certainly the fundamental objective of social policy.

there is some notion of distinction between this daily bread and commodities beyond this (Robinson 1971: 25).

One important property of basic needs is that they function as the primary *feedback channels* through which information of the quality of the society is directed. If a certain basic need is not fulfilled, there will certainly result a strong wave of feedback from the affected group (either in the form of death or of some disruptive activity).

In the analysis of basic needs, the fundamental question to be reckoned with is that of what makes a need basic. The question of the nature of a need in itself tells nothing about the causes of the need's basicness. There are many innate and frequent needs which can not be considered basic. Examples of such needs are for instance the need to bite one's fingernails, the eliminability of which is also questionable. But eliminability is a concept that is closely connected with basicness. However, it can hardly be considered a criterion of basicness (see Kiviniemi 1971: 53 for a discussion of these criteria).

The most obvious and common criterion for basicness is that of biological (or physiological) necessity. Ahmavaara has provided the most exhaustive list of biological needs (based on unconditional reflexes), a list which is probably very typical among psychologists:

1. the need for air to breathe and an environment necessary for the functioning of the vital organs,
2. need for food,
3. need for security,
4. need for movement, and
5. the sexual need (Ahmavaara 1970: 134—136).¹

According to Ahmavaara, biological needs are characterized by the following properties:

1. They are inherent and cannot be increased in or decreased by will.
2. Biological needs are activated through repetitive physiological states of deficiency with a definite upper limit.
3. The fulfillment of each biological need is a necessary but not sufficient condition for the biological welfare of the individual (see Ahmavaara 1970: 136).

But as Etzioni (1968: 624) and Benn—Peters (1965: 165—166), for example, point out, biological needs are completely abstracted from society. In themselves they are necessary for a person to survive in any circumstances. However, basicness is certainly a social concept.

There is nothing in the nature of any need that in itself would demand that society satisfy it. A society may well let its members die of malnu-

¹ Jyrki Noponen (1971) has based his analysis of welfare wholly on this classification.

trition, or of exposure, even if it is an affluent society. But even though society would take into consideration most of the basic needs (in the biological survival sense), it is through society that the amount and nature of fulfillment of these needs is determined. Merely from the existence of a biological need we cannot deduce anything about how it is fulfilled in a given society.

However, it is certainly true that men have such needs the fulfillment of which is a necessity for simple survival. And precisely these needs must be seen as basic. The functioning of the society is largely centered around the fulfillment of these needs. Therefore, in my view the approach exemplified here by Etzioni and Sklair, who define basicness as something completely different, following entirely from the nature of a given society and being related to the superstructure of this society, is not very fruitful. In my opinion a basic need is one related to the survival of man which causes social activities that in turn create new methods to fulfill basic needs and which also create previously unknown needs, specific to a given social formation.

In the view of Etzioni (1968: 624—626), 'basic human needs' are needs specific to man, human needs are not the 'profane' needs common to man and animal. He suggests the following basic human needs:

1. a need for affection (solidarity, cohesion, love)
2. a need for recognition (self-esteem, achievement, or approval)
3. a need for context (orientation, consistency, synthesis, meaning, or »wholeness«), and
4. repeated gratification, (*ibid.*).

These needs are obviously specific only to small groups and not to societal activity (to the »Gemeinschaft«, not to the »Gesellschaft«). Any of them can be fulfilled in a group of three. Therefore I would propose that these are »needs« basic to the analysis of happiness, but not to the analysis of welfare. Men will not be completely happy unless these »wants« are fulfilled, but they do not regulate nor are they alone significant for the functioning of the society. Any society would function — and some would say well — without the fulfillment of any of these needs.

For our purposes, these needs cannot therefore by any means be basic, only some desirable qualities of social intercourse in small groups.

Thus it follows that the Etzioni description of 'basic human needs' is very far from what we should regularly consider as basic needs. It is true that the normal basic needs are common to both man and animal to some extent, but it is only man who has built an enormous social structure to fulfill these needs; i.e., it is mostly in man that these needs are socialized (see also Marx 1964). Therefore, it is wrong to say, as does Sklair (1970: 191) that »with nutrition, shelter and sleep and nothing else, the

individual could survive as an animal, as a member of the human species, on the basis of the satisfaction of his biological needs». Both Sklair and Etzioni ignore the fact that nutrition and shelter alone imply a fantastic amount of various social activities. Through these social activities new needs are created, the base of these needs being exactly the needs of nutrition and shelter.

Both Sklair and Etzioni speak of basicness in an essentially unhistorical context, as a quality of almost any currently prevalent needs. It is obvious that many definitely non-basic needs can be conceived of as basic by some people in some circumstances. But what is important here is why certain needs come to exist and why they seem to be basic in the sense of necessary (such as a private car, in some instances).

The social quality of basicness is well expressed in the definitions of basic needs as course-of-life needs — needs for living in a certain manner.¹

Course-of-life needs, needs constituting a complex of necessary social activities expresses well the idea of a basic need. They are not simply biological, although we can say that their origin is in the biological processes. But the biological processes never determine the outcome of the need in a given society. And from the social policy point of view, this is what is most important.

The question of how to define the entirety of needs existing in a society and how to classify them, is of course an extremely pertinent question. As previously noted, basic needs are only the beginning, the base of a complete hierarchy of needs created by social activities themselves. One of the most famous attempts to define a hierarchy of needs comprising other than solely basic needs is the Maslow needs hierarchy, which, although rather old, is still widely used (see Maslow 1954: 80—89, Allardt 1972, Niitamo 1971):

1. physiological needs
2. security needs
3. needs for solidarity, context and acceptance
4. need for self-respect and status
5. need for self-realization
6. need to know, learn, discover
7. need for symmetry, beauty, esthetical qualities.

Maslow assumes a hierarchical structure with primary emphasis on physiological and security needs before others. Inspection reveals that

¹ See Benn—Peters (1965: 165—166), Braybrooke (1968: 90); both Braybrooke and Benn—Peters then define another category of needs, called 'adventitious' or 'functional' which refers to a category of needs not always present, depending on the situation.

this classification and, for instance, the Ahmavaara classification scarcely differ. Both include the implicit assumption that needs are autonomous and independent of society. But if one examines the various needs mentioned by Maslow, it is obvious that some of these are clearly inseparable from society, and all of these needs are social in the sense employed here.

The need to know and learn is definitely a need created by social development, by the necessity of the scientific-technological revolution. The need for a certain status is created by the social structure. As previously noted, needs for security and physiological needs can no more be fulfilled by the individual, but only by the society.

And what about the need for self-realization, the need which, according to Marx is the goal of man? It is certainly a fundamental need, if not a basic need. But it contains certain difficulties: what does self-realization mean? From a certain point of view it is equivalent to welfare: i.e., man is well off when he can realize himself. Therefore it is the embodiment of all needs: if we say that a man's needs are fulfilled this is the same as saying that he has realized himself and this again the same as saying: he is well-off, his welfare is absolute.

Therefore we cannot include self-realization into the list of man's needs for the same reasons that we cannot speak of a »need» for welfare, as this would imply speaking of a need of all needs, or of a need to fulfil needs. We merely assume that the fundamental objective of man is his welfare, or self-realization.

On the whole one can say that Maslow's needs hierarchy certainly contains elements that are essential to the understanding of the working of society and man, but these are abstracted out of their context, as when one tries to specify a first impression. It is thus, in many ways astonishing that sociologists have for so long been contended to rely on this list.¹

If one compares the Maslow hierarchy and the Markovic description of ideal praxis (see above, p. 44) we can immediately see that they are somewhat alike. This confirms the assumption that Maslow's catalogue contains something very essential for welfare analysis. But as needs should be the central intermediate variables between social activities and social welfare, their hierarchical listing is obviously inadequate. We must try to get a conception of how these needs are, in reality, related to each other and to social welfare.

¹ Erik Allardt has remarked that it is somewhat unjust to criticize the Maslow classification on these grounds as Maslow developed his classification for clinical practice. What is interesting, however, is that it has gained an immense popularity and has been used much more widely, as well as by Allardt himself.

5.4. *The Marxist Conception of Needs*

The subject of need in historical materialism is one of profound complication. On the other hand, many claim that need is the central concept of Marxism and the tenet of the whole Marxist system; some have made needs as a point of separation between Marxism and other philosophical and ethical systems. This has been disclaimed by Kaufman (1971) who, on the contrary, claims that Marxism and liberalism converge on human needs and that liberalism is essentially interested in needs and not wants. In any case the problem of needs is not the pivotal point of argument for historical materialism in comparison with other philosophical systems.

For instance Etzioni (1968: 623) distinguishes between the Meadian and Parsonsian, and Marxian and Weberian traditions, of which according to Etzioni, the former does not speak of 'basic' needs in the sense of things which are necessary for human existence and the latter of which starts from alienation and basic needs. Here Etzioni in effect claims that needs are autonomous; social, yes, but at the same time independent criteria to determine what is the proper functioning of society.

But Etzioni is mistaken in his claim that his approach is related to the Marxist conception of needs. For Marx did not fall prey to Etzioni's 'easy' solution where certain needs are postulated and a critique of society is thus possible. Marx saw needs as continually changing depending on the level of developing of the society, and on the nature of the needs fulfillment processes. But Marx did not only see that needs are dependent on social development but also that social development was dependent on needs, that needs regulated the definite form of social production (Marx 1963).

Note that the problem here is of the unhistorical nature of Etzioni's analysis. The creation of needs and production are both closely intertwined historical processes and cannot be analyzed independent of each other at a certain moment of history.¹ Thus it seems that the Etzioni solution is an overly simplistic one in relation to the nature of needs. There cannot be a universal standard according to which societies could be compared or assessed. This has definite implications for the concept of welfare and for the use of welfare in social policy.

The study of man and his activities naturally leads to the problem of needs. And it is unquestionably true that the fulfillment of men's needs is the central objective of communist society (see for instance Rumjantsev

¹ I am not saying that there is a complete polarity. Etzioni and other bourgeois sociologists do not claim that needs are not at all related to society, nor that they are totally without historical context: my argument is that although this may be conceded their emphasis is still on the autonomous, unhistorical aspects of needs.

1969: 10—11). But it is not so simple as some would believe: just estimate needs and then determine production, etc. It is a gross oversimplification to treat needs as independent criteria for social policy, and Marxist analysis has especially centered around this problem.

It is obvious that Marx never developed (nor have any subsequent Marxists) a complete theory of needs. But needs played, however, a very central role in the Marxian system. Expressed abstractly, they serve as a link between the material basis of the society, material production, and the totality of human activity, praxis (see for instance Markus 1969: 56, Lefebvre 1968: 48—50). But the nature of the relationship between material production, needs and praxis is not a simple one, and in the following I will attempt to clarify it.

We may begin with the following definition: »Needs are the requirements for the existence and development of social and individual life which are expressed and develop historically primarily in the production and reproduction processes» (Wörterbuch der marxistisch-leninistischen Soziologie 1969: 53). In the needs of man the dependence of man upon his natural and social environments is expressed, according to Marx, in the production of material conditions of existence, in production and reproduction and simultaneously in striving to develop physical and psychological strengths and abilities in the productive activity and social and human relations. The satisfaction and development of needs are connected inseparably with the entirety of the activities of the members of society. They serve in a many-faceted way to provide for the development of personalities with a greater capacity for living a fuller life (Wörterbuch der marxistisch-leninistischen Soziologie 1969: 54).

This definition seems to be the most adequate from the point of view of the ensuing analysis. What separates it from usual definitions is its connection with the processes of production and reproduction. This is what especially interests me here.

In general, the contribution of Marxist analysis to the theory of needs lies especially in the analysis of two processes: the process of social creation of needs and the process of the fulfillment of needs. It is obvious that these two processes are central to a needs theory. Especially the process of the social creation of needs has been subject to much »misunderstanding» (or mispresentations) as we shall see. In both of these processes the concept of praxis plays a very important role: through praxis, needs are being formed but needs also regulate praxis in the form of needs fulfillment.

The major insights gained through this analysis are first, the connection of needs with material production and the understanding of needs as a historical process, and secondly, the association of needs with specific social formations implying that there are no arbitrary needs: there are no

needs without a social »origin«. This latter point is especially relevant as many, in connection with needs, emphasize non-social, biological and other factors.

The item of greatest centrality in the Marxist theory of needs is the emphasis on the *historical nature of needs*. Needs are developed historically, in social action and are in no way innate, constant, nor given by nature. »The various shaping of material life is, of course, in every case dependent on the needs which are already developed, and the production, as well as satisfaction of these needs is an historical process« (Marx—Engels 1970: 87).¹

The only independent, original need, is the »need« for survival (see the famous passage in the *German Ideology* (Marx—Engels 1970: 48).² This implies the fulfillment of such needs as eating, drinking, shelter, etc., which form the basis of material production. Production, therefore, arises out of needs, out of the necessity for survival. But when men enter into material production, when they begin to work, they simultaneously affect their needs: production begins to create and alter needs. And as these needs do not necessarily relate to material production, the »higher-level« needs are created. These needs are therefore in no way innate: as Marx says, it is not important whether these needs come from the stomach or from the head, their origin is social all the same.³

In his well-known analysis of the relationships of production, consumption and distribution, Marx notes that production in the first place instigates consumption (the fulfillment of needs) along with its material object. »Consumption without an object is not consumption«, hence from this point of view production creates and produces consumption.

»But it is not only the object that production provides for consumption. It gives consumption its definite outline, its character, its finish. Just as consumption gives the product its finishing touch as product, production

¹ »The consumer is no freer than the producer. His judgement depends on his means and his needs. Both of these are determined by his social position, which itself depends on the whole social organization. True, the worker who buys potatoes and the kept woman who buys lace both follow their respective judgements. But the difference in their judgements is explained by the difference in the positions which they occupy in the world, and which themselves are the product of social organization.«

»Is the entire system of needs founded on estimation or on the whole organization of production? Most often, needs arise directly from production or from a state of affairs based on production« (Marx 1963: 41—42). See also Marx (1965: 41—42), Rumjantsev (1969: 8—9), Gorz (1971: 81, 103).

² It should be noted that Marx and Engels were followed by, for instance, Marshall in this view of the nature of needs (about this, see Myint 1948: 134—135).

³ Marx (1967a: 35). Thus, the development of schemes where for every human activity (class of human activity) there is a corresponding biological need, must be considered erroneous from the Marxist point of view.

puts the finishing touch on consumption. For the object is not simply an object in general, but a definite object, which is consumed in a certain definite manner prescribed in its turn by production. Hunger is hunger; but the hunger that is satisfied with cooked meat eaten with fork and knife is a different kind of hunger from the one that devours raw meat with the aid of hands, nails and teeth. Not only the object of consumption, but also the manner of consumption is produced by production not only objectively, but also subjectively. Production thus creates the consumers» (McLellan 1971: 25).

This point has been emphasized, for instance, by Gorz (1971: 82), and Markus (1969: 55). According to them, it is not possible to compare situations where the »same» need is fulfilled in two different, socially-conditioned ways. As Gorz notes, it is meaningless to ask whether a man who eats red meat, white bread, travels by car and is clothed in manufactured fibres lives better than a man who eats black bread and potatoes, travels by bicycle and is clothed in cotton. The existing forms of production simply do not allow a choice. One can only live in a certain, relatively well-defined manner (of course there are possibilities to deviate, but these are not available to the majority of people). In other words, material production, and society in general, define rather conditionally the needs of man. But not of course completely. As Marx notes, continuing the above-cited passage from the *German Ideology* (Marx—Engels 1970: 87):

»The conditions under which individuals have intercourse with each other, so long as the above mentioned contradiction is absent, are conditions appertaining to their individuality, in no way external to them; conditions under which these definite individuals, living under definite relationships, can alone produce their material life and what is connected with it, are thus conditions of their self-activity and are produced by this self-activity. The definite condition under which they produce, thus corresponds, as long as the contradiction has not yet appeared, to the reality of their conditioned nature, their one-sided existence, the one-sidedness of which only becomes evident when the contradiction enters on the scene and thus exists for the later individuals.»

Thus production relations and the form of production come into contradiction; i.e., it is not always possible to fulfill needs under given relations of production, under given forms of production.

Marx analysed very efficiently precisely the process in which capitalist society creates needs which actually are inhuman, which come into contradiction with the socially-conditioned nature of man.

In the Marxist analysis, what distinguishes man from animal are not the so-called human needs as distinct from 'animal' needs (such as eating, shelter, etc.) but the fact that while animal is an immediate needs-satisfier,

man satisfies his needs indirectly, through social activity, through *work* (see Markus 1969: 48–49). Therefore one of the most important theoretical-philosophical mistakes of 'Marxist' analysis is to claim that Marx saw man as the victim of biological needs (for instance Kolakowski; see Markus 1969: 50 and Marcuse 1969: 10–11, 16–17).

These presentations ignore the fact that Marx especially emphasized the historical nature of needs. It is of course true that man is a creature of needs, but these needs are created through material production, through work. As Markus notes, »when we forget this historical determination of human needs, when we see needs as primary and absolute, then the opinions of Marx are biologized and anthropologized» (Markus 1969: 51).

Thus, in a sense we can say that work is the essence of man, and not needs. Man exists, not through needs but through work. Needs are only intermediary processes from this point of view. But in the final analysis it is the combination needs-work-needs which is important, i.e., needs come first and last with work as the central process related to needs.

The Marxist analysis of 'higher' needs therefore is not that there exist some 'higher' biological needs, to which some of man's activities correspond, but that starting from the fulfillment of the basic needs for existence through material production, in the process of this material production, new needs are created.¹

Only because of this is it possible that alongside material production, other forms of human 'production' are born, as well, such as religion, family, state, justice, morals, science, etc. According to Marxist analysis, biological needs by themselves would only create material production, and nothing else, only through material production are other needs created which cause other forms of human activity, or the totality of human activity, *praxis*.

It is no surprise that Marxists themselves are not unanimous about the analysis of needs in Marx. It is fairly obvious that, for instance, the analysis of Mandel deviates noticeably from the above view. According to Mandel, needs are extremely stable. All throughout history there has existed half a dozen basic needs such as food, clothing, shelter, exercise, and maintenance of the species. When one adds to this list the needs for hygiene and health plus the needs for the enrichment of leisure, we have, according to Mandel, reached the point where almost all consumption is explained (Mandel 1968: 660).

Nor is there an infinite variety of means to satisfy these few basic needs. »There is first, the problem of the quantity of the products required

¹ Markus 1969: 56: »Es entwickeln sich in den Menschen Bedürfnisse ihres Zusammenlebens, die keine biologische Gegebenheiten, ja nicht einmal die Humanisation biologischen Bedürfnisse sind», see also Lefevbre 1968: 49).

to meet these needs. On this point, history has already provided an answer, on the part of the possessing classes of our era. Between the stout country squire of the early nineteenth century stuffing himself with roast beef and swilling port wine, or the big bourgeoisie of the »Belle Epoque« with his twenty course dinners, on the one hand, and on the other, the rich capitalist of today, slim, devoted to sport, and constantly watching his weight, the change is undeniable» (Mandel 1968: 661).

In fact, needs and the ways to meet them are diminishing — becoming more rational with the result that the variety of production can be diminished accordingly, says Mandel.

To fall prey to this sort of argumentation is very understandable. As innumerable critics have pointed out, the determination of needs is a complicated process and the existing alternatives are not very interesting (asking people, defining needs 'scientifically', and so on; see Waltuch 1972: 13—19, Soviet Economic Reform: 26—29).

There is a temptation to regress, therefore, into claiming that needs are actually simple, easy to determine and so on. But this is certainly not a truly Marxist solution to the problem.

Mandel's argument is very interesting. With respect to the thrust of his argument, it seems obvious that there should at least be a tendency towards simpler and more rational consumption for environmental, cultural, egalitarian and other reasons, but whether there actually exists such a tendency is rather doubtful. On the contrary, even the rich capitalist does not shy the comforts of life, and to reach his level of comfort for everybody, we can say that needs, and the means to satisfy them are practically unlimited.

This is the factual side of the argument. Theoretically, some important defects of the analysis should be clear by now. In the first place, Mandel explicitly ignores everything else except material production. In another passage he even points to a source of »dangerous confusion« with respect to needs. Such needs as the need to investigate, know and create, teach, etc. are, according to Mandel, not needs at all. »What we have here are more and more complex and elevated forms of activity, of human praxis becoming more and more universal. Including these in the same category of »needs« can give rise to many misunderstandings» (1968: 664).

In other words, Mandel seems to deny the connection of praxis with needs. He does not see that through material production, through the satisfaction of his few basic needs, a variety of needs is created. It is true that these needs do not have the same status as the need for eating, but from the point of view of society, and of social man, they are inseparable.

Without the combination of needs and praxis, needs carry little interest, except for the »simple« determination of what to produce (but even this

determination is definitely not possible unless the totality of man's activity, praxis, is regarded). The temptation of this argument is obviously understandable from the economic point of view (also Bettelheim has succumbed to the same error, see Bettelheim 1967: 58—65).

The second important defect is seen in the point made by Gorz: »The historical form taken by the basic need must not be confused with the proper historical need» (1971: 93); i.e., the existing production levels and relations determine *how* the need is satisfied, determine the nature of the need. Therefore it is erroneous to assert that throughout history there have existed half a dozen basic needs, when actually these needs have been constantly changing their nature and their appearance. As Marx himself notes (1963: 40):

»The estimation of our needs may change; therefore the utility of things, which expresses only the relations of these things to our needs, may also change. Natural needs themselves are continually changing. Indeed, what could be more varied than the objects which form the staple food of different peoples!»

The importance of the second problem mentioned by Gorz comes especially to the foreground when we analyze the actual formation of needs in capitalist society, a problem which was rather prominent in Marx.

6. Welfare Economics and Welfare

6.1. *What Is Welfare Economics?*

Welfare economics has been compared with astrology, the relationship of economics and welfare economics being the same as that of astronomy and astrology (Boulding 1952: 5). This is in many ways a very accurate comparison,¹ and the main reason for studying welfare economics in the traditional sense is either to see the uselessness of economics in problems of policy-making at the highest level or to study some of the most elaborate parts of economics (especially the social optimum). But there are various concepts and classical problems in welfare economics that still deserve attention and that are closely bound up with the problems presented in the previous sections.

¹ Boulding probably had in mind only the attempt to give a scientific basis to a problem not amenable to scientific analysis, or to create scientific propositions from nothing, but as astrology usually only gives a favorable prediction of one's future, in the same way welfare economics is concerned with giving a good impression of the society in which it exists.

Here we may cite William Vickrey, who, albeit pessimistic of the potential of welfare economics, notes that even if the tools of research are not perfect, research in welfare economics provides guidance with respect to the directions wherein answers may best be sought (Vickrey 1960: 535).

In welfare economics proper there are two traditions which cover the whole field: these are classical welfare economics and the 'new welfare economics' or neoclassical welfare economics.¹ In a strict sense, or to keep matters clear, that is all there is to welfare economics: what happened before or after 1950 (see footnote) does not entail a development of welfare economics proper, but either scrutiny of the old principles or development in a wholly new field. This will be elaborated in the following section, but in what follows it must be borne in mind that 'welfare economics' covers only classical and neoclassical welfare economics, and this is what is studied in the present chapter.

There are many varied views on the actual goal of welfare economics. They range from claims that »... welfare economics deals with the ways in which economic phenomena, activities and institutions affect organisms; personality systems; social structure; the body of cultural forms; the natural and artificial physical organic environment as unit-objects in instrumental and relational modalities; and the development of individual capacities for welfare-relevant activities» (Gintis 1969: 7), to the more modest objective of defining a social optimum. On the latter there seems to be relatively wide consensus. For instance, Arrow (1951: 923) says that welfare economics has tried to answer four questions:

1. What is the content of the 'maximization of social welfare'?
2. What are the 'optimum' conditions?
3. In which circumstances are these not identical with the conditions of perfect competition? and
4. What are the practical consequences of the answers to questions 2 and 3?²

It can probably be safely said that the concept of welfare has not been an object of study in welfare economics. Contrary to the claims of Arrow,

¹ According to Sen (1970: 56), new welfare economics has reigned between 1939 and 1950. The former marks the year of the publication of Nicholas Kaldor's article on his compensation principle, and 1950 denotes the year of the first presentation of the Arrow theorem.

² According to Boulding (1952: 2–3) new welfare economics has had such objectives as 1) to clarify and quantify the vague concept of 'riches', and 2) to clarify what it is that economists have to say on matters of public policy, which has led to a search for a definition of an economic 'optimum'. Judgments have also been passed by outsiders: Parsons and Smelser (1965: 30) see the objectives of welfare economics as the study of individual satisfaction of happiness and the problem of the social optimum.

above, welfare economics has actually concentrated on the problem of a 'social' optimum and on finding criteria to compare different social situations. The finding of these particular criteria has been connected with the problems of applying welfare economics — a subject of much heated discussion.

Welfare economics has been seen as a discipline with a function identical to medical science: the objective of both is helping mankind, which does not change the nature of the discipline itself (Reder 1947: 14). This parallel is somewhat suspect because the subject of welfare economics is society, which presents very different problems with respect to application from those encountered by medical science.

There is also the belief that welfare economics as a subject is completely neutral: whatever the political leanings of the practitioners of welfare economics, it serves them equally well.¹ This claim is based on the existence of socialist writers who have in fact made significant contributions to welfare economics (Lange 1964, 1969, Lerner 1944).

This leads us directly to the problem of what is 'value-free' and 'scientific'; problems that have busied welfare economists past and present.² I shall not pursue these problems here. Yet, it can probably be said that the majority of the views presented by welfare economists on these matters are either incorrect or insignificant.

It is interesting to note how welfare economists have pondered the problems of applying welfare economics even while they have been the first to admit that the practical application possibilities are not very good (see de Graaff 1957: 168, Little 1963: 1). But some of them have been rather optimistic. Mishan, for example, believes that in the main, welfare economics should direct itself to showing the negative side of economic growth, and take up the problem of whether the existing system is acceptable or not (Mishan 1964: xiv, 1968: 81). Even more extravagant claims have been cited above (p. 77). From what follows it will become obvious that the belief that the application of welfare economics is possible in a harmonious society, where conflicts are efficiently suppressed, and the controlling of conflicts happens according to generally accepted means (Sweden and Netherlands are given as examples; Adler—Karlsson 1970: 47) is not realistic.

¹ »... a comprehensive system of scientific welfare economics provides welfare economists of all shades of political opinions with the basic tools of analysis they require, its foundation and methods are largely independent of the 'philosophical preconceptions' of any group of these economists» Myint 1948: 219.

² Boulding (1952: 3); for a review, see Nath (1969). Nath's views, however, are not free from naive beliefs in the separability of value and fact. See also Sen (1970: 56–59).

6.2. *The Development of Welfare Economics*

6.2.1. General Remarks

Thorough treatment of a subject such as the development of welfare economics would require a great deal of space. What is attempted here is a survey of the highlights of its development. There are many interesting connections between social policy and welfare economics: i.e., to the extent that welfare economics can claim to be the counterpart of Sozialpolitik as it came to be known in Germany, or at least lay claim to a common origin, viz. an attempt to utilize economic theory in solving public issues.¹

It is customary to approach the origins of social policy (in the sense of Sozialpolitik) as stemming from the Verein für Sozialpolitik (see Nieminen 1955), but historically it is evident that the Verein was only one of numerous tendencies long existent in the development of classical economics. Just as the Verein was an answer to the development of capitalism in Germany, so was the development of classical economics a response to the rise of capitalism in England. The writings of Adam Smith as well as those of Ricardo, Malthus, and Mill were occupied not only with the problems of discovering the fundamental laws of capitalism, but also with giving recommendations on how to solve the problems that arose along with capitalism.² The opposite of these responses, although originating from the classical tradition as well, is Marx' attempt to expose capitalism's laws of motion, and its derivative practical social consequences (see Marx 1967, 1970).

Historically, then, the study of welfare economics originated in a concern for a broader economics that would include the entire social organism.³

¹ Relatively few comments on welfare economics exist in the literature on social policy and these comments do not emphasize the connections between social policy and welfare economics, being content simply to mention the existence of welfare economics (cf. Nieminen 1955: 177, Dich 1964: 43). For an exception, see Liefmann—Keil (1961), where the author uses some methods of welfare economics.

² See Herz (1961), Myint (1948), Ruotsalainen (1971). Eräsaari has pointed out that it should not be forgotten that Sozialpolitik was born out of a criticism of traditional German economics. I concede this, but this critique was particularly directed against the uselessness of the extant economics for studying the modern economy.

³ See Myint (1948: 206—207), who credits J. M. Clark, Frank Knight and Thorsten Veblen in particular with such views, and assumes that it was probably in the discussion at the beginning of the 20th century that the term welfare economics came into being. Although these economists (Clark and Knight) were rather conservative, they were nonetheless critical of the existing theories of economics and of the narrowness of their assumptions.

This is not far from the originally Smithian view that production must serve social needs rather than being a goal in itself (Pipping 1955: 41). This has been especially emphasized in Marxist literature simultaneously showing that capitalist production is not at all adapted to serving social needs, and in this sense, we can argue that welfare economics reflects a response to the same kind of interest as »Sozialpolitik«. The results, however, are different, and it can probably be said that welfare economics was the one that remained furthest from its objectives.¹

6.2.2. Welfare Economics and the Utilitarian Tradition

Before going into the actual development of welfare economics, a brief digression on the relationship between welfare economics and utilitarianism must be made. There seems to be an overall consensus about the fact that welfare economics is based on utilitarian principles.²

The connection between the principle of utility and the maximization of social welfare is, by intuition, obvious.³ Rescher divides the principle into two parts: 1) the greater good and 2) the greater number, i.e., an aggregative and distributive part (Rescher 1966: 25–26). If one concentrates on the greater good principle, one may ignore the problems of distribution. According to Rescher, Bentham himself in his later writings emphasized the former, and this much may be said about welfare economics, as well. The principle of utility or general utilitarian ethics is not considered currently adequate.⁴ It seems that the relationship between welfare economics

¹ Of course there are other differences: while welfare economics was an academic, abstract and formalistic phenomenon (i.e., the new welfare economics), Sozialpolitik was decidedly historical and rather concrete, and in a sense related to working class interests.

What is meant by the above comparison is that from a welfare theoretical point of view there is a certain similarity, as in the reformist science tradition.

² Arrow (1963: 22–24): »This ideal seems implicit in Benthamite social ethics and its latter day descendant, welfare economics.« According to Arrow, welfare economics is a combination of utilitarianism and psychological hedonism. In utilitarianism, common good is based on individual good (one of the main tenets of welfare economics), and in hedonism, individual good is based on individual desires). About the relationship of psychological hedonism and economics, see also Pipping (1953: 27–28). Pahlke (1960: 18–19) also emphasizes the connection and for a very complete survey, see Bohnen (1964).

³ As Bohnen (1964: 4) points out: welfare economics is an attempt to elaborate utilitarian ethics in concrete terms.

⁴ See Rescher (1966) on the critique of this principle; but also see Baumgardt (1952: 521) and Robbins (1965: 11–12), who consider it very relevant.

and utilitarianism exists mostly on an imaginary level: the connection has been made partly because welfare economists speak about utility, which has nothing to do with utilitarianism, and partly because most of the actual developers of welfare economics were decidedly not utilitarianists (for example, Pigou as a student of Marshall; see Pipping 1953: 24, Little 1957: 8).

As Arrow would have it (1963: 22—23), one reason for relating welfare economics and utilitarianism is the belief that utilitarianism *leads* to the laissez-faire principle. This appears to be an erroneous assumption. It would be just as acceptable, going by the utilitarian principle, to have society completely regulated according to said principle, and it does seem to have been created for precisely such a purpose, i.e., as a governing principle of social control (cf. Robbins 1965: 11). On the other hand, the laissez-faire principle of perfect competition and the Paretian optimum demonstrably lead to the self-same requirements, but it can also be shown that complete regulation may bring about the fulfillment of the optimum conditions, thus shattering the argument in both ways.

The most important connection between utilitarianism and welfare economics is certainly the emphasis on wants rather than needs. Both the utilitarian tradition and welfare economics stress that »good» is related to human wants. Useful is what is wanted by man, regardless of whether the need is real or not. Welfare economics has driven this approach to its logical conclusion, by showing what it is possible to infer by analyzing solely what man wants.

6.2.3. Pigou and New Welfare Economics

While the members of the Verein für Sozialpolitik were also called Catheder socialists because, while believing in capitalism, they advocated some »half-way socialist measures», and believed that socialism could grow out of capitalism (see Nieminen 1955), the same cannot be said of the welfare economists proper. Of these, Pigou certainly had some social sympathies towards the poor etc., but he was clearly not a socialist, and his teacher Marshall was a very ardent advocate of liberal capitalism.¹ So while in the Verein there was interest in social reforms, welfare economics showed no concern about social reforms at all. The main question was how, under existing conditions — or conditions of perfect competition — the welfare of society could be maximized.

The development of welfare economics proper began with the publishing

¹ See Levin (1956: 124), although in his youth Marshall entertained some radical ideas.

of A. C. Pigou's *The Economics of Welfare*¹ in which he attempted to develop Marshallian economics in the direction of non-market effects. For example, he emphasized the distinction between private and social cost, and non-market effects in general. On the other hand, he mainly used criteria of efficiency and production in his analysis, thereby staying closely within the classical tradition (see Levin 1956: 125—126).

Thus he defined economic welfare (the object of his study) as »that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money» (Pigou 1962: 11), and saw the national income (national dividend) as the objective counterpart of economic welfare, i.e., the operational measure of economic welfare (*ibid.*: 30). Although he admitted that economic welfare was not the same as general welfare, he believed that they usually varied together (*ibid.*: 12). This type of definition which clearly separates the 'economic' and 'total' welfare concepts cannot be considered adequate, as is noted in chapter four. Yet it is obvious that the Pigovian definition can be interpreted as falling in accord with the usual definition of economic welfare, as welfare stemming *ceteris paribus* from economic causes² (if we emphasize the indirect measurability of welfare by money). In this sense, then, Pigou cannot be said to differ so much from later welfare economics, and the crucial difference between him and the later welfare economists can be found in the composition and the main tenets of the book.

Firstly, Pigou was explicit in his sympathy for the plight of the poor, both in his verbal expressions (Pigou 1962: 5) and choice of subject matter. The larger part of the book is about questions that were left completely intact by later welfare economists, such as problems of labor policies, social security, income transfers, minimum pay, and poverty. These matters were precisely the ones that, prior to this, had been the domain of the German »Sozialpolitiker». In fact, Pigou's book can well be considered as belonging to the same tradition. But of course in Pigou's case it was a solitary phenomenon in the backlogs of welfare economics.

Secondly, Pigou accepted the comparability of interpersonal utility (*ibid.*: 89—90), which was later to fall into disrepute among welfare econ-

¹ (1962; first edition, 1920); for a good review of Pigou's ideas, see Dobb (1969: 80 *et seq.*).

² Majumdar (1958: 5, 8, 13) criticizes the Pigou definition for reasons that are extremely general and do not particularly seem to apply to this definition. According to Majumdar, the Pigou definition is not acceptable because:

- 1) welfare is not unidimensional as Pigou implies it is;
- 2) the Pigou definition ignores the distribution of income, and
- 3) the Pigou definition is restricted only to consumption and production of the national income.

These three criticisms apply equally well to any definition of economic welfare analyzed in this monograph; especially the second and third.

omists. In this of course, he did not differ from the classical economists or Marshall, who saw nothing wrong in comparing the utilities of different persons nor in making decisions about the social worth of some certain action.¹

These beliefs were crystallized in the famous propositions that apparently continue to govern much of the discussion on income distribution:

1. Increases in national income, provided the share of the poor is not diminished, increases economic welfare.²
2. »Any cause which increases the absolute share of real income in the hands of the poor, provided that it does not lead to a contraction in the size of the national dividend from any point of view, will, in general, increase economic welfare» (*ibid.*: 89).

The first assumption is a clear Paretian assumption, although only a certain group, the poor, is specified. The second assumption is much stronger than any Paretian assumption, in that the redistribution of income is central (although, characteristically, on the condition that national income does not decrease).

Therefore it can safely be said that later welfare economics, the so-called 'new' or neoclassical welfare economics, does not have much in common with Pigovian welfare economics, a matter that cannot be emphasized too strongly. But as we are mainly interested in neoclassical welfare economics, these facets will not be probed here.

The chroniclers of welfare economics have implied that it was Robbins' article («Interpersonal Comparisons of Utility», 1938); see Mishan 1964: 38, Little 1957: 56) which marked the beginnings of the New Welfare Economics. It was in this article that Robbins challenged the possibility of making interpersonal comparisons of utility (as this would imply value judgements) and so paved the way for the Paretian assumptions.³ It must

¹ Note that Pigou was already aware of the 'apologetic' critique which argued that because of the greater ability to discern utility of the rich, income differences were acceptable. Pigou did not believe this to be true in the long run (*ibid.*: 90). But he emphasized that even if the greater capacity for enjoyment of the rich were true, the large actual differences in the incomes of the population would be cause enough to ensure redistribution of incomes thereby increasing welfare. (If 18,000 families in England in the 1920's had 1/15 of the total national income, and several million families together less than half, it would be certain that an increase in income would be much more important to the latter than to the former (*ibid.*: 93–94)).

² However, Pigou (*ibid.*: 82, 84) takes care to note that an increase in national income may mean increase in welfare only in the short run: in the long run the increase may be questionable.

³ Myint (1948: xiii) provides an example of the acceptance of Robbins' proposition: ». . . although, speaking for myself, I am convinced by the arguments of Prof. Pigou and Mr. Lerner that economic welfare would be increased by a transfer of income from the rich to poor,

be said that the idea of 'objectivity' in social science in this sense was due to Weber, as Robbins was well aware (1952: 90—91); the ideas of Pareto were not very new either.¹ But it seems true that the Robbins article may have been a sort of a catalyst for a latent process long under way.

The program of positive economics culminated in Friedman's definition of economics as a positive science which is not interested in normative assumptions or arguments, and which concentrates on what is, rather than on what ought to be (Friedman 1953: 3—5).

Robbins' program gained general acceptance among economists, and soon after the Robbins article, Nicholas Kaldor published his article on welfare propositions in economics (Kaldor 1969 (1939)), where he proposed to «examine the relevance of this whole question (the Robbins argument) to what is commonly called 'welfare economics'» (Kaldor 1969: 387). The idea was to completely eliminate normative assumptions from welfare economics, while at the same time continuing to offer recommendations in the field of social policy.² This was to happen on the basis of certain reputedly universally acceptable assumptions, the so-called Paretian assumptions.³

Occurring almost simultaneously with the introduction of the Kaldor compensation principle (developed by Hicks, Scitovsky and innumerable others; see section 6.3.), Bergson presented his deservedly famous social welfare function, the formulation of which signified a completely new outlook on the problem, as compared to the compensation principle. As the function of the compensation principle was to enable policymakers to see whether a certain decision was acceptable or not, the function of the social welfare function was to enable them to systematize all policies (strictly, to find a set of optimal solutions that fulfilled the optimum conditions, see

I am bound to admit that these arguments still involve interpersonal comparisons of utility and cannot therefore be regarded as scientific propositions.»

¹ Nor should the relevance of the Hume guillotine be forgotten (see for instance S. Kivinen (1972)).

² It is interesting to note that these extreme 'positivists' in economics were unaware of the implications of the Hume guillotine, which pre-empts the possibility of making recommendations based on mere statements of fact; cf. Nath (1969: 95) who comments on this.

³ Sen (1970: 57) notes that unanimity does not ensure freedom from normativity, in spite of the fact that most welfare economists at that time seemed to think so (cf. also Dobb (1969: 77—79)).

This was already noted by Radomysler in 1946, when he claimed that while Pigovian welfare economics was positive, in the sense that it made strict distinction between normative and positive, Kaldor-Hicksian welfare economics was only obfuscating this separation with its belief that unanimity implies value-freedom (Radomysler 1969: 90). Although I cannot agree that Pigou separated normative and positive statements and was unconcerned about what ought to be, it is true that the analyses of Kaldor and Hicks were not value-free in any sense.

section 6.4.). Yet both were based on the same principles, with the welfare function being of a more general nature.

The development and analysis of the optimum conditions marked the high point of New Welfare Economics.¹ The first major setback was the Arrow theorem (see chapter 7), the impact of which was long resisted on the grounds that it was irrelevant to New Welfare Economics. Yet the Arrow theorem dealt a blow to the concept of a social welfare function, and greatly lessened its attractiveness. From within, the books of De Graaff (1957) and Little (1951, 1957) did much damage to the belief of the usefulness of welfare economics. After a prolonged silence (according to Baumol 1965), there has been a revival of interest in the problems of welfare economics, but not within the old framework. Mackenzie depicts this revival as an attempt to move from the logic of political economy to the logic of economic politics (Mackenzie 1967: 139). More specifically, the new approaches utilize newly developed methods of analysis (such as operations analysis, systems theory and related disciplines) but also a new approach that emphasizes problem of social structure, power and political processes. In effect, this means abandoning many economic abstractions (for a contrary solution see Downs 1957 and Rothenberg 1964, who utilize economic analysis in the analysis of political processes). In this sense, we may say that the crisis of welfare economics has given way to the development of a policy science as defined above, and to a more realistic view of social reality — one which makes the analysis of welfare economics interesting.

For instance, in the first edition of his book, Baumol (1965: 2, 204—207) had an excessively negative view of the prospects open to welfare economics, which, in the second edition changed to more positive outlook. This may be understood only on the basis that in his introductory essay to the second edition, Baumol has chosen to understand the domain of welfare economics rather broadly. The original, »classical» welfare economics is as barren as ever.

¹ Although welfare economics belongs exclusively to the Anglo-Saxon tradition and has had little outside influence, some monographs do exist in German, wherein the field is reviewed and several original points are brought out. Particular mention should be made of Pahlke (1960), Müller-Groeling (1965) and Bohnen (1964). Astonishingly enough, in Sweden there are quite a few economists who apply welfare economics to practical problems and even make it a basis for very concrete suggestions concerning social policy. See e.g., Söderström (1972a, 1972b), Niklasson—Söderström (1970), Ståhl (1968). We might even say that in Sweden social policy is intimately connected with welfare economics.

6.2.4. The Concept of Economic Welfare

What does economic welfare mean in relation to general welfare? The commonly accepted solution is to restrict the scope of welfare to the factors that influence (or »cause») welfare (this we might call a von Wrightian solution). Thus, economic welfare would be the welfare that is caused by economic factors, *ceteris paribus*, i.e., when other factors are assumed to be constant (Little 1957: 51, Graaff 1957: 6),¹ although earlier it was common to think of economic welfare as a distinct part of welfare.²

Majumdar (1957: 15) has ventured a definition of his own which differs significantly from the two versions presented above. He wants to connect economic welfare to such factors as choice and scarcity, both of which hold a notable position in economics; of these, choice may indeed be said to constitute a part of the actual operational definition of welfare utilized in welfare economics. According to Majumdar, »By economic welfare, we may choose to define not a portion of general welfare, but certain tangible aspects of it which are capable of being described in terms of choice of ends and scarcity of means». Majumdar also claims that this is the definition used by the new welfare economics. As is clear from the above, this is not so as far as explicit definitions go, but as we stated, the actual operational definition does bring the Majumdar definition to mind. It is obvious that the Majumdar definition is not particularly lucid and does not leave much room for other 'parts' of welfare, and since we shall concentrate more on an analysis of the problems of choice and welfare, I will not go into the Majumdar definition further.

On the other hand, there are some interesting points to be made about the two alternate ways of defining economic welfare presented above. It is by no means self-evident that the 'modern' definition is decisively better than the classic one. Although from a von Wrightian point of view it is acceptable, the *ceteris paribus* condition implies that changes in

¹ Little (1957: 51) presents a parallel, that may serve to illustrate this idea: »... it is imagined that the mind is like a well of unknown depth, partly filled with water, the level of which could be altered by turning on various taps labeled economic, political etc. Once the water is in the well there is no way of saying which tap it came from, and also it is impossible to say how much water is in the well. One cannot therefore significantly ask how much economic welfare someone has; but one say that the level of the water has risen or fallen as the result of turning the economic tap, if the other taps are not touched, i.e., one can say that economic welfare increased or decreased.» See also Radomysler (1960: 93–94).

² This was particularly true of the utilitarian tradition Little (1957: 51); but for example Dalton (1952: 9) was still of the opinion that: »Human welfare is divisible into economic, or material, welfare on the one hand, and on the other hand, various kinds of welfare which are not economic. This division will be sufficiently intelligible without further discussion, though by the nature of things the dividing line is not clear cut.»

economic welfare do not affect other factors of welfare, either directly or indirectly through welfare itself. I.e., this definition abstracts important interrelationships between the 'welfare factors' and welfare.

On the other hand, the concept of welfare as a divisible whole is not to be completely rejected. It is obvious that there are components in welfare that can, to a certain extent, be analyzed separately. This is already implied by the multi-dimensionality of the concept. It is another question whether or not these dimensions can be distinguished along the same lines as distinctions between 'economic', 'social', etc.

It would seem, therefore, that the best definition of economic or social welfare would recognize both the existence of social and economic causes and the existence of social and economic components (among others). This problem finds its 'natural' solution in the concept of level of living and its analysis, but it is clear that from the point of view of welfare economics such a concept does not have much relevance.

6.2.5. The Concept of Utility

It was mentioned above that the popular solution for defining partial welfare was to refer to the causes of welfare. For instance, economic welfare was considered that part of welfare caused, *ceteris paribus*, by economic factors. But this does still not convey the idea of welfare that the welfare economists had in mind. For this, we must take up the concepts of utility, preference, and choice. The starting point for the welfare economist was the concept of utility. Practically, we may regard it as a synonym for welfare in the eyes of the welfare economists. The literature on utility is vast and more recently the theory has been developed mainly by statisticians and psychologists.¹

In this monograph I shall not go into the problems of modern utility theory. This field has grown very quickly and has become extremely technical, especially where more complicated situations are concerned. Typically enough, all this has very little relevance to problems of welfare.²

We are interested solely in the concept of utility taken from the welfare economic point of view. This implies that definitions of a more technical type do not convey much that is of interest. Rather, the relevant question

¹ But note that utility and welfare, *per se*, imply completely different concepts on the nature of well-being and the 'good' life. Utility is linked with what is useful, what is practical, and not necessarily with other qualities of a good life; cf. Gouldner (1970: 62–73).

² For an elaborate presentation on the nature of utility theory see Fishburn (1968); for the applications of utility theory in decision making, see Fishburn (1970a), which is also a relatively complete survey of developments in utility theory.

concerns the connection between utility and welfare on the one hand, and how this concept was applied in welfare analysis, on the other. This entails such problems as the problem of cardinal utility, additivity of utility, measurability of utility, etc.¹

But even utility in its original sense was much too 'normative' for the welfare economists. Utility had to be reduced to choice: i.e., if a person prefers one good to another, the preferred good provides him with more utility (see Little 1957: 19).

Thus, the concept of utility may be put to one side, or given only a superfluous meaning as the guiding principle for choices. Even preference was superfluous; preference was nothing but hypothetical choice — one spoke of preferences when denoting choice between all the possible alternatives.²

Welfare, therefore, is identified simply with choice and preference (de Graaff 1957: 5, Archibald 1969: 319, Armstrong 1951: 259). The welfare of the individual is increased if

1. the individual prefers A to B
2. A becomes a possible alternative.

A may be a good, or a service or conceivably an even more complicated commodity. This is the welfare content of the New Welfare Economics, and once combined with the Paretian assumptions, we have the whole concept of social welfare in welfare economics before us.

The problems discussed above may be put into another frame of reference — by considering the concepts of uninterpreted and interpreted theories. We may define an interpreted theory simply as a theory whose basic concepts have been given explicit content. Alternatively, we may speak of 'theories' as uninterpreted theories and 'models' as the interpreted theories (see Mates 1965, Rudner 1966). In welfare economics it was alleged that theory should be seen as uninterpreted, and that interest should be centered around relations between the concepts. (This was especially emphasised by Archibald in his well-known article (1959: 317, 320)). Welfare theory, then is seen as a theory interested in choice mechanism and choice potentialities. Leaving the theory uninterpreted means that there is no normative content in it at all. Nevertheless, we may say something interesting about choice, asserts Archibald (*ibid.*: 316—317).

This seems to be a mere illusion: what is logically meant by uninter-

¹ For the history of the concept of utility see, for instance, Edwards (1967). Robinson (1962: 48) has remarked: »Utility is a metaphysical concept of impregnable circularity: utility is the quality in commodities that makes an individual want to buy them, and the fact that individual want to buy commodities shows that they have utility.»

² See von Wright (1963b, §7) for a critique of the identification of utility and preference, which applies very well to the situation in welfare economics.

interpreted theory does not apply in this case. There is actually so much interpretation in even this version of welfare economics, that we cannot correctly speak of an uninterpreted theory in any formal sense. The concept of choice is already an interpretation of, say, the relation Pxy . That Archibald's version is completely irrelevant is another matter: while thinking that he is presenting a non-normative theory, he is in fact approaching total triviality (see Little (1965) and Archibald (1965) for a discussion in which Little presents approximately the same argument as above).

In fact, it is true that the enchantment with choice common to nearly every economist is in itself very suspect, especially from the welfare point of view. The emphasis on choice presupposes giving up all extraneous means of considering a certain thing's effect on welfare. If it is chosen, that is all that matters. This is considered an advantage by many economists: 'consumer sovereignty' is not violated, and nobody is making valuations for the consumer (except the producer of course). In fact, the principle of free choice, as we shall see, is not extended to consumers alone but also to the producers, which renders it even more suspect.

If, then, only the individual's opinion counts, and that only through his choice of goods and services, what can be said about the connection to welfare? First of all, it is obvious that potential choice of goods and services may involve a simultaneous deterioration of other conditions, such as breathable air or other environmental commodities (see Mishan 1964: 96, 1969 where he emphasizes the problems of external effects and social cost in connection with choice).

Secondly, it is quite obvious that an individual may make choices that are detrimental to his welfare. This point has been made by countless others over along period of time.¹ Veblen, for instance, has written a book about it.²

¹ More recently Mishan (1967); Baumol (1965: 28–29), who however defends the principle of consumer's sovereignty; Scitovsky (1951); and Galbraith (1958). Baumol (unwittingly) gives a fitting example of the impossibility of the principle: »On the one hand I must sharply disagree with the implications of Scitovsky's view, for at its worst it offers unrestricted licence to the bluenoses and those who would impose on myself and others their own standards of good taste and good behaviour. Though I am also repelled by huge chrome protuberances on automotive vehicles I will fight assiduously (though not to the death) for other people's right to have them.» This example is interesting because just such protuberances have already been forbidden as endangering other people's lives in cases of collision in many countries.

² Veblen (1953: 80): »Many items of customary expenditure prove on analysis to be almost purely wasteful, and they are therefore honorific only, but after they have once been incorporated into the scale of decent consumption, and have become an integral part of one's scheme of life, it is quite as difficult to give these up, as it is to give up many items that relate directly to one's physical comfort, or even those such as may be necessary to life and health».

Consumer sovereignty (or, 'the individual is the best judge of his welfare') has been criticized in detail by many writers. It is extremely easy to ascertain instances where an individual simply cannot be the best judge of his own welfare. Zeckhauser and Schaefer (1968: 41—42) point out the following:

1. In uncertain situations a person cannot know all that is relevant to his choice.
2. Experience and education may be preconditions for a 'correct' understanding of certain questions.
3. A person may simply not understand the alternative choices (noted e.g., by John Stuart Mill, Levin 1956: 122).
4. The individual may have strong habits that restrict his choices.
5. Certain things are forbidden by society whether the individual likes it or not (like marijuana).

These problems have also been discussed a great deal by the authors of 'socialist economics' (see e.g., Bergson 1966: 196—197, Dobb 1969, Lange—Taylor 1964).

What is difficult, however, is to point out the alternative, i.e., on what grounds human welfare should be judged if the individual is not considered the best judge. In any case, it is obvious that in many cases society has already taken the possibility of choice away from the individual — one attempt to solve the problem would be to try to find criteria for dividing the existing alternatives into those that may be left for the individual to decide, and those that may not. One could hazard a guess that in capitalist society, such a list of actual possibilities of choice would be much shorter than it is usually imagined to be.

The origin of the debate on value-free economics was the question of so-called interpersonal comparisons of utility. This meant simply that previously economists had believed it possible to add 'utilities', and thus compute collective welfare from individual welfare. The utilitarian principle clearly required such additivity because otherwise it would not be possible to say what was the greater good for the greater number. And at the core of the additivity problem lay the question of whether or not one could compare the utilities of two different persons.

This problem was usually presented in the guise of a decision-maker's problem, but from an individual's point of view we may easily see that 'interpersonal comparisons of utility' were basically the same as problems of relative deprivation and reference groups in sociology.¹

¹ For deprivation and reference groups, see Gurr (1970), Israel (1971), Runciman (1966: 10), For an early attempt to show the existence of reference groups, see Katz' hen experiments. Pipping (1953: 67).

This discussion has two distinct parts: the attempt to show that comparison was unnecessary and that all interesting results in economics were available by using ordinal utility; and secondly, the measurability-of-utility problem, whose central question is whether or not cardinal utilities exist.

The definitive blow against cardinal utility in economics was dealt by the Slutsky—Hicks—Allen indifference curve approach, where it was shown that no cardinal utility at all was needed, in order to obtain adequate results in consumer theory.¹

To construct individual indifference curves, the sole requirement was that the individual should be able to compare the objects of his preferences pairwise. This should result in an ordinal preference ordering. The utility of an object, or the differences between utilities were things that could be ignored. (For the presentation, see Hicks 1964: 14—15). The concept of marginal utility could be replaced by the concept of marginal rate of substitution, but most important was that now economists could safely discard the notion of cardinality.

This remained the dominant theme for a long time; in fact it still is (see Quirk—Saposnik 1968: 115), although with certain reservation.² But Arrow, for example, noted as late as 1963 (1963: 9) that interpersonal utility comparisons had no meaning, and that no supporter of the cardinality principle has produced anything that could not be analyzed through ordinal utilities. Such extreme views are hardly supported any more, but there are still many who accept a more guarded anticardinalist approach (see for example Drewnowski 1970: 83, Fishburn 1970b: 218).

On the other hand, even among economists the acceptance of cardinal utility and interpersonal comparisons has steadily gained ground (for a steadfast supporter, see Frisch 1964: 418; Coleman 1966: 1117, Boulding 1952, Rothenberg 1961: 137, for reasons for this), but it is mainly others who have emphasized the necessity of interpersonal comparisons for any kind of useful political and social analysis. First of all, it is obvious that interpersonal comparisons are a reality: they are made all the time and an analysis that does not take this into consideration is seriously impaired (Barry 1965: 44—45, Boulding 1952: 32). Secondly, it has been claimed

¹ The Slutsky (1915) paper came into renown subsequent to the Hicks—Allen paper (1934). See Fishburn (1970b: 218) for the references. The classic statement is in Hicks (1946 (1939)). Hicks himself (*ibid.*: 12) refers to Pareto.

² Quirk and Saposnik note that although ordinal analysis is good in positive economics, it does not mean that it is good in other fields, such as welfare economics.

See also Rescher (1966: 332), and Stevens (1959: 52), who compares the measurement of such things as clarity and noise with the measurement of utility. For the *strategic* implications of the cardinality-ordinality discussion, see chapter 7, where these are discussed in connection with the independence-of-irrelevant-alternatives condition.

that interpersonal comparisons and cardinal utility are not such insurmountable problems after all, and that they can in fact be measured rather easily.¹

It should be noted that the problem of cardinality can be divided into two parts: whether it is possible to measure utility with an interval scale for an individual, and whether it is possible to use an interval scale for all individuals, i.e., to have a common (but arbitrary) zero point for all individuals. I do not consider the true cardinal scale, the ratio scale, relevant, as it is beyond our present resources to find an absolute zero point (an absolute point of dissatisfaction).²

Neurath (1970: 36) complicates the problem even further by noting that we may consider the same individual in different points of time as different individuals, thus bringing up the problem of comparability in these cases as well. In principle, comparability here is different because a person himself may make the comparisons. The real, or 'true' cardinality problem is, of course, the problem of the *inter-personal* comparability of utility.

All the problems referred to above have a common starting point, that being individual comparability. There is no concern with collective action, with problems of society. As Neurath (*ibid.*) notes, even if the interpersonal comparability of utility were possible, this does not mean that we could be able to compare different social orders and their relation to the welfare of people. I.e., the problems of social structure and so forth are abstracted out of existence. This, of course, is the central problem in all welfare economics and also in the Arrow theorem, as we shall see.

Majumdar (1958: 47) distinguishes the following stages in the debate on ordinality-cardinality:

1. introspective cardinalism (Marshallian cardinalism; this is of course the classical view, also)
2. introspective ordinalism (the Slutsky—Hicks—Allen indifference curve analysis)

¹ According to Majumdar (1958: 38–39), Marshall represented 'absolute' (i.e., ratio scale) cardinality in assuming complete additivity of utilities with absolutely defined units.

² Presumably it is safe to say that originally the abandoning of cardinal utility was seen as a certain loss by the economists. It was only later that the more eager apologists turned the whole business upside down in attempting to show that restricting welfare to choices was only good. It was fine that one need not care about utility, welfare, happiness etc., as they are irrelevant. Only choices mattered (see Archibald (1959: 320) who whole-heartedly approved this; also de Graaff (1957: 34)). The problem — ignored by economists — was that choices are not identical with welfare nor with utility. Thus there is no reason to speak of welfare economics, but only of 'choice economics'.

On this basis welfare economists were also able to deny being utilitarians, because for them utility was an empty word (see Graaff (1957: 38)).

3. behaviorist ordinalism (Samuelson's revealed preference theory)
4. behaviorist cardinalism (von Neumann-Morgenstern utility theory).

After these distinct stages there have been attempts to revive the introspective cardinality notion (Majumdar 1958: 48), while modern utility theories are mostly axiomatic variants of the von Neumann-Morgenstern approach, although ordinalist approaches are also to be found (Fishburn 1970a).

The differences between behaviorist ordinalism and introspective ordinalism are very slight: in the latter approach, one assumes certain ordinality qualities for the individual's preferences; in the former, the starting point is observed behavior. Neither approach postulates anything on the nature of utility or welfare (Majumdar 1958: 80). In a Hicksian sense, the revealed preference approach can be considered even more sophisticated than the Hicksian version itself, because it assumes even less.

Of the two main approaches to the solution of the cardinal utility problem the first is that of Pareto—Fisher—Frisch (Vickrey 1960: 522—23; Fishburn 1970a: 81 *et seq.*, 1970b; Frisch 1964). Going by this assumption, a linear utility function may be defined and can be determined on the basis of observing individual choices. To make interpersonal comparisons possible, we still must assume that average consumer behavior in each income bracket can be taken as typical for those income and price categories.¹

Ragnar Frisch has continued along these lines (the latest development occurring in 1970), his interest being centered around the possibility of practical application. His attempts are not very highly revered in the field of utility theory (see Fishburn 1970a,b, where they are ignored outright).

The second approach is that of the Neumann-Morgenstern expected utility hypothesis (see Vickrey 1960: 523: 524, Rothenberg 1961: 201 *et seq.*, Luce—Raiffa 1957). Put simply, the expected utility hypothesis begins with the assumption that a person wants to maximize not utility, but the mathematical expectation of his utility. This was first presented by Bernoulli, and von Neumann-Morgenstern presented it in a precise, axiomatic formulation which included other assumptions as well (Rothenberg 1961: 203, Luce—Raiffa 1957). The original von Neumann-Morgenstern formulation contained four axioms, some of which can be regarded sceptically (Fishburn 1970a: 191, Rothenberg 1961: 217—220). As this

¹ These assumptions are not unproblematic; for instance, Vickrey (1960: 523) notes that we may construct examples of such welfare functions where the marginal utility of income is an increasing function of income.

is not the place to discuss expected utility, I shall restrict this presentation to the nature of the von Neumann-Morgenstern axioms, and their implications.

Rothenberg (1961: 201) considers this approach the most promising, as it obviously is due to the empirical testability of the axioms. The axioms are very simple:

1. The first axiom assumes that individual preferences depend only on the probabilities of different outcomes and not, for example, on how the outcome was deduced. This means that preferences for gambling, etc., are ignored (*ibid.*: 250).
2. The second axiom assumes that the preference orders are complete and transitive (*ibid.*: 227).
3. The third axiom is the continuity axiom; its most important implication is that lexicographic utilities are impossible; as was noted, however, contrary to this assumption Chipman defined utility as lexicographic. The importance of lexicographic preferences lies in the fact that the multidimensional nature of utility and welfare is not taken into consideration when lexicographic preferences are excluded (*ibid.*: 232–233). A need hierarchy, for instance, implies a lexicographic ordering.¹ According to Rothenberg it is natural to assume that utility functions are lexicographic. This means that the applicability of the expected utility hypothesis is rather limited (*ibid.*: 233–234).
4. Axiom four, or the strong independence axiom, denies that combinations of goods have any interaction effects and depend only on the preferences of the elements, which is clearly rather unrealistic (*ibid.*: 235–236). It does not make all complements impossible, only those that effect two or more prospects.

It is clear then, that the axioms are rather restrictive. Once accepted, however, we arrive at linear utility functions for each individual. That is, we get cardinality, not comparability, for each individual. To attain comparability we must still make some very strong assumptions about the identity of tastes, etc., or other arbitrary assumptions (see Vickrey 1960: 524).

It may surprise the reader to note that Pareto is mentioned as the developer of both the ordinal indifference analysis and cardinal utility analysis. This apparent incongruity is due to the fact that Pareto developed a measure of cardinal utility first and later discarded it when he

¹ A simple example of a lexicographic ordering is as follows Sen (1970: 35): we have two individuals with welfare levels W_1 and W_2 and the social ordering is formed in the following way: first maximize W_1 and given this level of W_1 maximize W_2 . Lexicographic orderings are also analyzed by Debreu (1959).

found that ordinal utility was sufficient in his analysis of static and risk-free consumer demand theory (Fishburn 1970a: 82).

Rescher (1969: 103) does not consider the expected utility approach useful because, notwithstanding mathematical benefits, the application difficulties are considerable. There are many other approaches the difficulties of which are very great.¹ Rescher has advocated very practical measures, à la Frisch² but the difficulty with these measures seems to be that they are rather arbitrary, representing 'raw' empiricism with a problem that requires a much more theoretical analysis. It seems obvious that cardinal preference, or interpersonal comparison of utility is a necessity for any policy-making system that attempts to be realistic. The problems of which type of cardinal preference is necessary have not yet been solved. It may be an insurmountable problem, pointing to a need for fresh research.

What then, does giving up cardinal preference and interpersonal comparisons of utility indicate? First of all we dispense with additive utility or welfare functions. This does not eliminate welfare functions completely but changes their nature and narrows their scope.

We should note that especially 'social welfare functions' are practically eliminated in their entirety. What is called social welfare function bears in the following only a faint resemblance to it as such, being applicable to only a very restricted type of situation.

Secondly ordinal utility implies that most of the central problems of social decision making are simply theorized out of existence. As Rothenberg (1961: 142) notes, in addition to ordinal utility functions, ordering of different distributions is needed: a rule for combining production and distribution effects, etc., i.e., for all essential problems. To use Rothenberg's words: »The use of ordinal indices solves the problem of securing an acceptable social ordering by assuming it away!» (Rothenberg 1961: 142; this is true in general, see Cropsey 1954: 120). As a corollary to this point, we may note that it is not possible to analyze problems of income distribution or welfare distribution in an ordinal frame of reference.

Rescher (1966: 333) gives a good example of how insignificant ordinal preference truly is. Assume that person A has the following preference ordering:

¹ For example the Armstrong 'bare' preference approach, or an attempt to measure cardinal preferences in terms of a minimal preference unit, Rothenberg (1961: 146–147), Vickrey (1960: 519–520). For a statement of the fundamental difficulty in the Armstrong approach see Fishburn (1970b: 215) or Vickrey's own approach (1960: 526–527).

² See for example Rescher (1966: 333–335), Rescher (1969); see also Tinbergen (1959), Theil (1964) for practical approaches where utility functions are constructed and connected with decision-making models.

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Let us imagine that we may see this preference on the following scale:

	Excellent	Very good	Neutral	Very bad	Extremely bad
1.	b		a		c
2.	b a c				
3.					b a c
4.	b	a c			
5.			b		a c
6.	b			a c	

Clearly all of the above alternatives are possible under the same ordinal preference ordering (and infinitely many others). It is obvious that all of these orderings may lead to different conclusions when compared to other orderings. In fact, we know nothing about the absolute order, nor of the differences between alternatives on the basis of an ordinal preference ordering.

It should be noted, as Fishburn (1970b: 218) emphasizes, that there is nothing in interval measurement, *per se*, that implies the possibility of measuring preference intensities. Even the interval scales are based on such simple preference measurements that they do not allow for inferences on preference intensities.

In the following, we shall be concerned only with ordinal preferences as the bases for welfare decisions. What has been said thus far indicated that the possibilities to infer anything on the basis of ordinal preferences alone are very limited. In spite of this, however, it is astonishing to note how much has in fact been said.¹

6.2.6. The Pareto-Optimum

The economist's solution for individual welfare was to identify welfare with choice; as for social welfare, his solution was the famous² Pareto optimum, which is the trademark of the so-called New Welfare Economics.

¹ The principle of interpersonal comparison of utility is very important in Marxist theory. As Johan Willner (1971) points out, without interpersonal comparability of utility the central concept of surplus value would be left undefined.

² Perhaps infamous would be a more apt choice of terms.

There are explicit definitions of the New Welfare Economics as a science of the Pareto optimum and its conditions (Mishan 1964, Little 1957: 84). This discussion will commence with a presentation of the Pareto-optimum assumptions since, as stated earlier, they form the basis of the New Welfare Economics as a whole, and are by no means confined to that sector dealing strictly with the assumptions themselves.

The Optimum is based on the following assumptions:

- 1° The individual is the best judge of his welfare (note that this goes for all components of welfare: e.g., the productive activity of a private entrepreneur (see Nath 1969: 8)).
- 2° The welfare of society depends only on the welfare of the individuals and is a monotonically increasing function of the latter (Little 1957: 118).
- 3° The non-economic factors affecting an individual's welfare can be ignored with respect to 'economic' welfare.
- 4° If at least one individual is better off (his welfare is higher) without anybody being worse off, then society as a whole is better off (has a higher welfare). It is specifically this assumption that makes the optimum 'Paretian' (Nath 1969: 8—9, Mishan 1964: 6—7).

In addition to these assumptions it is implicitly assumed that the welfare of society is to be maximized (that is, the welfare of the set of individuals that form society). This is in no way unique to the Pareto-optimum. Without this assumption there would be no need for a welfare theory.¹

We say that a situation is Pareto-optimal if it fulfills the Pareto criterion; and that there is a Pareto improvement if we move from a sub-optimal (in the Pareto sense) to a Pareto-optimal position.

Some of these assumptions clearly refer to the conception of individual welfare (3°). Yet the crucial assumption, which contains the most importance from a social welfare point of view is the fourth, which may be called the Paretian assumption. In the form presented above it does seem very naive and generally acceptable (as its advocates emphasize). But if it is formulated in the following alternate way, we gain a better picture of its implications:

- 4' If all individuals in a society either prefer or are indifferent to a given

¹ See also the statement of the Pareto-optimum by Pareto himself (Pareto 1909: 617—618; cited in Rescher 1966): »Consider any particular position and suppose that a very small move is made . . . (If) the well-being of all the individuals is increased, it is evident that the new position is more advantageous for each one of them; vice versa, it is less so if the well-being of all the individuals is diminished. The well-being of some may remain the same without these conclusions being affected. But if, on the other hand, the small move increases the well-being of certain individuals and diminishes that of others, it can no longer be said that it is advantageous to the community as a whole to make such a move.»

change, then the change may be approved (i.e., it increases the welfare of the society). In other words, the Paretian principle requires unanimity in the sense that nobody is *against* change.

As Sen (1970: 22) notes: »Precisely how incomplete the Pareto criterion will be depends on how unanimous the individuals are. At one extreme lies the case in which everyone has the same preference, when the social ordering will, in fact, be complete for this special case. At the other end lies the case where two individuals have diametrically opposite preferences, in which case no alternatives whatever could be compared with each other using the Pareto rule.»

In the light of these reformulations we may see the full impact of the Pareto criterion on the economics of welfare and on the conception of welfare in economics:

1. Very few changes are tolerated by the Pareto criterion. I.e., the scope of welfare economics is extremely limited when it is based on the Pareto criterion. This should be borne in mind when the Pareto optimum and its conditions are considered in the following. In no sense does the Pareto criterion provide a universal principle for the evaluation of welfare (see Dobb 1969: 10—12, 20; Armstrong 1951: 259, 262; Zeckhauser-Schaefer 1968: 52; Rescher 1966: 13; see Buchanan—Tullock 1962 for an attempt to expand the scope of this principle).
2. In particular, the criterion has nothing to say about distribution. For instance, according to this principle, a change which increases the welfare of the rich but leaves the welfare (illfare) of the poor intact is acceptable nevertheless, since the aggregate welfare is increased (Nath 1969: 127, Dobb 1969: 23).¹
3. The Pareto criterion says nothing about the means of creating an unanimous situation. I.e., the comparison of suboptimal states is not possible with the Pareto criterion, as noted in the first point (Arrow 1963: 37, Rescher 1966: 14).
4. On the other hand it is not possible to compare Pareto-optimal situations with the Pareto criterion. We cannot, therefore, choose from two Pareto-optimal situations (Arrow 1963: 37, Rescher 1966: 13, Zeckhauser—Schaefer 1968: 51—52).

The Pareto principle has been defended on the grounds that it permits a separation between efficiency and equity, the latter not belonging within the realm of economics (Brownlee—Buttrick 1968: 237). In fact, it is true that the concept of economic efficiency is usually defined by the Paretian

¹ To be exact, this requires the additional assumption that all Pareto-optimal states are indifferent to each other. This has been usually implicitly assumed in welfare economics. The omission of this assumption implies a need for additional criteria to compare the Pareto-optimal states (Sen 1970: 23; see also point 4 in the following).

criterion (Nath 1969: 152—153, Scitovsky 1951: 4—5). As we shall later point out, such separation is not justifiable on the grounds that a concept of efficiency cannot exist without an inherent notion of equity. Also, the Pareto principle does imply a certain notion of equity in its assumptions; we shall return to this.

Yet the Pareto principle has elicited astonishingly wide support. It has been advocated by philosophers and economists alike (Brandt 1959: 319—320, Buchanan—Tullock 1962: 171—173, Brownlee—Buttrick 1968, and innumerable other economists).

Considering all of its implications this is truly surprising. One of the reasons may be found in its similarity to the Braybrooke—Lindblom »disjointed incrementalism», and Popperian »piecemeal social engineering» notions which implicitly dominate most policy discussions in the capitalist countries.

As Brownlee and Buttrick note, the Pareto criterion forms a two-step procedure: using the Pareto criterion the first step enables one to choose between social states that fulfill the Paretian criteria; the second step entails choosing the best alternative by some other criteria (Brownlee—Buttrick 1968: 237). I.e., the criterion implies a restricted choice, a »piecemeal» choice at its best.

From what is said above, it follows that the criterion is also a very conservative one, its implication being actually that no policy can be instated if there are some who oppose it. In any society where we may speak of a fundamental divergence of interest amongst the citizens, the Paretian principle is necessarily biased in favor of those who may be said to benefit from existing injustices, as they may easily prevent their correction.¹

Boulding (1952: 18) has said that »the real significance of the Paretian welfare economics, then, is that it sets forth explicitly the distinction between those changes in social variables which can take place through 'trading', i.e., through a mutual benefit of all parties — and those changes which involve »conflict», or the benefit of one part, at the expense of another.»

¹ Barry (1965: 51) contends that the criterion is ultra-conservative. If one considers the implications of the Buchanan—Tullock, *Calculus of Consent* (1962), one must concur with this judgment. See also Baran (1952: 357—358): »It was left to Pareto, who was contemplating social reality not through the looking glass of English moral philosophy but from the more austere position of a »disinterested» aristocratic observer, to formalize an attitude that expressed adequately the monopolistic answer to the Mill—Marshall—Pigou »revolt of the middle classes». By repudiating the validity of interpersonal comparisons of utility, Pareto purged political economy of all the reform implications disturbing the British (and German) economists. As it was impossible (in his opinion) to make any scientific statements concerning cardinal utility, any judgment on distribution of wealth and income became

According to Boulding, it is understandable that welfare economists have been interested in trading alone. This may be so, but Boulding certainly exaggerates the role of mutual benefit in trading (both parties may imagine reaping benefits without actually getting any). Much of the subsequent defense for using the Paretian principles in analyzing problems of social choice is based on this notion: all social choice has been conceived of as trade, leaving no room for conflict (especially in Buchanan and Tullock 1962).

6.2.7. Critical Notes

This section consists of some additional critical notes about the essential basis of welfare economics. When some of the central theories are presented in the following, these criticisms should be kept in mind, because they insinuate severe restrictions on the theoretical adequacy and applicability of welfare economics.

First, as is obvious from the above, the theories of welfare economics, beginning with Pigou, are individualistic and atomistic in character. They represent methodological individualism in its crudest form, e.g., the denial of any social or collective influence apart from the individuals themselves whatsoever. They also wholly ignore these same influences even in the context of methodological individualism, i.e., dealing with the extent to which the social factor affects the individual, and through him, society itself. The «atomistic» view of society (according to which every man is a Robinson Crusoe) is an integral part of the classical tradition (see Herz 1961: 57) although it has been developed to its extremity in modern welfare economics where formal constructs are completely devoid of any 'structure', in the sense of social structure.¹ It would be impossible

to him an ethical value proposition beyond the realm of economic science. Taking from the rich and giving to the poor became nothing that could be recommended by economics, since even the notion «rich» and «poor» lost meaning in the Pareto frame of reference. What appeared as common sense to Smith, Ricardo, Mill, Marshall, Pigou — not to speak of the uninstructed man in the street — turned out to be a nonscientific ethical preference, with the economist's preference counting no more than anyone else's.»

¹ This has been said very eloquently by Parsons and Smelser (1965: 23, 31), although of course in a way that no doubt leaves the economist, or indeed anyone, slightly confounded: «Only through the institutionalized value system of the society and its various functional subsystems which develop in accord with specific exigencies is concrete meaning given to the concept of welfare. It follows that to define economic, much less social welfare in terms of some aggregate of allegedly independent individual welfare functions or in terms of some elaborate system of comparison of individual functions is theoretically untenable.»

For an example of the nature of the problem, see Knight (1969 (1924): 227) where he says: «In the perfectly ideal order of theory the problem of management would be nonexistent!» Knight already very strongly criticized the individualistic assumptions, to say nothing of Veblen and the institutionalized economists.

to discuss here the problems of methodological individualism; this principle can be formulated in many ways.

It is clear, however, that the principle expounded by welfare economists is an instance of such crude methodological individualism that very few philosophers and social scientists are ready to accept it. Especially when coupled with other assumptions about the nature of individual choices, the result is an extremely unrealistic picture of the workings of society and the economy. For example, individual preferences are considered fixed and exogenous to the economic mechanism, although they certainly are neither. In some cases they may be considered fixed but then the ongoing changes must really be infinitesimally small.¹

Both Radomysler (1969: 91) and Baran (1968: 26) emphasize the point that a realistic welfare economics should begin with an analysis of welfare and its causes. This has been completely overlooked by welfare economics. As Neurath (1970: 39) has so aptly remarked: »Representatives of political economy tried to teach people something about human happiness. And a kind of hybrid, partly dealing with human happiness, partly dealing with bookkeeping, was evolved. But the scientific means they tried to apply have been inferred from bookkeeping and not from happiness analyses.» This refers to an earlier period but fits nicely in the welfare economics context.

Welfare economics has been criticized very harshly even by people who are »inside» the tradition. In this criticism, all of the specific points that have been mentioned above, such as the extreme restrictions in the definition of welfare, etc., have come up. For instance, Myint (1948: 220) notes that »welfare economics has followed the line of least resistance in restricting itself to valuations of separate individuals which can be measured in terms of money, while a more comprehensive study of human welfare requires a revision and sometimes even a replacement of market values by the valuations of Society as a collective whole which, although not so accurately measurable are more fundamental». The same point about the restrictiveness in the definition of welfare is brought home even more forcefully by A. Radomysler (1969: 92, originally published in 1948): »In current writings of welfare economists, it is true, the matter is simpler than this. However, they are hardly concerned with the problem of welfare; in fact they are not. . . . Welfare, or happiness (i.e., Radomysler equates welfare with happiness), however, is no simple thing. That which our welfare economists consider is only one part; and what they see in this, more-

¹ See Gintis (1969: 1–2) who explicitly assumes the contrary. It is interesting that the assumptions Gintis calls Marxist are actually identical to the ones endorsed by such conservative economists as Frank Knight and J. M. Clark; Knight (1969), Levin (1956: 117–118), Myint (1948: 209–210).

over, is quite simply not there. All the things that matter, on the other hand, are left out.»

Radomysler's chief claim is that welfare economists have lost touch with reality. None of the actual problems relevant to individual and social welfare are actually argued about. Radomysler lists the following: »Lock-outs and strikes? Industrial relations? The control of wages and the control of prices? . . . Private ownership or nationalization? The problem of justice in the distribution?» (Radomysler 1969: 93). This list could be continued indefinitely, and here we already arrive at the threshold of a Marxist critique: e.g., one concerning the relationship of social reality to welfare economics.

It might be said that welfare economics is in an impasse, as is noted by many critics, friendly and otherwise (see for instance Little 1957: 1, Leibenstein 1965: 39, Pahlke 1960: 79). Pahlke suggests that welfare economics has only two ways out: either to preserve the assumptions and restrict the area of application, or to give up the assumptions. Essentially, the latter line is not only a way out but it is a way out of welfare economics altogether, because it would imply giving up not only one of the assumptions but practically all of them. This is probed in the following, when welfare theory proper is analyzed.

It is clear that in the present situation, where the opinion that welfare economics has no future is rather widespread, there are innumerable suggestions as to how to develop the field. I shall take up a few of them in the following sections, but by no means all, of course, as that would be impossible.

By way of a general conclusion, one could say that historically, the study of welfare economics originated from a concern for a broader economics that would include the entire social organism (Myint 1948: 206—207). This was especially true of the first decades of the twentieth century. Later, welfare economics degenerated into a mere defense of private capitalism, an apologia for the existing conditions.

For a considerable length of time there have been suggestions made concerning the development of welfare economics along its originally intended lines. As far back as 1948, Kenneth W. Boulding made a prediction that, still today, is appropriate only as a prophesy: »Thus we seem to be on the verge of an expansion of welfare economics into something like a social science of ethics and politics: what was intended to be a mere porch to ethics is either the whole house or nothing at all. In so laying down its life welfare economics may be able to contribute some of its insights and analytical methods to a much broader evaluative analysis of the whole social process» (Boulding 1948: 34).

6.2.8. Political Implications

However, sharp the criticism against the assumptions and theories of welfare economics, there has seldom been any attempt to explain why welfare economics is such an impotent and useless discipline. The »inside» critics of welfare economics, such as Graaff and Little, avoid drawing conclusions about the origins and causes of this impotency. Only recently have remarks about the problems become open. One of the earliest is by Paul A. Baran (1968: 26) who simply notes that welfare economics is one of the most apologetic disciplines of all social science and the one most directly engaged in defending capitalism by all means. In particular, this has involved the direct omission of matters such as might implicate capitalism, e.g., the problem of equality. Almost all of the above-presented features of welfare economics, such as the Pareto principle, the separation of efficiency and equity, of distribution and production, the denial of interpersonal utility comparisons, etc., can be conceived of as means toward this end.¹

It might be said that overall, welfare economics was mainly an activity of the more conservative type of economists, especially in later times. This has been disputed, by pointing out that Lange and Lerner, as well as other socialist economists for example, were interested in welfare economics and were even involved in its development. It is obvious, however, that this was based on mistaken notions of the »system indifference» or neutrality of the concept of welfare. It was presumed that the objective of the maximization of welfare was perfectly apolitical and the question was only which of the two, a centralized planning mechanism or private capitalism, could realize it better (see Lange—Taylor 1964).

It is painstakingly obvious that the writings of Lange and especially those of Lerner at that time can not be considered particularly socialist or Marxist (see especially an effective refutation by Bettelheim 1958: chapter 1). In effect, we may say that a comprehensive Marxist critique of welfare economics does not exist. Yet the problem is very interesting, because welfare economics may be conceived of as one of the well-developed theoretical attempts at defending the fundamental precepts of capitalism, namely, the free consumer choice in a system of private enterprise. Even Dobb's book, *Welfare Economics and the Economics of Socialism*, (1969), does not amount to such a criticism.

Quite obviously this is due to the fact that Marxists have looked on the field of welfare economics as blatantly reactionary already on the

¹ See Dobb (1969: 77—78) who notes that after the classics, such problems as equality have become repulsive for economists in general.

political level — a continuation of the worst tendencies in classical economists. What Marx said about Utilitarianism has later been reiterated by Paul A. Baran on the topic of welfare economics, almost verbatim.¹ Thus, an outside critique of welfare economics has often merely consisted of arguments not directly related to the actual content of welfare economics.

Recently, however, there has been a full-scale attempt at a critique of welfare economics from a relatively new (although not so original as the author himself claims) point of view.

In his unpublished work, Gintis has attempted to show the failure of the concept of welfare in welfare economics. As pointed out above (p. 101), some of his assumptions are very closely related to the classical tradition, although he presents them as Marxist, but in most of his analysis he introduces a novel approach to welfare economics.

According to Gintis, neo-classical welfare economics is only a faithful reproduction of the contradictions of capitalism. Just as capitalism is based on the efficient production of goods and services, so is welfare economics based on a view of welfare that sees goods and services as final ends in themselves; »non-physical, non-market unit-objects are treated as 'means' toward the maximization of marketable products in capitalist institutions, the justification for these institutions on the part of neo-classical theory requiring theory devoid of welfare-relevant attributes» (Gintis 1969: 10—11).

Gintis starts his analysis from two »Marxist» principles: »First, we take 'preference structure' as endogenous to the economic mechanism, following the dictum that 'men develop according to their social relations of production . . .'

»Second, we extend the scope of welfare-relevant entities from goods and services to the gamut of social roles, relations, activities and objects, in the belief that economic activity has a formative influence on all aspects of social life. Social welfare depends on the structure of environment, community, and work activities, as well as the pattern of individual psychic development, and this fact must be incorporated in a welfare model» (Gintis 1969: 1—2).

As pointed out above, these assumptions are not new or »Marxist» in the sense that they were accepted exclusively by the Marxists. It is obvious that precisely these qualities have been essential to welfare theory for a long time, and are not limited to a Marxist point of view. In a Marxist approach, both of these assumptions should obviously be much more

¹ Marx—Engels (1970: 114): »The economic content gradually turned the utility theory into a mere apologia for the existing state of affairs, an attempt to prove that under existing conditions the mutual relations of people today are the most advantageous and generally useful. It has this character among all contemporary economics.» cf. Baran (1968: 26).

specific, and the role of economic institutions should be especially emphasized.

But Gintis is even more traditional in abstracting the content of welfare and concentrating only on its form — this being exactly the argument of the more conservative wing of welfare economists who wanted to ignore all relevant considerations (*ibid.*: 4).

Despite the traditional outlook of Gintis' approach, his requirements for welfare economics are rather radical. First of all, he quite correctly interprets »welfare economics» to mean the study of the outcome of economic activity and economic phenomena for individual welfare (*ibid.*: 4). He specifies by noting »... the crucial set of conditions that must be satisfied by any adequate welfare theory. Such a theory must consider the effect of a particular organization of economic institutions not only on the implied set of marketable physical unit-objects, but on the properly economic unit-objects in the form of economic roles and collectivities, on the other relevant social unit-objects, and on the implications of this economic organization for the compatible 'bundles' of unit-objects on the level of physical-organic, personality and cultural systems» (*ibid.*: 25).

These requirements are very demanding indeed, if one considers what welfare economics has thus far accomplished, but this could indeed be considered a partially »Marxist» program, although the restriction of emphasis to *individual* welfare is not acceptable. Gintis correctly notes that this is not only a program for welfare economics but for welfare theory in general (or welfare sociology as he prefers to call it (*ibid.*: 36)).

It must be said that the constructive development of welfare theory is not adequately emphasised in the Gintis paper referred to above. But he manages to pinpoint all of the crucial failures of welfare economics. For example, Gintis points out a fact that has not been noted elsewhere: welfare economics actually takes data » — as the given prerequisites for analysis — precisely what must be one of the outcomes of the analysis» if it is to be more than a »simple apology for existing relations of production» (*ibid.*: 38); i.e., it takes as data the preferences of the individuals and considers them given.

Some areas of Gintis' criticism are rather traditional (see for instance pages 17—18 where he criticizes the neo-classical assumptions in a very conventional way) but all of his paper is a very radical critique of the foundations of classical and neo-classical welfare economics. It cannot be called a Marxist critique, but it deals with certain related points. It is very understandable that a Gintis-type critique which is clearly prejudiced cannot be accepted by the more traditional welfare economists. It is against the accepted paradigm in so many ways. But I feel that it incorporates a much more fruitful starting point than the existing structure of welfare

economics. This belief may be arbitrary, but some credence is of course gained by the fact that traditional welfare economics has proved its fruitlessness.

6.3. *Compensation Principles*

The principle of compensation and discussion about it is mainly historical now (see e.g., Little 1957: 84), yet it is of interest from the normative science point of view and especially from the point of view of social policy. As mentioned above, compensation criteria were based on the belief that it is impossible to compare interpersonal utilities and therefore one must look for possibilities to make recommendations based on unanimous consensus (Rothenberg 1961: 62, Kaldor 1969: 387).¹ In believing that consensus would provide an opportunity for 'objective' and 'scientific' recommendations, economists were of course in error (see Nath 1969: 95).

Compensation criteria may, interestingly enough, be seen as an attempt to get around the famous Hume guillotin which formed the basis for separation between 'positive' and 'normative' science. But at least for some economists, the wish to make recommendations clearly overrode the wish to stay inside the confines of positive science.

Another interesting connection is that compensation criteria are a clear example of the division of economics into two distinct parts: production and distribution. The original idea behind the first compensation criterion developed by Kaldor was specifically to reduce all problems of welfare economics to production and completely eliminate the distributional aspects (Kaldor 1969: 388—389).

Although the compensation principle does not seem to be very useful, it has some important qualities. First, it calls attention to the problem of externalities and their solution (Baumol 1965: 25). Brownlee and Buttrick (1968: 249) emphasize this side of the compensation principle in their analysis of its possible uses. There are many actions in society that affect citizens in different ways. Brownlee and Buttrick recommend the estimation of compensatory taxes and bribes needed in every social action. Some elementary compensation (in most cases to landowners) occurs constantly, but applied in full this principle might have interesting consequences. On the other hand, the total application of compensation analysis would make it indistinguishable from cost-benefit analysis.

This is the question that already strikes at the foundations of the whole criterion. It is obvious that one cannot separate production and distribu-

¹ The important articles of Kaldor and Hicks are reproduced in Arrow—Scitovsky (1969) which the references cite.

tion with respect to welfare. The manner of distribution is clearly dependent upon the relations of production, as the price system is not only a distributive mechanism but also a control mechanism for productive resources (see Dobb 1969: 26, Graaff 1957: 155). On the other hand there is no concept of total product that would not be dependent upon income distribution.¹

Thus there is no way of separating production effects from distribution effects while considering welfare. This is essentially what the Pareto principle, on which all compensation criteria are founded, disputes. In accordance with the Pareto criterion, distribution would have no welfare effect: this is also what compensation criteria assume (or that distribution may always be neutralized). We shall return to this problem because it has far-reaching consequences especially for politics: that is, what is politically acceptable and what is not.

The compensation principle may be said to be based on the following assumptions (Rothenberg 1961: 69):

1. State A is socially preferred to state B if every member of society prefers A to B.
2. State A is socially preferred to B if at least one person prefers A to B, and nobody prefers B to A.
3. The society is indifferent with regard to A and B if nobody prefers neither A nor B.²

In other words, the states A and B are not comparable if there is at least one person who prefers B to A while others either prefer A to B or are indifferent. The fundamental principle of compensation, then, is simply that if the individuals who prefer (for instance) A to B can compensate (bribe) those individuals who prefer B to A so that these become at least indifferent while the compensating individuals still prefer A to B, a change from A to B is an improvement, or is socially preferred. All interpersonal comparisons of utilities are therefore avoided.

This is roughly the original principle (or criterion) of compensation, presented by Kaldor (1939: 385), and elaborated by Hicks (1939), and called the Kaldor—Hicks criterion. Later, Scitovsky (1969 (1941)) pointed out some anomalies in the principle and suggested a new version that intended to correct these. Samuelson (1947) however, was able to show that even the Scitovsky version was vulnerable to intransitivity. It might be said that with Little's attempt (1951, 1957) to develop a 'final' version, the creative period of compensation principles was ended (see Dobb 1969:

¹ See Arrow (1963: 40). Note that Marx has also analyzed this problem well in *Grundrisse* (1970); see also Rescher (1966: 15), Rothenberg (1961: 102).

² Note that this is precisely the fundamental Paretian assumption. Thus the compensation principle is nothing but an application of the Pareto principle.

82–85). Currently, few seem to consider compensation principles worthwhile,¹ although there might be some limited use for them in, for instance, problems of social policy.

There are two kinds of compensation: actual and potential. The difference between them is not particularly significant, although previously there has been some intensive discussion about whether there should be actual compensation or not (see e.g., Baumol 1965: 163). This discussion has some ideological and political relevance in the sense of who would benefit more from actual or potential compensation. For instance, Little (1957: 120) thought that potential compensation would be more progressive as the consequent reforms would probably be biased for the poor, for whom it would be difficult to make compensations to the rich. In addition, the effects of actions would not be entirely clear, and the process of compensation would be difficult in practice, although easy to calculate in theory. Consequently, potential compensation would not hinder the execution of actions as much as would actual compensation. On the other hand it is equally possible to imagine that most reforms would benefit the rich and therefore actual compensation would be a necessary condition for their acceptability (for an example, see page 112).

Most of the students of compensation principles seem to regard potential compensation as the more practical. In addition to the practical advantages mentioned above, there is also the consideration that if compensation were actually to be made for every change, the resulting situation would probably not vary significantly from the original; i.e., the principle of actual compensation is very conservative in character (Little 1957: 96, Scitovsky 1969: 393). It was also defended by the implausible argument that different changes would cancel themselves out, with the result that, in the end, no compensation would be necessary and everybody would be better off (Zeckhauser–Schaefer 1968: 59).

When considering the operation of the compensation principle, it makes no difference whether one envisages actual or potential compensation, as long as practical problems are not important. In the following it may therefore be assumed that compensation is potential.

The Kaldor compensation principle may be illustrated² graphically (figure 6.3.a) using the device of welfare frontiers (or utility possibility curves).

¹ Except maybe Mishan (1969), and of course the more conservative wing of economists such as Buchanan who represent the point of view that the only acceptable system of recommendations is based on the compensation principle; Buchanan (1960: 114–116). See also Buchanan–Tullock (1962) where an entire text is built on this principle.

² For an involved formal analysis see Sen (1970: 30–32).

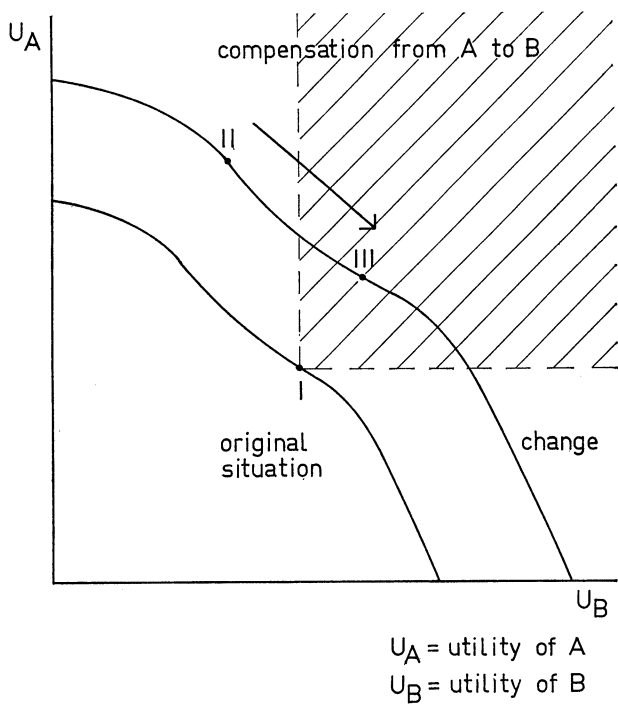


Fig. 6.3.a

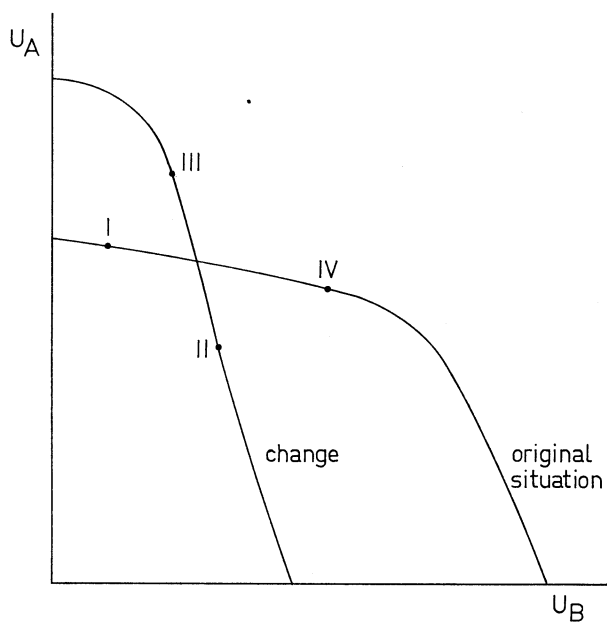


Fig. 6.3.b

The shaded area is that which is acceptable under the assumptions. This means that any change is acceptable where those who gain may compensate the losers so that the final situation falls in the shaded area. This, of course, is not always possible.

It was not long after the presentation of this criterion that Scitovsky was able to demonstrate ambiguities in the Kaldor—Hicks criterion in some situations. The so-called Scitovsky paradox may be formulated as follows: in certain situations it was possible that under the Kaldor—Hicks criterion both the change and the return to the old situation would be recommended. The explanation of the paradox was simple:

If the welfare frontiers intersect, it is possible, in the first instance, to move from situation I to situation II because by compensation the acceptable situation III can be reached. But from situation II it is also possible to move to situation I, because from it, it is possible to get to situation IV by compensation (Rothenberg 1961: 80—82, Zeckhauser—Schaefer 1968: 58—59). There is nothing astonishing in this result. If a change affects the distribution of welfare-relevant factors (as is indicated by the slopes of the welfare frontiers), it is perfectly understandable that a criterion such as the compensation principle falls astray.

This problem was solved by demanding that the welfare frontiers should not intersect in the relevant area under consideration. (Strictly, the number of times that the curves do intersect should not be odd). But even after this requirement was suggested by Scitovsky (and therefore named the Scitovsky criterion), it was possible to show that there were situations when the result would be ambiguous (Graaff 1957: 86—87). This was based on the fact that if the curve was allowed to intersect an even number of times, the recommendations would no longer be based only on compensation arguments: there would also be a distributive argument present. Between points II and III (see figure 6.3.c) lies a section of the original (pre-change) curve which is, in the Paretian sense, better than the respective section of the new (post-change) curve. Its rejection is therefore possible only on distributive grounds (Samuelson 1947: 251, Graaff 1957: 87).

The end result of these developments is that the compensation principle is ambivalent. Of course one might argue that such situations where the welfare frontiers behave in the way assumed by Samuelson are relatively rare, but this is not important. The fact is that welfare frontiers are scarcely known, if at all.

It might be said, therefore, that the compensation principles were defeated on their own grounds. But these were not the only possible grounds for criticism. The most important external reason for the breakdown of the compensation principle is obviously their distributive implications.

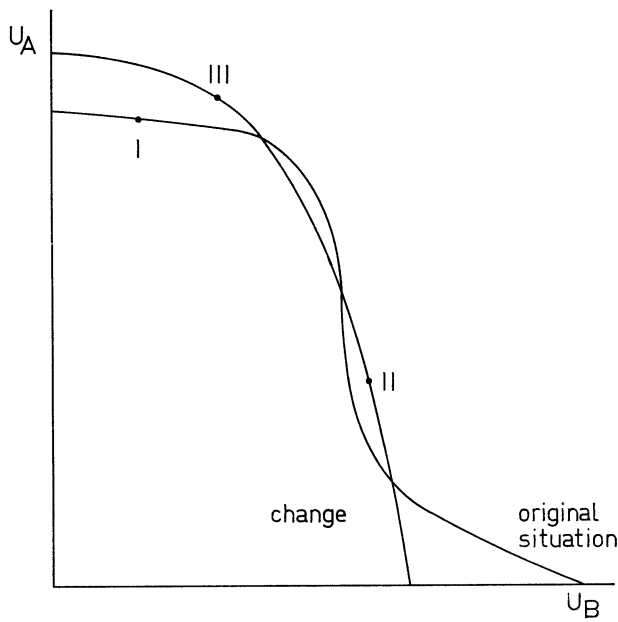


Fig. 6.3.c

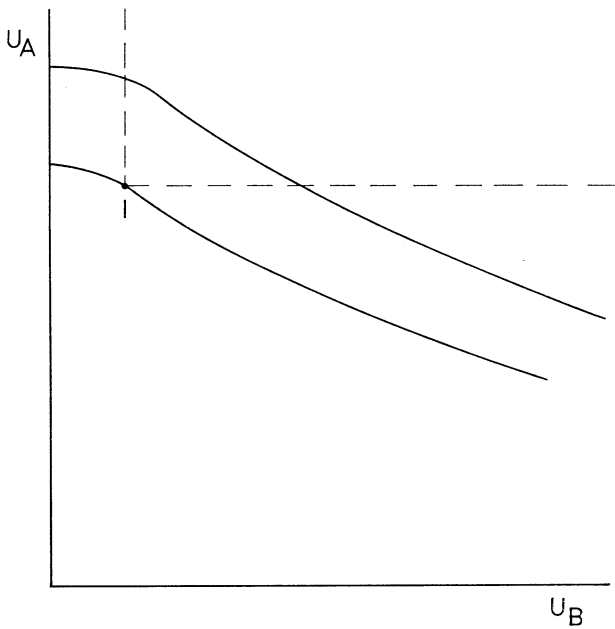


Fig. 6.3.d

In the first place, it is apparent that the compensation potentialities of the rich were quite superior to those of the poor and therefore compensation principles were biased towards such solutions that benefit the rich and had to be compensated to the poor (see Rothenberg 1961: 87). Assume that A is very rich and B is very poor. The two-man community would have the kind of welfare frontier shown in figure 6.3.d and the starting situation would probably be of the type shown in the figure.

Secondly, the compensation principle would entail distributionally very suspect solutions. For instance, if an act would increase the property of John D. Rockefeller by one million dollars and 1000 individuals of average incomes would thereby lose 999 dollars, according to potential compensation the change would be recommended because Rockefeller could (but he would not have to) compensate to the others the losses sustained, yet still have 1000 dollars left (Zeckhauser—Schaefer 1968: 59).

The above implications are related to the fact that compensation principles are strongly biased for growth: they favor policies for growth and are biased against policies that implement distribution (i.e., policies that change the slope of the welfare frontier). It has been said that the basic premise of compensation principles is that one should forget about distribution and concentrate on growth (Rothenberg 1961: 116—117). I pointed out in the previous chapter that economists disliked problems of income distribution, especially egalitarian problems. The compensation principle is an outstanding example of this dislike.¹

A more sympathetic explanation for the growth emphasis is given by Rothenberg (1961: 118), whose argument is rather elaborate: If we assume that the growth potential of policies is independent of who gains and who loses (i.e., there is no built in propensity for a certain party to win and another to lose), then the result of who loses and who wins occurs completely at random. And if the policies affect growth, it is obvious that, in general, more people are likely to win than to lose. Rothenberg himself notes that this explanation is not adequate: there is no certainty that gain and loss is a random process, and that the expectation of gains are larger than the expectation of losses for the same individual in any one policy.

¹ This has been emphasized by Rescher (1966: 17), who points out: »What (the Kaldor—Hicks criterion) does is to serve as a smokescreen, hiding unconcern with a certain set of problems and as an excuse for passing these unwanted problems on to somebody else . . . The tendency of welfare economics is simply to divest economics of concern with the very problem we set ourselves here — that of evaluating distributions. Apart from a dutiful, polite bow in the direction of egalitarianism, modern Anglo-American economics has tended to refuse to confront our problem on the relevant terms, and thus provides little guidance toward its solution».

It should be mentioned that Kaldor himself emphasized that because it is not possible to give recommendations on the grounds of interpersonal comparisons, they should be avoided. That is to say, he was inspired by the Robbins dictum (Kaldor 1969: 387).

The more recent development of compensation principles has been based on an explicit recognition of the distribution problem. But their solution to this problem is more imaginary than real. It is however, instructive to see how the problem of distribution was actually solved.

Little (1951, 1957) has tried to develop a criterion that would also contain distributional effects. This criterion is rather simple in principle:

- a) is the Kaldor—Hicks criterion satisfied?
- b) is the Scitovsky criterion satisfied?
- c) is the resulting income distribution »good»? (Little 1957: 101).

The idea was based on the precept that it should be possible to make a value judgment about the distribution, because in principle this would not conflict with the Paretian judgments: they explicitly eliminate all considerations of distribution. The main problem is, of course, whether it is possible to separate the distribution effects from other effects, specifically from growth effects. Previously I have indicated that this is not possible. According to Rothenberg, however, it would be possible:

- 1° if pure distributional judgments are simpler than judgments about social states;
- 2° if it were easy to measure changes of distribution; and
- 3° if it were easier to construct and observe judgments about distribution (Rothenberg 1961: 111).

Nonetheless, these conditions are not satisfied, says Rothenberg.¹

The Little criterion also ignores all the problems of the Scitovsky criterion, which are very real. Arrow has also noted that while the Kaldor—Hicks—Scitovsky criteria purport to compare different levels of production independent of distribution, Little tries to compare different income distributions independent of income (or production) levels. This is as equally impossible as the original attempt (Arrow 1951: 928).

Later, some additional difficulties of the Little criterion have been pointed out by, for example, Sen and Lydall. Sen (1963: 772) remarks that in reality, the Little criterion is not based on the separation of distribution and production but only on the use of criteria, one of which is Paretian and the other unspecified. These criteria together lead to certain

¹ An example on the interdependence of distributional and absolute judgments is given by Rothenberg (*ibid.*:111) A person may disapprove of the existing distribution of income because he thinks the poor are too poor, but given the same distribution, he would accept it if the poor were in an absolutely better position, i e., if the whole distribution would prevail on a higher level.

conclusions about policies. What is fundamental in the Little criterion is that the complete transitivity of policies is assumed, i.e., transitivity of welfare comparisons. In effect, the Little criterion is not a criterion at all but only a transitivity assumption, says Sen (*ibid.*: 776). From a practical point of view (the comparison of distributions) this is certainly true. But from a theoretical point of view it may be denied. Little assumes also the possibility of actual comparison and not only the existence of comparable alternatives.

Yet this has not prevented E. J. Mishan from considering the Little-type criterion as the best welfare criterion developed in welfare economics. Although he admits that the results are very meagre, there are, in his opinion, some practical advantages in the Little compensation criterion (Mishan 1969: 67—68, 73). This is certainly a minority opinion. Most students of compensation criteria do not consider them as viable alternatives in considering welfare-theoretical problems.

Generally speaking, it can be said that the compensation criteria are extremely restricted in application: any middle-level decision-maker has to employ criteria much more complex and applicable to wider problems than compensation criteria (Zeckhauser—Schaefer 1968: 60, Rothenberg 1961: 71—72). The crucial restrictions of compensation criteria may be summarized as follows:

- 1° Compensation criteria are only sufficient conditions for acceptable actions; they are not necessary for finding policies that are 'good' (Arrow 1951: 924).
- 2° It is possible, therefore, to choose only the best state or policy among those that are compared: not the best possible policy. If the recommendation of a policy simultaneously prevents the execution of another policy that is better, the opportunity costs of compensation criteria are great.
- 3° The conditions of compensation criteria are extremely restrictive. They are founded on all too strict assumptions; specifically, they are too simple.
- 4° The practical difficulties are also great. For instance, to calculate the amounts that actually should be compensated is an impossible task. Rothenberg (1961: 77) remarks that it is not at all certain whether it would be easier to calculate how much to compensate than to form a welfare function.¹

¹ Rothenberg's critique that, on the basis of the second best theorem the area of the criteria is still more restricted, is however misplaced. It is not required that compensation criteria be applied only to optimal situations (see Graaff 1957: 87). In fact, it is questionable whether compensation criteria could be applied to optimal policies.

5° It is implicit in every compensation criterion that they break down if we want to compare large changes (see Arrow 1951: 929–930). It is obvious that most welfare economists prefer small changes to big ones. But theoretically it is interesting that the compensation criterion is a typically disjointed-incrementalist criterion (see Braybrooke—Lindblom 1963), although the conscious cross-references do not exist. Although it is agreed that compensation principles are not widely applicable, there are extremely interesting theoretical connections between some approaches to social policy, and compensation principles.

According to a rather popular school, social policy was the distributional aspect of general policy-making (see Nieminen 1955). In other words, one could say that social policy theorists concentrated on the distributive aspect of the Little criterion. On the other hand, they were little acquainted with the developments in welfare economics.¹

There are two pertinent problems here. First, the interest of social policy theorists was, as previously mentioned, in the redistributive aspects of policy (this is not true now, but was earlier). This was exactly the point against which the compensation criteria were directed. The primary idea behind the Kaldor—Hicks criterion was that a redistributive policy alone would be damaging. And it might be mentioned that the social policy theorists were struck with the same disillusionment about distribution problems that was to be seen in the compensation criteria (see for example Kuusi (1964) where this disillusionment and the emphasis on growth is very marked).

On the practical level, it seems as if social policy problems would be planned to defy application to compensation criteria. For instance, in sickness benefit programs the beneficiaries and the losers are actually very much the same group. In fact, many of the newest measures in social policy (in Finland) such as the work-pension provisions (*työeläkejärjestelmä*) run counter to the spirit of compensation. There is nothing to compensate as there is no redistribution.

This is probably related to the same fundamental reason why compensation criteria in general are not popular. The social policy of a capitalist country is especially geared to avoiding problems of compensation and uses »comprehensive» solutions meant to avoid these problems entirely. In fact we might say that the compensation approach is not a realistic one in any society where there is no possibility for compulsory compensa-

¹ For instance Dich (1964: 43) only mentions welfare economics when speaking about a subject that in no way is related to welfare economics. Liefmann-Keil (1961) has a longer reference to compensation theoretical problems but only as a digression. Nieminen's (1955) extensive book was published just when the discussion about compensation criteria had reached its height, but did not contain any mention of the subject.

tory arrangements. Rescher, for exemplar, notes that the principle of compensation has an obviously mythological basis: »There is no reason in theory, and little evidence in practice to think that the beneficiaries of a new economic arrangement are likely to compensate those who sustain losses thereby. Rosy opportunities for general improvement often turn, in the cooler light of morning, to grey actualities that advance special interests, doing so in ways that could and should have been foreseen. If one is going to motivate economic measures in terms of a social-contract-for-the-general-advantage conception, one must undertake the responsibility to assure in advance that the terms of this contract are reasonably realistic ones» (Rescher 1966: 15).

What is wrong in Rescher's presentation is that the compensation principle is especially meant for cases in which special interests are advanced in such a way that they should be compensated for. The general improvement programs, on the other hand, deny the possibility to handle them by specific compensation.

6.4. *The Social Welfare Function*

6.4.1. General Remarks

In the following we shall analyze the most important and interesting concept of welfare economics, that of the welfare function. It is in this concept that all the fundamental problems of welfare economics are centered. There is nothing special about the concept of a welfare function in itself. It is only natural to express a relationship in a functional form, through which some fundamental mathematical qualities may be used, and the structure of the problem can be clarified.

The welfare function implies simultaneously a definition of welfare. Through it are specified the actual ways to define welfare in economics. Astonishingly, the welfare economists have avoided the observation that they are defining welfare by the welfare function. On the other hand this type of definition is largely empty, because neither the variables in the function, nor the relationships between the variables are specified. The fundamental question solved by the welfare function has been that of the conditions of its maximization. These conditions can be seen to be rather restrictive, although the assumptions of the welfare function itself are not particularly extensive. Not even the form of the function, or its components are specified except to a limited degree.

The welfare functions presented in the following are all Paretian. In other words, they are based on the Paretian assumptions presented above.

First the general formulation of the welfare function will be presented, after which we will examine the class of welfare functions defined by the Paretian assumptions. It is obvious, therefore, that there are many more general welfare functions, although there has been no theory developed for them (cf. Inada 1964: 316—317). The use of Paretian welfare functions has been defended on grounds that they define a relatively large class of functions while making relatively few assumptions. Furthermore, these assumptions are supposed to be very widely acceptable (Graaff 1957: 9—10). It is plausible to assume that a welfare function that supposes unanimous consensus would be accepted by the individuals of whose welfare functions it is constructed. This is of course a tautology. Yet it can be said that the possibilities for application cannot be very extensive. Indeed, there are very few occasions that allow for the construction of such functions.

It should be noted that the Paretian assumptions do not specify the welfare function completely. As a result of the maximization, we get an infinite amount of points. This is due to the fact that the assumptions are not enough to define a complete ordering (Lange 1969: 26—27).

The famous formulation of the welfare function by Bergson in 1938 is as follows: Take two consumer goods x and y , two kinds of labor a and b , two other factors of production C and D and all other factors affecting welfare R, S, T, \dots . Assume the society consists of s individuals ($g = 1, \dots, s$).

The welfare of the society W can be given as a function of these variables:

$$(6.4.1) \quad W = W(x_1, y_1, a_1^x, b_1^x, a_1^y, b_1^y, \dots, x_s, y_s, \\ a_s^x, b_s^x, a_s^y, b_s^y, C^x, D^x, C^y, D^y, R, S, T, \dots)$$

In other words, the welfare of the society is a function of the goods consumed by the individual, work performed by the individuals, the inputs of other factors of production and of other relevant factors (Bergson 1966: 5; some of the symbols have been slightly revised to avoid confusion).

The interpretation given to economic welfare above is here very simply formalized; we assume that the factors, R, S , and T are constant and all changes analyzed are *ceteris paribus* with respect to these factors. This is defensible if the changes in the factors are small, although the factors are certainly interdependent (see Bergson 1966: 5—6, Rothenberg 1961: 8—10). In the following I shall assume a perfectly general formulation except, for simplicity, in maximizing the function I shall regard only the «economic» factors (see App. 1).

It is evident that the formulation given by Bergson is rather reminiscent of a production function (except for the consumer goods used,

and one might well imagine them belonging in a more general production function). But concerning the maximization of the function, it is insignificant by what names the variables are called.

The formulation 6.4.1 is perfectly general: it is merely a function that defines what factors affect welfare. Because of this, Rothenberg claims that it entails no value judgments (Rothenberg 1961: 11). This is of course erroneous, because it is certainly not only factual considerations that determine which factors affect welfare and which do not. For an example, it is not a simple matter of fact whether a certain type of work positively affects social welfare. But these assumptions aside, there are no considerations referring to the connection of individual and social welfare; it is probably this that is envisaged by Rothenberg. And here the Paretian assumptions enter the picture. On the basis of the first assumption (see p. 97) the welfare function is transformed into the following:

$$(6.4.2) \quad W = W(U^1, \dots, U^s)$$

where U^g = the utility of the g th individual. W is assumed to be a monotonically increasing function of U^g , i.e.,

$$(6.4.2b) \quad \frac{\partial W}{\partial U^g} > 0$$

(Bergson 1966: 58, Nath 1969: 8–9).

The social welfare function is assumed to be composed of individual welfare functions and the direct formulation of 6.4.1 is substituted for the indirect formulation where all the given factors of welfare affect social welfare only through individual welfare functions.

These individual welfare functions, in terms of 'economic' welfare, may be formulated as follows:

$$(6.4.3) \quad U^g = U^g(x_i^g, v_j^g) \quad \begin{array}{l} i = 1, \dots, n \\ j = 1, \dots, m \end{array}$$

where x_i^g is the share of the g th individual of the i th consumer good and v_j^g is the productive input of the g th individual in the j th form of labor (Nath 1969: 9).

The maximization procedure is based on this form of utility function, but there is, of course, nothing that could hinder a more general formulation (see, for instance, Alberts 1970: 47–49).

The Bergson welfare function, then, is an individualistic — and in its content rather restricted — function which, however, does not obscure the essential problems in connection with welfare functions. It can be interpreted as a means of giving a numerical value (of social utility) to each

social state with the aim of society being the maximization of the function under technological and resource, etc., constraints. In other words, it is supposed to help the society to choose that social state conducive to the highest possible social welfare in a certain environment (Arrow 1963: 22, Alberts 1970: 40–41). The idea is simply to express the ordering of the states of society in the set of real numbers.

Note that even this is not strictly necessary: as Sen (1970: 34) points out, a social welfare function need not be a real-valued function; it is only necessary that it be an ordering (for example, a lexicographic ordering cannot be represented by a real-valued function).

The form of this function has been a point of much interest. If we assume that it is simply the sum of the individual utility functions perhaps weighted by some appropriate numbers, we are in a solution where the interpersonal comparability of utility is assumed (see the Lange formulation, p. 129). We may assume more complex forms for this function, some of which do not require interpersonal comparability, some of which do. The form of the function is, in essence, a problem of aggregation, i.e., the problem of how to combine individual utilities. This is precisely the problem given an exact formulation by Arrow and analyzed in the next chapter.

The essential quality of the social welfare function is that it specifies the goals of society. W (normally a vector)¹ gives the goals of society, whereas the variables in the argument are the means to be manipulated by the society or by the individuals themselves (Nath 1969: 139–140). If the goal is simply the maximization of W , the problem is as presented below. If the goal is a specified value of W , the problem is more complicated.

From the above, one may get the impression that the problems involved are rather small. As can be seen in the following, this is not true. The maximization as a mathematical problem is simple enough; even taking into consideration anomalies such as corner maxima, the problem of the global maximum, etc. The essential problems are in the specification of the function, the selection of its variables, and the relationships between these variables, i.e., problems that have not bothered welfare economists. On the other hand, there has arisen a degree of criticism against the welfare function even among welfare economists.²

A typical example is probably represented by the view of Dobb (1969:

¹ We may either assume that W is a real number, or that it is a vector. In the latter case, the problem of maximization is slightly more complicated in form, but not in substance.

² Some of it is self-defeating, such as that of Brownlee and Buttrick (1969: 235). They 'discard' the notion of a social welfare function in favor of a 'partial ordering of social states'. In fact, the Bergsonian social welfare function itself is nothing but a partial ordering of social states, as can be seen in the following.

110) that the welfare function is simply an elegant instance of a formalism that greatly eases the analysis by assuming important problems to be solved by some ingenious but unnamed way without, in fact, giving any clues for their solution. The formal solution is therefore no solution at all, because all the real problems remain unsolved. The simple technical problems receive all the attention and the corollaries are given an economic interpretation although the function itself is devoid of any economic content.

This has been stated also by, for example, Zeckhauser—Schaefer (1968: 54) and Little (1957: 123). In the defence of the mathematical formulation it should be said that without it there would be no clarity about which problems are solved and which are not, and also that mathematical formulation gives some specificity to the problem (Debreu 1959: viii). This is, of course, not to be taken for granted: we may also say that the formulation of the welfare function has obscured the view of the real solution to the problem and some of the central aspects of it, such as the problem of the politization of the problem. In fact, the meaning of the Dobb critique lies in the idea that the importance of the welfare function should not be exaggerated: it does not solve anything in itself. It is only a frame of reference, and faulty as such.

6.4.2. The Welfare Optimum and Its Conditions

In this section I shall analyze the maximization¹ of the welfare function and the problems in this connection. We shall not, however, go into the technical details of the maximization of the welfare function at this time (but see Appendix 1, where the maximization procedure is presented and the optimum conditions are formulated mathematically).

In the following I will interpret the optimum conditions and analyze their importance, especially from the point of view of policy. From this analysis certain negative conclusions concerning their relevance emerge.

There are three groups of conditions, the production optimum, the exchange optimum and the total (or top level) optimum. These can also be combined, but it is more illustrative to consider them separately. The optimum conditions are, of course, only necessary conditions for the Pareto-

¹ Some students (for instance Simon) have presented the view that maximization is an incorrect term and that we should speak of satisficing: people attempt to achieve satisfactory, though not necessarily maximum solutions (see Zeckhauser—Schaefer 1968: 92—93). It seems that this is only juggling with words. Maximization is maximization even if you take heed of the restrictions and constraints; satisficing is just maximization with respect to the constraint: one should not restrain oneself too much. This goes for the 'modern' economists as well, who claim that firms no longer maximize their profits.

optimum. We need also second derivatives and conditions about them to make sure that what we have is a maximum and not a minimum. It can be shown that these conditions are those required from an equilibrium point in static equilibrium theory. As mentioned previously, even these only guarantee the existence of a local maximum; there is no certainty that the point is a global maximum. In the framework of the classical approach this has been solved giving a set of additional conditions which restrict the end result even further (Mishan 1964: 25–26, Nath 1969: 31–34).

It will not be necessary to analyze these additional conditions, as the analysis of the optimum conditions themselves is enough to show the futility of this approach (note that there are attempts to show that these conditions are more widely applicable (Arrow 1951)).

The *production optimum* (which also expresses the condition of technical efficiency) may be interpreted as follows (Nath 1969: 14, Little 1957: 136, Mishan 1964: 18): For any two production factors, the ratio of their physical marginal product must be the same in the production of all those goods to which they contribute. Or in other words, the marginal substitution rate of any two production factors in the production of every good must be equal. The reverse is also true: for every good, the marginal rate of substitution for every pair of factors must be the same. This may be illustrated in figure 6.4.a (a so-called box diagram).

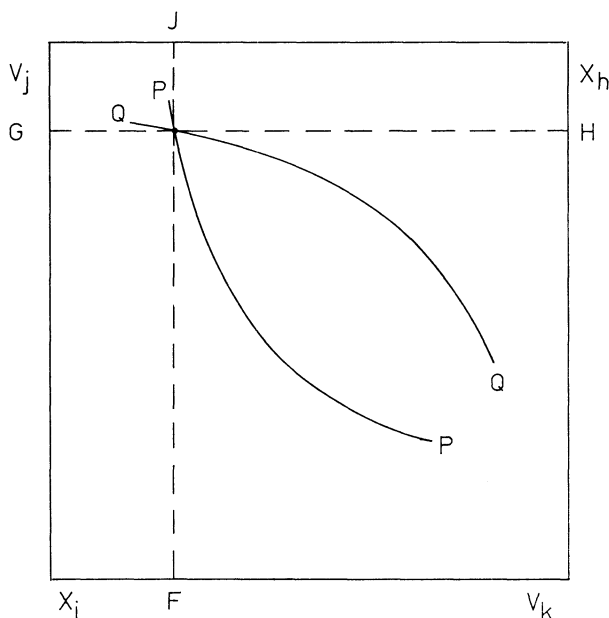


Fig. 6.4.a

The notation follows the usage above. PP and QQ are isoproduct curves (convex to the origin), i.e., curves where the production of the good stays constant while the ratio of the factors is changed. Only in the point of tangency of these curves is it possible to increase production without increasing the total amount of factors used, thus this is the production optimum defined above. This also explains why the optimum conditions are often (and also here) presented as the ratios of derivatives (i.e., angular coefficients of the tangents). In the situation of figure 6.4.a, G units of factor V_j are used in the production of X_i , and F units of factor V_k . Moving down on the curve PP we can increase the production of the good X_h (move to a higher isoproduct curve) without decreasing the production of X_i .

It has been claimed that production does not require other value judgements than the assumption of rationality (Nath 1969: 12–13). Yet it clearly contains assumptions that have marked political and social relevance. For instance, workers are assumed to have no preferences about types of employment, which is certainly not true, although a typical capitalist assumption. Under the production optimum, the efficiency of the workers is also independent of the income distribution, yet this condition is least problematic of all. Its main content is the rather innocent presupposition that all enterprises should buy material factors of production at the same prices. It is also possible to formulate the production optimum in such a way that entails that the workers are not indifferent as to their occupations. In such a situation, it is required that the differences of prices between human factors of production in different occupations depend upon preferences regarding work (see Little 1957: 155).

In any case, even in this form the actualization of the condition is very uncertain. Already the effect of regional differences is very noticeable. But we may still note the social content of the condition: it would require very little division of labor and there are no conditions about leadership. In fact, it is a rather democratic condition.

The following interpretation may be given to the *exchange optimum* (Nath 1969: 18, Mishan 1964: 18, Little 1957: 129). For any two goods X_i and X_h , the ratio between their marginal utilities for every individual must be the same. It is also required that in production the marginal rate of substitution for any pair of productive services must be equal for all individuals (who are engaged in these productive services).

This can be illustrated by a box diagram (figure 6.4.b).

The individuals are r and g , the products are X_i and X_h . PP and QQ are here regular indifference curves. From the intersection of the curves we have the distribution of goods for the two individuals. Just as in the previous condition, it is possible to move down along the other of

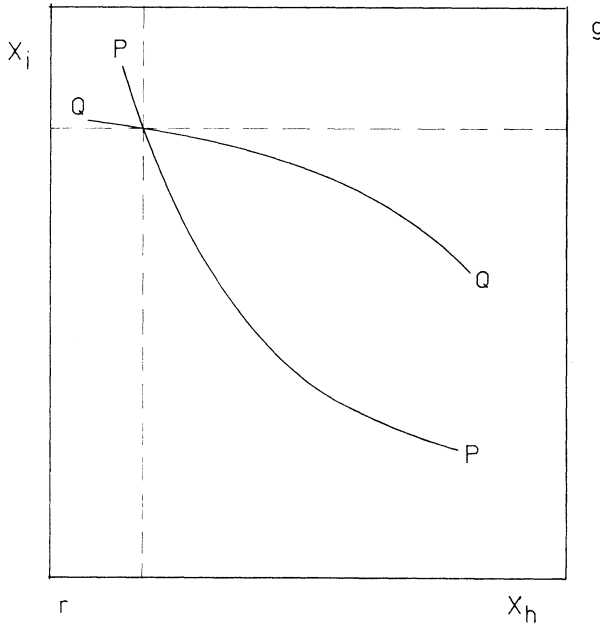


Fig. 6.4.b

the two indifference curves so that the situation of the other individual improves without impairing the position of the second. Only at the point of tangency is this impossible.

Let it be noted in passing that with the aid of compensation criteria, we can also show that the point of tangency is recommendable (a sufficient condition): it fulfills both the Kaldor—Hicks and Scitovsky criteria. From any move toward it regression is not possible. Instead it is possible that the distribution gets 'worse' (with respect to equality, for instance) when we move to the optimum point. This shall be analyzed slightly more extensively in the following (see also Little 1957: 130). The exchange optimum in no way depends upon whether there are external effects for the consumers or not (these are contained in the rates of substitution). Instead, these affect the production optimum.

The unrealistic character of this condition is obvious: for example, if we accept leisure as one of the goods among which the consumer may choose, we get into trouble. Most people are not free to choose as much leisure time as they would wish. In general the marginal rate of substitution does not reflect the free choices of an individual in many cases (Little 1957: 133—135; and not only free choices but also conscious or rational choices). On the other hand the exchange optimum implies severe

restrictions in the means of economic policy; for instance, all kinds of regulations are proscribed unless one wishes to reach the optimum.¹

In addition, progressive taxation is forbidden, as it interferes with the marginal rates of substitution of goods and services to different individuals.

The *total optimum* may be formulated as follows (Nath 1969: 19, Mishan 1964: 19, Little 1957: 141). For any two goods the subjective marginal rate of substitution between them must be the same for all individuals, and this ratio should be the same as the marginal technical rate of transformation in the replacement of one good for another by moving any factor of production from the production of the first good to the second.

On the other hand, this condition also requires that the subjective rate of marginal substitution between any *factor of production* and *good* must be the same (see appendix 1: equation A.1.20); and this common rate must be the same as the marginal technical rate of transformation of the factor of production and the good in question. The former part of this condition (see appendix 1: equation A.1.19) may also be expressed in such a way that the common subjective marginal rate of substitution must be the same as the marginal rate of transformation of all pairs of goods, i.e., the objective rate of substitution (Mishan 1964: 19). This optimum condition may be illustrated by the following diagram (figure 6.4.c).

QQ is the transformation curve which expresses the efficient transformation between goods X_i and X_h , and PP is the indifference curve of an individual g . QQ is concave to the origin and PP is convex to the origin. It is easy to see that the utility of the individual may be increased until PP and QQ are tangent to one another, so that the first part of the total optimum condition is fulfilled. The second part may be illustrated in the same fashion by substituting a factor of production for the good in one of the axes (Little is clearly in error in this regard, cf. 1957: 141).

The realization of this condition is not reasonable without the simultaneous realization of the two previous conditions, because otherwise the total optimum has no meaning (Little 1957: 141).

Above I have analyzed the content of the optimum conditions. The next step is to analyze their collective importance. If we compare these conditions with regard to their difficulty of actualization, the production optimum is clearly the easiest to reach. The exchange optimum is more

¹ Little emphasizes this in connection with his criterion of income distribution: it is precisely because of the considerations of the distribution of income that some regulative measures are taken. This shows, according to Little, that income distribution is more important than the optimum conditions (Little 1957: 153). See also Lange (1964 (1938)), who presents the same argument.

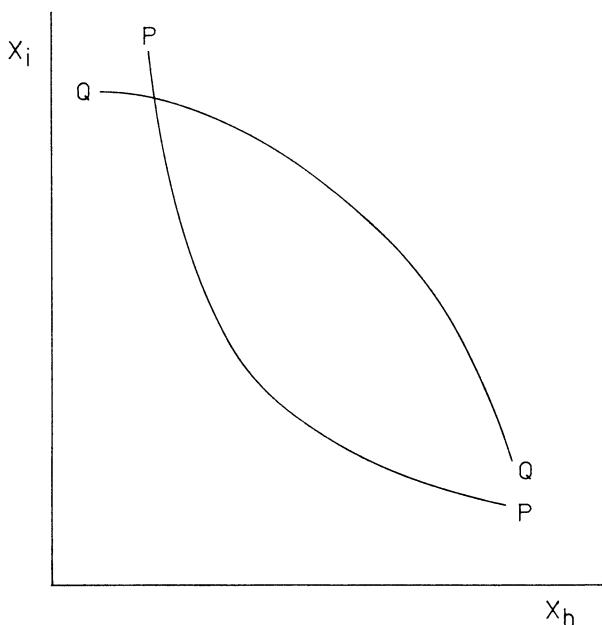


Fig. 6.4.c

difficult, but possibly achievable under some special circumstances. The realization of the total optimum, conversely, is extremely difficult.

In general, the practical significance of the optimum conditions are restricted by the following axioms (Little 1957: 145, cf. also Mishan 1964).

- 1° All of the conditions must be simultaneously fulfilled, otherwise the optimum has no meaning. Only the production optimum may have independent relevance.
- 2° The supply of all factors of production must be perfectly elastic.
- 3° The conditions proscribe income tax, indirect taxes and subsidies (especially the total optimum).
- 4° The distributive effects of moving to the optimum must be positive or neutral, otherwise the conditions cannot be accepted (it is obvious that this depends on who decides about the distributive effects).
- 5° There may be no external effects in production or consumption (see also Little 1957: 137–139 and Mishan 1964 for an analysis of this).

Points three and five are very concrete with respect to the existing reality: income taxes, subsidies, etc., are here to stay, as are also external effects. The latter might always be eliminated by proper taxation, the imposition of costs, etc., but this is forbidden by point three. Also the optimum conditions may be amended so as to reflect some externalities, but this is not very fruitful. In the following we may observe that even

if the optimum conditions were all realized, their significance would be slight with respect to social welfare (in fact it might be negative). It should also be noted that such problems as savings and investment are wholly exterior to the optimum conditions. However, conditions for them may be constructed, so this does not constitute a problem (see Little 1957: 145–151).

The crucial fact is that the optimum conditions define a Pareto-optimum. In other words they define only an extremely elementary social optimum. We can achieve at best a dichotomous classification between optimal and non-optimal states. Even if we had a state that realized all of the optimum conditions and even the second order conditions, we would still not have determined a unique state: there is an infinite amount of Pareto-optimal states, among which we may choose. This can be illustrated by figure 6.4.d with the help of the welfare frontier concept.

All of the points of the frontier are Pareto-optimal; they differ with respect to the existing distribution.¹ So the movement from a suboptimal state to an optimal state may in reality be a deterioration because the distribution may be less desirable (see Mishan 1964: 27).

In figure 6.4.e it may be seen that only a part of the Pareto-optimal situations is allowed when we start from a sub-optimal point. This implies that the path to the optimum, which is ignored in the optimization process, has a very critical importance to the end result. The original limits cannot, however, be crossed. So if we happen to start from a situation very near an optimum point, we have few possibilities to influence the distribution.

In other words, the optimum conditions cannot be regarded as even necessary (not to speak of sufficient) conditions for welfare (although Little (1957: 117) seems to think that they are necessary conditions). Necessary they are not, because we may demonstrate that a suboptimal state is, on the whole, better than an optimal state. Clearly, then, neither can they be sufficient conditions.

Little notes that sufficiency is completely disregarded in optimization. In effect this means that one is not interested in how to define a state of social welfare nor in how to achieve such a state. This is considered by Little as the advantage of compensation criteria, which concentrate on the sufficient conditions (Little 1957: 117).

It is astonishing that although the restrictions of the Pareto optimum have been generally recognized, there has been a long discussion about which economic system, the socialist or the capitalist, better fulfills the conditions of a Pareto-optimum. The traditional view was that only per-

¹ Distribution is not the sole factor that causes the nonuniqueness of the Pareto-optimum, but it may be used as an illustration.

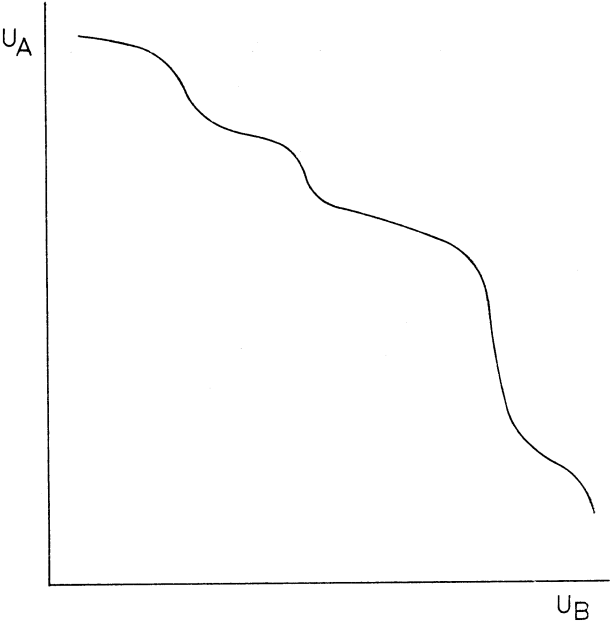


Fig. 6.4.d

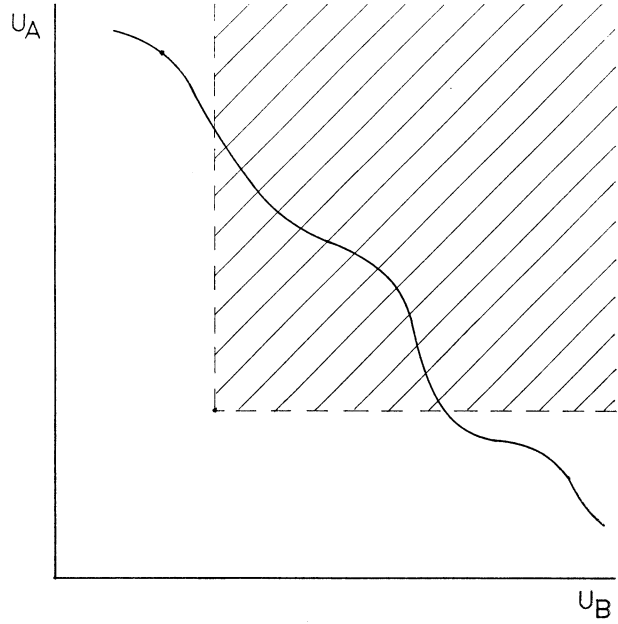


Fig. 6.4.e

fect competition could bring about this ideal (Mishan 1964: 27). On the theoretical level this problem has been clarified, although even Mishan has some mistaken conceptions about it (he claims that perfect competition is neither a necessary nor sufficient condition for Pareto-optimum). It is obvious that perfect competition is not a necessary condition (as under state monopoly, or socialist ownership, the conditions may be realized equally well and probably better; see Lange—Taylor 1964). But it has been shown that under very general conditions it is a sufficient condition for the Pareto-optimum (see Quirk—Saposnik 1968: 125, Arrow 1951). In a sense, however, Mishan is right. Perfect competition is not a sufficient condition if we assume that individuals are not free to adapt their supply of labor to the equilibrium level of wages (which is a realistic assumption). But to assume the contrary is a meaningless addition to the other unrealistic assumptions already mentioned, so the question of whether or not perfect competition is a sufficient condition is rather academic (Nath 1969: 30—31, cf. also Mishan 1964: 176—177).¹

Thus, the final, and most important general implication of the Paretian welfare function is that it is, in an oblique way, *not related to society at all*. It is actually only a skeleton of a truly social welfare function. As will be remembered, in the Paretian assumptions we explicitly exclude all such situations where we should have to compare the welfares of different individuals. This means that we cannot speak of a social welfare function at all, only of a collection of independent individual welfare functions, which are applicable only in very restricted situations. Basically, then, in the process of optimizing the welfare function we are abstaining from aggregation; instead of aggregating welfare we only consider situations where aggregation is not necessary.

It follows then, that not only the conditions of optimization of the welfare function are restrictive, but so is the entire framework of the

¹ In passing I might mention the connections between the Pareto-optimum and the optimal allocation rule. The allocation rule says that the marginal value of all factors of production needs to be the same in all uses. It can be shown that we may deduce the optimum conditions from this rule and vice versa, i.e., they are equivalent (Mishan 1964: 18—20).

It can also be shown that a sufficient condition for the fulfillment of the allocation rule and the optimum conditions is that the price of the product equals the marginal cost, that is, the conditions realized under perfect competition. This is, however, not a necessary condition (Mishan 1964: 20) as the allocation rule is theoretically equally possible in a completely planned economy as in a perfect competition situation. The Central Planning Board may determine how the factors of production are transformed. In fact, because it can be shown that the information provided by markets is always imperfect, in a market economy, as we try to adjust the defects in condition fulfillment we must use forced optimization as well (Mishan 1964: 24, Zielinski 1968: 89—90, Lange—Taylor 1964 (1938): 8—9, Bergson 1966, Dobb 1969).

Paretian welfare function. And the restrictions are concentrated upon the problem which the Paretian welfare function purports to solve, namely that of the construction of a social welfare function. We may therefore consider the idea of establishing a complete determination of the maximum as actually contrary to the idea of a Paretian welfare function.

Having discussed above the optimum conditions of the social welfare function I may shortly consider the problem of the complete determination of the maximum.

Assuming that all conditions (also second order) are fulfilled, what is needed for the comparison of the Pareto-optimal states? It is obvious that additional ethical and social assumptions are required. In a classic discussion the following alternatives are presented (Lange 1969 (1942): 32):

- 1° We might undertake a comparison of interpersonal utilities, i.e., for every Pareto-optimal state we would estimate the total utility and choose the state that gives the highest total utility.
- 2° Some organ of the society might make a social valuation of the Pareto-optimal states and in this way decide what state is chosen.
- 3° We might have an immediate social valuation based on the distribution of goods and services.

In all cases the finding of the real maximum means that we have to relate the individual welfare evaluations to each other. Formally, the problem may be analyzed as follows:

The Paretian welfare function,

$$(6.4.2) \quad W = W(U^1, \dots, U^s),$$

must be maximized on the condition that

$$(6.4.4) \quad P(U^1, \dots, U^s) = 0,$$

i.e., from the welfare frontier (utility possibility curve) P , we must find a maximum point. This condition assures that we are on the frontier.

Let

$$(6.4.5) \quad M = W(U^1, \dots, U^s) + P(U^1, \dots, U^s),$$

which we may solve by differentiation (taking partial derivatives) and get

$$(6.4.6) \quad \frac{\partial W / \partial U^g}{\partial W / \partial U^r} = \frac{\partial P / \partial U^g}{\partial P / \partial U^r},$$

or, if we define the marginal social significance of the utility of the g th individual as the partial derivative

$$\partial W / \partial U^g,$$

we may express this condition in words as follows:

For any two individuals, the ratio of the marginal social significances of their utilities must be equal to the marginal rate of substitution of their utility levels (on the welfare frontier; Nath 1969: 22–23, Lange 1969: 32–33).

As is easily recognized, the practical problems in this connection are immense. How to determine the marginal social significance the utility of an individual is a problem that remains to be solved.

We may illustrate this maximization procedure by the figure 6.4.f. Define the welfare evaluation curve of the society (the Bergson contour) as the path of the points where the society does not distinguish (is indifferent) between the utilities of different individuals (Zeckhauser—Schaefer 1968: 54–55).¹ Consider a society of two individuals r and g , and compare the welfare frontier of the society with its welfare evaluation curve. That point where the welfare evaluation curve on the right touches the welfare frontier is the maximum point (cf. Vartiainen 1967: 49).

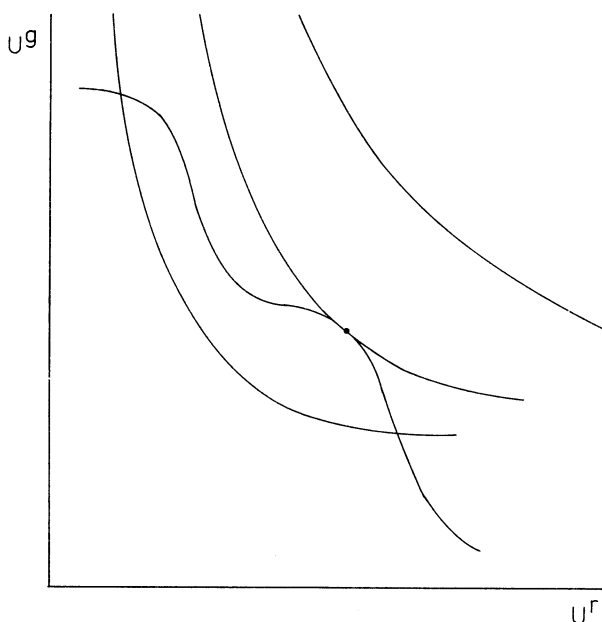


Fig. 6.4.f

It should be noted that the welfare evaluation curves may also intersect because of the many possible distributions of welfare. This means that

¹ This definition is rather hypothetical: such a curve does certainly exist in rough outline but theoretically its construction is an impossibility.

maximization is possible only when the social indifference curves are constrained to the effect that they cannot intersect. These constraints are possible, but not very practical (see Samuelson 1956).

7. The Arrow Impossibility Theorem and Related Approaches

7.1. *General Remarks*

In simple terms, the Arrow problem is as follows: Is it possible, under certain general conditions, to construct a device which, when given the preferences of the members of society (their choices over various alternatives), produces a set of solutions which is transitive, i.e., within which it is possible to find the best choice (see Blau 1957: 303).

This is a very fundamental question. It goes to the heart of the whole problem of democracy and social welfare in that the ultimate goal of a democratic decision-making system is to produce decisions founded on the wishes of the members of society, i.e., social welfare on the conditions of the members of the society. But there is also a more technocratic aspect to this problem. If we can construct such a device, then all the indirect decision systems now in use may be said to be superfluous.

The Arrow Impossibility theorem (or paradox, as it may alternatively be called) is clearly connected with other impossibility results known in philosophy and mathematics (Hintikka 1970), such as for example, the Gödel result. I shall not, however, go into this aspect of the problem. It is natural that our central point of interest shall be on the policy relevance of the Arrow theorem. This is why I shall employ the simpler notation utilized by Arrow instead of a more strictly logical notation.

Historically speaking, the origin of the Arrow theorem can be found in the so-called voting paradox, known already in the 18th century. It was probably first formulated by Borda and Condorcet. Later it was analyzed by, among others, Nanson, Laplace, Galton and the famous C. L. Dodgson (Lewis Carroll).¹

We can illustrate the voting paradox as follows. Assume there are three voters, 1, 2, 3 and three alternatives a, b, c. The voters order the alternatives in the following way:

1	2	3
a	b	c
b	c	a
c	a	b

¹ See Black (1958: 156–161, 180–189), Guilbaud (1966), and Sen (1970: 38), who gives a slightly different account.

If we consider the majority principle, the community of the three voters prefers *a* to *b* and *b* to *c*. Therefore, by transitivity, it should prefer *a* to *c*, but actually the contrary is true. We are therefore confronted with a contradiction.

The voting paradox itself has been a subject of much scrutiny (see, for instance, Riker 1961). It is a relatively common phenomenon especially in multidimensional questions. The thing that the voting paradox and the »impossibility theorem« have in common is that both lead to a situation where the choice of the community cannot be deduced from the choices of the members of society. The Arrow paradox is thus actually a generalization of the voting paradox. In the first place, the Arrow paradox is not concerned solely with majority voting. Secondly, the Arrow paradox gives the general conditions under which the type of paradox illustrated above prevails.

The importance of the Arrow theorem is still under discussion (see for instance Tullock 1967). There are and have been many kinds of criticisms against it. The first, and most general type, is that which wholly denies the relevance of the theorem, of which we have many alternatives. One type, mentioned here only because I have given the theory of welfare economics a relatively comprehensive treatment, asserts that the Arrow theorem is not relevant because it does not belong to welfare theory (see for instance Little 1952, 1957, Mishan 1964: 63—66, Bergson 1966: 36, Nath 1969: 135—136 and Graaff 1957).

This criticism, in its simplest form, is based on the principle that as welfare economics is founded upon the Pareto-optimum, and the Arrow theorem is not, the Arrow theorem has nothing to do with welfare economics and welfare theory in general. In a strict sense, this is of course true. Traditional welfare economics can gain little from the Arrow theorem. But as Arrow himself has shown, on the other hand, the theorem may be formulated in such a way that it subsumes the conditions of Pareto-optimum and may comprise the basis for the formulation of compensation principles (see Arrow 1963, Sen 1970).

More important is the claim that the Arrow theorem is not relevant to welfare theory but rather, to the decision-making process (see for instance Little 1952: 427—428, Buchanan—Tullock 1962). This is admittedly more to the point. In the context given by Arrow, the theorem has a content more general than that of welfare theory. Yet Arrow himself has cogently criticized this assertion by pointing out that the attempts to separate welfare theory and the theory of social choice are fruitless. It is clearly beyond the scope of scientific analysis to claim that the Arrow theorem is on this or that side of an arbitrarily drawn borderline (see Arrow 1963: 108). It is typical of economists to try to ignore a variety

of problems on the premise that they do not belong to their field, but if we are interested in the concept of social welfare, we must realize that the Arrow theorem, as well as welfare economics, are extremely relevant to our discussion.

If one assumes that the theorem is indeed relevant, it is possible to criticize its assumptions. This is by far the most popular form of criticism, which is natural, considering the challenge represented by the formulation of the theorem: that of resolving a paradox. Assuming that it is formally correct, one must show that the assumptions are not acceptable or that the contradiction depends upon some merely technical points in the assumptions. This type of approach shall be analyzed extensively when I discuss the assumptions.

The third type of criticism relates to the mode of expressing the entire problem. It can be said that the theorem is actually rather restrictive in the long run, although it purports to be extremely general. This has also been a popular way to evade the theorem, or to circumvent it — by claiming that a given procedure is not comprised in the theorem, and therefore the theorem is not applicable. A most comprehensive criticism along these lines is given by Braybrooke and Lindblom (1963). My critique in fact, shall be of this type as well. It is namely so that the theorem has certain restrictions which are rather important from the vantage point of our discussion of social welfare.

These restriction were also known to Arrow, the most important of which were the following:

1. Strategic aspects of individual choice are not analyzed (Arrow 1963: 6—7, Luce—Raiffa 1957: 330). This is a very pertinent omission. It essentially eliminates the processual nature of social choice, thus resulting in an exceedingly mechanistic view.
2. The values of the individuals are assumed to be unchanging: this is the economist's classical assumption and must clearly be considered unrealistic. There is no reason to assume that individual preferences would be autonomous and constant except, of course, for simplicity in the analysis.
3. Cardinal utility and interpersonal comparisons of utility are essentially denied (see Luce—Raiffa 1957: 330).¹ There are ways to take these into consideration, but in the original version of the theorem these were clearly ignored.

In addition there are several minor points that need not concern us

¹ Vickrey (1960: 508) considers this the essential quality of the Arrow theorem: «Arrow's theorem is in effect an attempt to examine just how far one can get in constructing social welfare functions that will consider only ordinal preferences.»

here (such as the rules resulting in a probability distribution; Luce—Raiffa 1957: 330), but it should be obvious that in this form, the Arrow theorem is actually marred by many restrictions, the seriousness of which has already been noted.

Yet there are those who criticize the theorem not for its restrictiveness but for its generality, claiming that more restrictive assumptions (and therefore eliminating the impossibility result) are necessary (Tullock 1967).

More recently, the Arrow theorem has been developed in such a way that the whole problem complex cannot be described by referring to Arrow alone. It has been shown that the conditions of the Arrow theorem apply only to a restricted subclass of all possible collective choice procedures.¹

Yet the original Arrow consideration — that the conditions introduced by him are too mild — is still relevant.² As Sen notes, even if a social decision function would fulfill all of the Arrow conditions (1970: 50), it could still look very unappetizing. What Sen has attempted to do is to weaken some of the conditions to be able to introduce additional conditions that would produce more plausible collective choice functions.

7.2. *Choice and Preference*

The impossibility theorem is concerned with social states and preferences over them. A social state is »a complete description of the amount of each type of commodity in the hands of each individual, the amount of labor to be supplied by each individual, the amount of each productive resource invested in each type of productive activity, and the amounts of various types of collective activity . . .» (Arrow 1963: 17). In other words, by a social state is meant an exhaustive description of the conditions prevailing in the society.

A state may be represented by a vector x , whose content elements are all the possible components of the social state. The set of all possible social states is called *the set of alternatives* S . All alternatives are exclusive. At a certain time an individual can choose among a subset S' of the set of alternatives. That is to say, some of the alternatives do not exist for him.

The individual is assumed to order the existing alternatives with respect

¹ Sen (1970: 48) makes a distinction between social welfare functions and social decision functions. The latter require acyclicity of preference instead of transitivity (for a definition of the concept of acyclicity, see p. 152). It can be shown that the impossibility theorem is valid for social welfare functions but not for social decision functions.

² It should be noted that Arrow himself considered the conditions as necessary conditions for social choice, and that more conditions would be required to make the conditions sufficient. This is only partly true.

to his preferences by comparing all states in consecutive pairs.¹ Note that no conditions are prescribed for the formation of preferences. According to Arrow, it is not essential to specify the standards according to which the individual orders the states. He might be a member of the Veblenian elite, or a supporter of absolute equality (Arrow 1963: 17—18). There is, in effect, no presumed model of preference formation. As noted in the previous section, this is a grave deficiency. It essentially means that we must completely ignore an important part of the social choice (in the classical manner of economists).

7.2.1. The Preference Axioms

Instead of describing a model for their determination, conditions for preferences are given. Although we are not concerned with how preferences are formed, it is necessary to make some assumptions about their substance. First some general points. The first is that any preference is always the preference of some entity: it is connected with some individual or society consisting of individuals.

Secondly, the term preference implies nothing more than 'liking better'; i.e., a person prefers x to y because he likes x better than y (cf. von Wright 1963b: 12—15, Schick 1969: 130—131). In other words one makes a typically behaviorist assumption by disconnecting preferences from all considerations about the nature of welfare. Although Arrow refers to the relationship of preferences to values, there is nothing in the preference axioms themselves that would connect them with values, or with welfare in general (Arrow 1963: 18, Hansson 1968a: 424, Murakami 1968). The axioms are typical axioms for »pure» preferences. They are presented in the following.

It is, of course, possible to present other axioms in addition to those given by Arrow (cf., for instance, von Wright 1963b, Hansson 1968a, Koskela 1970: 8—9). These axioms are not directly relevant for the impossibility theorem, so I shall not be concerned with them.² Hansson gives a

¹ Comparison by pairs is nearly impossible according to the preference axioms, if we have a set of larger than, say, 10 alternatives. Arrow himself concedes this, but in his opinion »at least conceptually, it makes sense to imagine the choices actually being made from pairs of alternatives» (Arrow 1963: 20).

² As Hansson emphasized (1968a: 441), the two axioms presented here are shallow from the point of view of a preference *theory* and additional axioms are needed 'which carry the theory beyond the level of the trivial'. But here we are not interested in preference theory but only in utilizing some axioms for the purposes of the impossibility theorem. These additional axioms, however, may also be suspect.

very plausible example of the insufficiency of one of Wright's axioms (1968a: 428–429).

We define the relation R

$$(7.2.1) \quad xRy \leftrightarrow \neg (yPx) .$$

We may translate R into word form as 'at least as good as' (cf. Arrow (1963: 13), Hansson (1968a: 426)).

For the relation R , two properties are required, in the form of axioms I and II:

$$(A\ I) \quad (x)(y) (x \in S \ \& \ y \in S \rightarrow xRy \vee yRx)$$

This is the completeness¹ axiom: we require that all alternatives are comparable. Note also that this axiom implies that R be reflexive: if $x = y$, the Axiom A I reduces to

$$(x) (x \in S \rightarrow xRx)$$

$$(A\ II) \quad (x)(y)(z) (x \in S \ \& \ y \in S \ \& \ z \in S \ \& \ xRy \ \& \ yRz \rightarrow xRz)$$

This is the transitivity axiom: it requires that if x is at least as good as y and y is at least as good as z , then x is at least as good as z .

We may now define preference and indifference with respect to the relation R :

$$(7.2.2) \quad xPy \leftrightarrow (xRy \ \& \ \neg (yRx))$$

$$(7.2.3) \quad xIy \leftrightarrow (xRy \ \& \ yRx)$$

Clearly then, it is immaterial which of these relations we employ as our starting-point.

These axioms seem intuitively rather reasonable. Comparability is a requisite to the formation of preference hierarchies.² But there are counter-arguments. It is obvious that certain states are extremely difficult to compare. As an extreme case consider state 1 in which all expenditures are going to military purposes, and state 2 in which all are going to social ends: on what basis are we to compare them?

In a later article (1967: 5), Arrow has argued that in all cases comparability is possible, as there always is a zero alternative which is chosen if other choices are not comparable. This does not seem to be very assuring, because to choose inaction, or the state that exists because there are incomparable choices, cannot be generally considered highly acceptable.

¹ This is Sen's terminology. Arrow prefers the concept of connectedness.

² It is also important in consumer choice theory because it can be shown that it is a necessary and sufficient condition for integrability, (Arrow 1959: 121).

The transitivity axiom is usually considered even stronger. As Murakami (1968: 9) notes, it is necessary for us to be able to choose the best alternative from the set of existing alternatives. Yet this is not strictly necessary. We only need transitivity of preference (quasi-transitivity) to fulfill this requirement.¹ This has been pointed out by Sen (1970: 3, 15). Interestingly enough the transitivity of indifference principle has already been criticized harshly for its other unsatisfactory qualities. Especially Schick has attempted to build a whole case against the impossibility theorem on the basis of the weaknesses of intransitivity of indifference (see Schick 1969: 131—133, 138).²

Luce and Raiffa (1957: 346) have given an example of the implausibility of the transitivity of indifference: If we gradually add small amounts of pepper to food, there will eventually come a moment when we are no longer indifferent as to whether more pepper is added or not. This is however, not altogether convincing. It could be proposed that we should compare not the piecemeal additions, but the sums with each other. On the other hand it is clearly true that in many cases divergencies can result from the comparison of a total action with the pieces that constitute the entirety. We may be more inclined to accept radical change if it is accomplished in a piecemeal fashion, and in this sense there may be some intransitivities of indifference.

The definition of intransitivity of indifference is uncomplicated: it refers to an equivalence relation which defines, among a set of alternatives, equivalence classes which are mutually exclusive. The preference ordering of all alternatives is thus reduced to a preference ordering of equivalence classes (Murakami 1968: 8—9).

Nor is completeness strictly necessary for social choice. If we disregard it, but retain reflexivity and transitivity, we have a quasi-ordering. The nature of these orderings and their effects upon the impossibility result has been extensively studied by Sen (1970).

7.3. *The Arrow Social Welfare Function*

We now return to the social welfare function, already so extensively analyzed in chapter 6. This time we are interested not in its optimization but in a more fundamental problem, namely that of its essential nature:

¹ Note that A II implies transitivity of preference and indifference: see Arrow (1963: 14).

² According to Schick, the conditions for social choice are not important because the impossibility theorem breaks down already in the preference axioms. The Schick approach in a way anticipates (although chronologically following) the results of Sen, where he shows that the theorem actually collapses if the intransitivity of indifference is disregarded.

in other words, is such a function practicable. Here I shall be using a slightly different terminology from that used in the previous discussion. First, I shall define a *preference profile* (a profile of preference orderings). If we denote the ordering of the individual i as R_i , then the preference profile of the society (of n members) is (R_1, R_2, \dots, R_n) . The set of all possible profiles in society is the Cartesian product

$$(7.3.1) \quad R^{(n)} = \underbrace{R \times R \times \dots \times R}_n$$

where

$$R = \{R^1, R^2, \dots, R^m\}$$

is the set of possible preference orderings of the alternatives, with m depending on the number of alternatives (see Luce—Raiffa 1957: 332).

We now define the choice function $C(S)$ as the set of all alternatives x in S , such that for every y in S , xRy (Arrow 1963: 15–16). Thus,

$$(7.3.2) \quad C(S) = \{x : (x)(y) (x \in S \ \& \ y \in S \ \& \ xRy)\}$$

Every element of $C(S)$ is preferred to other elements of S and indifferent to all other elements in $C(S)$. For every $x \in C(S)$ there is no $z \in C(S)$ such that zPx .

The choice function is thus related to indifference curves and utility functions, but in a more general fashion, with no need for explicit utility functions and avoiding the familiar problems of indifference curves, such as indivisibility problems. We can now define the social welfare function (Arrow 1963: 23): »By a social welfare function we mean a process or rule which, for every preference profile (R_1, R_2, \dots, R_n) gives the corresponding social ordering R .«

Formally,

$$(7.3.3.a) \quad (R_1, R_2, \dots, R_n) \xrightarrow{W} R, \text{ or}$$

$$(7.3.3.b) \quad R = W(R_1, R_2, \dots, R_n)$$

Some call this a choice function (Hansson 1968a) which would be more appropriate, but as that name is reserved here for other purposes, I shall refer to it as a welfare function. Other alternative labels are constitution (used later by Arrow himself), arbitration scheme, conciliation policy, amalgamation method, and voting procedure (Luce—Raiffa 1957: 332).

All of these would be better because we should save the name welfare function for a function that would express, for instance, the welfare effects of social choices or social action.

There has been considerable interest in the conceptual problems concerning the relationship between the Arrow and Bergson social welfare

functions. This is all the more important as it has been maintained that the Arrow theorem is not relevant to the Bergson welfare function (Bergson 1966: 35).

Considering that Arrow himself has emphasized the 'constitutional' nature of his welfare function, it would appear related to the Bergson function in that it would specify the choice of a particular Bergson welfare function. I.e., it would be a rule for choice (Arrow 1963: 23). This is a rather plausible description which has been ascribed to by Sen (1970: 35). This can be expressed through an illustration by Rothenberg (1961: 37—38).

The Bergson welfare function was defined as follows:

$$(7.3.4) \quad W = W[U^1(x_{11}, x_{12}, \dots, x_{1m}, x_{21}, \dots, x_{2m}, \dots, x_{n1}, \dots, \dots, x_{nm}) U^2(x_{11}, \dots, x_{nm}) \dots U^n(x_{11}, \dots, x_{nm})]$$

where it is assumed that utilities are interdependent (the consumption of some individuals affects the utility of others). x_{ij} expresses the amount consumed by the i th individual of the good or service j . (In the previous chapter this was denoted by x_j^i .)

The social state X_r is defined by the matrix:

$$X_r = \begin{pmatrix} x_{11} & x_{12} & \dots & x_{1m} \\ x_{21} & x_{22} & \dots & x_{2m} \\ \cdot & \cdot & \dots & \cdot \\ x_{n1} & x_{n2} & \dots & x_{nm} \end{pmatrix}.$$

These states may be ordered in the social preference ordering R , which is a vector

$$(7.3.5) \quad R = \begin{pmatrix} R_{X_1} \\ R_{X_2} \\ \cdot \\ \cdot \\ R_{X_h} \end{pmatrix} = R(U^1, U^2, \dots, U^n).$$

This is a function of the individual utility functions. Respectively the ordering of the individual i

$$(7.3.6) \quad R^i = \begin{pmatrix} R_{X_1}^i \\ \cdot \\ \cdot \\ \cdot \\ R_{X_h}^i \end{pmatrix} = R^i U^i(x_{i1}, \dots, x_{im})$$

is a similar function.

Combining these two equations (7.3.5) (7.3.6) we get

$$(7.3.7) \quad R = f(R^1, \dots, R^n)$$

which is precisely the Arrow welfare function. In other words, the right sides of the equations (7.3.5) (7.3.6) give the corresponding Bergson welfare functions.

7.4. *The Conditions for Societal Decision-Making*

7.4.1. The Formulation of the Conditions

In the following section I will analyze the conditions for social decision-making that Arrow has considered reasonable. These conditions are, it should be noted, given only as necessary conditions for a social welfare function; they do not completely define such a function. This fact has been utilized very efficiently by Sen to explore the possible alternatives (Sen 1970: 49).

These conditions are in themselves relatively simple and probably not worth the space allotted them, but their importance is twofold:

- 1) Together they lead to Arrow's impossibility result (note that also through relaxing the preference axioms we may affect this result), consequently creating an important barrier to any constructions of social choice, and
- 2) They have some rather important implications for social policy which we must investigate.

The presentation here is not strictly technical, as my present interest lies primarily in the implications of the conditions for welfare planning and social policy.¹

1. The first condition is referred to here as the *condition of collective rationality*.² We assume that the number of individuals $n \geq 2$ and the number of alternatives is greater than or equal to three. We define an admissible set of individual orderings as the set for which the social welfare function defines a corresponding social ordering which fulfills axioms I and II. Now we may formulate the first conditions as follows: *all logically pos-*

¹ It has been said that the Arrow conditions result is nothing else than the formalization of the consumer sovereignty principle, thus making their social policy implications rather meagre (Rothenberg 1961: 46), but this claim can be qualified.

² Arrow (1963: 24), Luce—Raiffa (1957: 334), Murakami (1968: 82—83). Sen (1970: 37) calls this the condition of unrestricted domain, which only entails a part of it.

sible individual orderings must be admissible; i.e., they must lead to a social welfare function which satisfies axioms I and II (Arrow 1963: 96).¹

The requirement of collective rationality then presupposes that the social decision-making needs to fulfill the same conditions as individual preferences, i.e., completeness and transitivity. I have discussed the nature of these requirements in connection with the preference axioms, and shall not take them up here except for the special qualities of social decision. It is obvious that the same arguments are, to a large degree, equally as applicable for the society as for the individuals.

The requirement of completeness especially, is essentially same for the individual and for society. The nature of transitivity is however different. The requirement of transitivity in social choice is, according to Arrow, essential because it assures that the final decision is independent of the means employed to reach it (Arrow 1963: 120).

Sen (1970: 48) has pointed out that this is not strictly true as transitivity does not ensure the choice of the same best alternative, if the choice set (defined by the choice function) contains more than one alternative. This means that the most important quality of transitivity is sacrificed. Yet it is precisely this quality that may be criticized: why should we demand that the result be the same, independent of the method used to reach it. In the political process, the way decision-making occurs is unquestionably a member of the set of welfare-relevant factors, especially if we define welfare as an activity (see chapter 4).²

The argumentation against collective rationality can also be based on a critique of the mechanistic 'Platonic' model: it can be claimed that social decision-making and social welfare contain strong extra-rational elements which cannot be ignored. The decision-making process itself contains creative, intuitive and non-mechanistic qualities which simply cannot be analyzed in the framework of a rational decision-making model.

¹ Originally this condition was only given for a triad of alternatives; later it was shown by Blau that this condition would not be enough for demonstrating the contradiction (Blau 1957, Vickrey 1960: 512).

² There has been some commentary, largely mistaken, about this aspect. Tullock (Buchanan — Tullock 1962: 332) has expressed the opinion that as the decision-making process is a means, and not an end, and is thus without any independent content, there is no reason to assume its rationality. This argument does not seem to hold water: the question is whether the decision-making mechanism produces rational results, not that it is rational itself (see also similar arguments by Buchanan (1960: 82)).

Dahl—Lindblom (1963: 422—423) have proposed an odd argument: if we accept intransitivity we need not consider social preferences. This also seems to be a misconception: the Arrow result essentially is that social preference is impossible due to the given conditions; in other words Dahl and Lindblom start from the Arrow result and proceed to criticize it on this basis.

This has been emphasized by Häyrynen (1970), and Dror (1968), among others. On the other hand, it can be said that social policy research must concentrate on the analysis of systematic knowledge and structured rationality because intuitionistic and extrarational elements lose their meaning when rationalized (Dror 1970: 103). And the pertinence of the Arrow theorem is precisely in the exploration of how far one can get with the aid of certain kinds of rational models.

But as I have pointed out previously, the problem of collective rationality is not overly important as both completeness and transitivity are actually expendable. Transitivity in particular, is not a necessary condition for a series of decisions in which it is only natural that the ordering may change (Schick 1969: 141).

Technically more important is the aspect of this condition which requires that *all logically possible* orderings should be admissible. This condition might also be criticized on the basis that some preference orderings are not regarded as acceptable in the consideration of social preference. And it has been shown that if we are willing to make such restrictions, we can eliminate the Arrow theorem entirely (Sen 1970: 65–66).

2. The second of Arrow's conditions may be called the *positive association of individual and social choice* (Arrow 1963: 25–26, Luce—Raiffa 1957: 335). Briefly formulated, it is as follows: we must require that the social welfare function has the capacity to consider that if some alternative rises in an individual ordering without a consequent decrease in position in other individuals' orderings, its status must not depreciate in the overall social ordering. Expressed in an inverted form, if the social welfare function includes xPy as a definite profile of individual preferences, this preference remains intact although the profile itself might change:

- a) so that other than comparisons of x do not change, and
- b) for every individual, the comparison (in pairs) between x and any other single alternative does not change or changes in favor of x (Luce—Raiffa 1957: 335).

This condition may formally be expressed as follows:

Let R_1, \dots, R_n and R'_1, \dots, R'_n be two preference profiles, the corresponding social orderings of which are R and R' , (P and P' represent the corresponding preference orderings). Assuming that for each individual i the following is true,

$$(7.4.1) \quad (x')(y') \left\{ \begin{array}{l} x' \neq x \\ y' \neq x \end{array} \right. \left\{ \begin{array}{l} x'R'_iy \leftrightarrow x'R_iy' \end{array} \right\}$$

$$(7.4.2) \quad (y') \quad \{xR_iy' \rightarrow xR'_iy'\}$$

$$(7.4.3) \quad (y') \quad \{xP_iy' \rightarrow xP'_iy'\}$$

Then the requirement

$$(7.4.4) \quad xPy \leftrightarrow xP'y$$

becomes necessary.

Sen calls this condition the weak Pareto principle (1970: 37), indicating its relationship with the Pareto principle. It is weak because its assumptions are stricter than those of the regular Pareto principle. Its weakness is reflected by the fact that it requires only that the society does not react negatively to a change in preferences. Under the requirements of the strong Pareto condition one individual alone could affect the society's preferences if others are indifferent. Yet strictly speaking, this condition is not the Pareto condition and I shall return to the relationship between the Pareto principle and the Arrow conditions. In this form the condition is probably acceptable to most people.

3. The third of Arrow's conditions, that of the *independence of irrelevant alternatives*¹, is probably the most controversial of all, especially in earlier discussions (see Rothenberg 1961: 127). This is partly due to the fact that its interpretation has been rather unclear. There are innumerable and contradictory claims about the independence of irrelevant alternatives condition and its meaning.²

The condition is formulated in the following way (Arrow 1963: 27, Luce—Raiffa 1957: 338):

Let R_1, \dots, R_n and R'_1, \dots, R'_n be two preference profiles and $C(S)$ and $C'(S)$ be the corresponding choice functions. If for all individuals i and for all x and $y \in S$, $xR_i y$ if and only if $xR'_i y$ then $C(S)$ and $C'(S)$ are identical.

$$(7.4.5) \quad (i) [(x \in S \ \& \ y \in S \ \& \ xR_i y \leftrightarrow xR'_i y) \rightarrow C(S) = C'(S)]$$

This may be expressed in another way. If S_1 is any subset of the set of alternatives S and we change the preference profile in such a way that for every individual his comparisons of alternative pairs in S_1 remain unchanged, the social orderings corresponding to the original and changed preference profiles are identical for the alternatives in S_1 .

The most general interpretation for this condition is that an alternative

¹ According to Rescher it is improper to speak of irrelevant alternatives as we are concerned with the question of whether the alternatives eliminated are irrelevant (Rescher 1969: 103).

² For instance, Arrow himself has been guilty of faulty reasoning in scolding Buchanan and Tullock for their misinterpretation (Arrow 1963: 109). It is certainly true that logrolling, which involves direct interpersonal comparisons, falls outside the scope of the Arrow theorem, Arrow however claims that this is not so because all kinds of criteria for preference orderings are allowable.

that is not in a given set of alternatives must not affect the choices of the individuals. Arrow has given an example that illustrates his idea of the principle well: There are elections in which each voter places the candidates in a preference order. Assume that after the elections, one of the candidates dies. We must then require that the results of the elections for the other candidates do not change, i.e., their ordering is unaffected (Arrow 1963: 26). This example has a strong intuitive appeal. If the decision function would allow such changes, then by adding one 'irrelevant' alternative we might change the order of other alternatives in an important way.¹

It is not difficult to present examples of decision functions that might nonetheless be considered reasonable, which are eliminated by the independence of irrelevant alternatives condition (Luce-Raiffa 1957: 338, 346; Rescher 1969: 103–108; Theil 1964: 334–335).² Also, as is obvious from the example given by Arrow, the majority rule, in which the alternatives are weighted according to the order given them, does not fulfill the independence of irrelevant alternatives condition (Vickrey 1960: 516).

It is obvious that this condition is so controversial because its practical implications are so grave. These implications can be analyzed by dividing the irrelevance condition into two conditions (Murakami 1968: 105, Sen 1970: 89–90, 105–108):

- A. For every pair of alternatives, social choice depends solely upon the information concerning this pair (the condition of pairwise comparison).³
- B. The information on which social choice is based for every subset of alternatives, consists of only the individual preference orderings for this subset.

The first condition concerns only individual choices. In the comparison of two alternatives, all other alternatives must be kept irrelevant (Rothenberg 1961: 128, Buchanan, Tullock 1962: 332–333, Koskela 1970: 26–27, Murakami 1968: 84). In fact, in the irrelevance condition, it is assumed that the decision-making procedures of the individuals can be reduced to pairwise comparisons, at least in theory. This is Arrow's view (Arrow 1963: 20, Murakami 1968: 107–108). It can be shown (Murakami 1968: 108) that comparisons between three and four alternatives, or more can be reduced to pairwise comparisons as long as the preference axioms are

¹ Valkonen (1971: 21) has mentioned an example of this kind of 'cheating' in a very important context, namely in a comparison of alternative transportation schemes in the city of Helsinki.

² Rescher in particular has attempted to create decision rules that are 'reasonable', but do not fulfill the Arrow conditions.

³ It has been even claimed that the whole theorem depends on pairwise choices (Buchanan–Tullock 1962: 334).

adhered to. Thus we are confronted with only two alternatives, either a pairwise comparison or a comparison that entails the whole set of alternatives simultaneously. This means that complete information about all alternatives, as well as a limited amount of alternatives is needed.

Arguments against pairwise comparisons are common in scaling theory used in sociological and social psychological research. As is well known, the respondents adopt reference points which form the basis of their orderings. If the reference point changes, the ordering also changes, i.e., the extraneous alternatives are not irrelevant (Rothenberg 1961: 129).

But it is more pertinent to regard the irrelevance condition as that which denies the cardinality of the utilities underlying preferences. I have already analyzed the implications of cardinality, but in this context an analysis specifically on the basis of social decision-making is in order.

First it should be remembered that additive utility functions are eliminated as acceptable social decision functions (Arrow 1963: 32, Vickrey 1960: 516).¹ Secondly, as noted above, the strategic aspects of social decision-making are ignored (Vickrey 1960: 518, Rothenberg 1961: 47). Arrow has defended the irrelevance condition on these bases, because one can imagine situations where, in order to achieve desired results, a person might adopt a strategy of concealing his true preferences, if preference intensities are considered important. But other, more 'acceptable' strategies are also eliminated through this condition, which makes the theorem rather unrealistic. An essential aspect of social decision-making and welfare is the 'game' between various social groups and even some tactical misrepresentation of preferences should be accepted. Take, for example, the situation of a person with very extreme intensities of preference. It would undoubtedly be very easy for others to predict his orderings.²

There are many examples that can be construed to prove the desirability of taking preference intensities into consideration (see Goodman—Markowitz 1952: 258—259, Luce—Raiffa 1957: 337). One additional argument against ordinality is that it leads to an implicit weighting of individuals, which cannot be considered acceptable (Quirk—Saposnik 1968: 115, Hildreth 1953: 89—90).

It is understandable that decision functions that do not fulfill the

¹ Rothenberg (1961: 31) claims the contrary, but on the other hand admits that preference intensities are unacceptable. What other interpersonal comparisons are possible?

² For instance, let us have three alternatives x , y and z . The person A considers x as the best alternative, y as the second best and z by far the worst. y and z are known as equally possible alternatives while x is impracticable. A will probably place y first contrary to his actual preferences (Rothenberg 1961: 128). This is the prevalent situation in direct elections for presidency. A person more often votes against one candidate than in favor of another, if his first choice is in the minority. See also Sen (1970: 91) for an additional example.

independence of irrelevant alternatives condition have often been presented as solutions for the Arrow dilemma. (See the above citations, also Goodman—Markowitz 1952, Hildreth 1953, Kemeny 1959, Coleman 1966b, Rescher 1969, Luce—Raiffa 1957, Rothenberg 1961). Many of these attempts have led to difficulties.¹

One of the attractive properties of the irrelevance condition is that it protects the welfare function from 'non-functional' behavior; i.e., it ensures that one preference profile will lead to one and only one social ordering (Koskeal 1970: 30). In fact, one of Arrow's main defences of this condition is that other solutions have led to such ambiguous results (Arrow 1963: 109—111).²

In general, it is the configurations of conditions that are mainly interesting, not the isolated conditions in themselves. Yet it can be said that the irrelevance condition is rather central and its main content restricts the Arrow theorem to the same level as neoclassical welfare economics.

The remaining conditions are rather trivial and serve only to eliminate certain extreme cases. These cases are however employed in the formal proof of the theorem, so they are crucial to it.

4. The fourth condition states that the *welfare function must not be imposed*. This means that the following case is forbidden: for any two alternatives x and y (such that $x \neq y$), the relation R is xRy for any preference profile R_1, \dots, R_n (Arrow 1963: 28—29, Luce—Raiffa 1957: 338). Arrow calls this condition the *sovereignty condition of citizens*. It is too strong a condition for the theorem (i.e., too weak), and a milder one, namely, that the condition must hold for a triad of alternatives, would fulfill essentially the same function.

It is obvious that this is an acceptable condition. It is extremely difficult to imagine a condition that would allow 'reasonable' impositions (Vickrey 1960: 512). Yet there are cases where decision-makers may act regardless of people's preferences with clear requisites for such an action. This would be true, for example, in the case of narcotics or pornography.³

5. The fifth condition demands that the *welfare function must not be dictatorial*. This means that there must not be an individual i , for whom it is true that always, when he prefers x to y , the society prefers x to

¹ Such as the attempt to define a limited amount of preference levels (Goodman—Markowitz 1952, Luce 1959). It can for instance be shown that small differences in the ability to discern preferences lead to large differences in distribution (Arrow 1963: 117—118).

² Lately, Hansson (1969a) (see also Koskela (1970: 31)) has pointed out that if we combine the irrelevance condition with symmetry conditions, the results will be nonetheless queer.

³ Note that the logrolling principle, to be considered later, also violates this condition (Buchanan—Tullock 1962: 333).

y irrespective of other individuals' preference profiles $R_1, \dots, R_{i-1}, R_{i+1}, \dots, R_n$ (Arrow 1963: 30, Luce—Raiffa 1957: 338).

This is also a relatively innocent and generally acceptable condition (but see the proof of the theorem, Appendix 2).

In essence, the fourth condition denies that the welfare function can be constant over all preference profiles, and the fifth condition demands that the function not be reduced to a certain independent variable (any one individual's preferences). In actuality, this means that we also deny the negative dictator: the case where the society prefers consistently x to y when an individual prefers y to x . Taken on the whole this implies that the function must be non-trivial, thus the Arrow result may be formulated as a non-triviality result in the deduction of social preferences from individual preferences (Murakami 1968: 104).

7.4.2. The Meaning of the Conditions

The conditions for the Arrow theorem only place restrictions on a social welfare function. Nothing is said of the states to which the Arrow welfare function may lead, that is, of the nature of welfare it implies.

One school of thought (of which Arrow is himself a member; see 1963: 106) seems to think that nothing else is required except this sort of 'constitutional' determination, i.e., the creation of rules according to which individuals may freely realize their own personal conception of welfare.¹ Even if one were to accept this, it is certain that the conditions contain implications for social policy which severely restrict their general applicability.

1. First, they are saturated with the premise of methodological individualism. The welfare of the society depends solely upon the welfares of the individuals, disregarding various important social processes relevant to welfare (see an analysis of this in Koskela 1971: 42).

2. Second, the conditions are rather traditional in the sense of economic analysis: they contain the concept of consumer sovereignty (conditions 2 and 4) which has been criticized above; and the principle of ordinal utility, also criticized above. It is another matter that both of these can be surrendered in developing the theorem.

3. The conditions also lean on the Pareto-principle.² It is clear there-

¹ Arrow (1963: 106): »... in my view a social decision process serves as a proper explication for the intuitive idea of social welfare. The classical problems of formulating the social good are indeed of the metaphysical variety which modern positivism finds meaningless: but the underlying issue is real.»

² See Arrow (1963: 96–97), in a weaker form: if for all i xP_iy , then for the society xPy ; this is implied by the conditions 2, 3 and 4 (see also Murakami 1968: 92).

fore, that they contain much of the traditional economic assumptions which have been severely attacked by scores of economists. In this sense the original formulation of the Arrow theorem is not of great bearing. Later I shall discuss more recent developments, some of which have already been mentioned in passing.

About concrete applications of the Arrow theorem, it may be mentioned that, for instance, the market mechanism (in the sense of perfect competition) fulfills the irrelevance condition but does not fulfill the condition of collective rationality. This is expressed by the intersecting social indifference curves which make intransitivities possible. The Samuelson social indifference curves satisfy the condition of collective rationality but not the irrelevance condition.

Compensation principles, on the other hand, do not satisfy the condition of collective rationality, especially its aspects of unrestricted domain (Rothenberg 1961: 70, Arrow 1963: 34–43). Sen (1970) has also discussed these implications of the Arrow theorem.

7.5. *Extensions and Restrictions on the Arrow Theorem*

The impossibility theorem is a paradox: to solve a paradox you must either show that some of its conditions are not acceptable or then formulate the problem in another way that eliminates the paradox. On the other hand, one may wish to generalize the paradox due to the possible relevance of its implications or because one senses that it might be more widely applicable than had been previously thought.

The literature concerning the impossibility theorem can be divided into fundamentally two stages. First came the stage when all of the conditions, and specifically the third condition were exposed to close scrutiny. This stage produced the literature on the restriction of preferences, i.e., restrictions on the part of the first condition which concerns an unrestricted domain.

The second stage spawned discussions about the fundamental bases of the theorem, namely the question of collective rationality,¹ but also saw the addition of new conditions and the introduction of choice functions, instead of welfare functions (as a technical distinction). Luce and Raiffa (1957: 340) have formulated this so that the third condition is the only

¹ Sen (1970) expresses this very clearly by separating the question of the nature of social and individual preference wholly from the conditions of the theorem: previously I have followed the Arrow manner of separating them only partly as axioms while retaining a part of them (collective rationality) as an assumption.

one that can be tampered with within the framework of the impossibility theorem itself. As conditions four and five are rather trivial and always acceptable in principle, in general, it is actually the three first conditions that can be altered. In fact, the second condition is also rather innocuous, so only the first and the third have proved to be central problematic points. Here I adhere to the Sen separation, and consider the question of collective rationality fundamental for the Arrow theorem in all its aspects, and the condition of the unrestricted domain of the social welfare function and the condition of the independence of irrelevant alternatives as conditions that can be manipulated. As the most interesting aspect of the independence of irrelevant alternatives condition is the subsequent question of strategy and interpersonal comparison which have been discussed extensively in this context, I will concentrate on the restrictions of the domain.

This has been the subject of many discussions. It has been shown that under certain restrictions on the individual preference orderings, the theorem collapses. And some have seen this as the main avenue for the elimination of the impossibility theorem, as these restrictions are relatively mild and acceptable.

More specifically, the restriction is as follows: if from the individual's best alternative we can deduce his complete preference ordering, we can construct a social welfare function which fulfills all the Arrow conditions.¹ This is called the condition of single-peaked preferences.

An instance of single-peaked preferences is political choice in a multi-party situation. Here we may assume that in most cases, we can deduce the individual's whole ordering rather well from his first (preferred) choice. Let us have alternatives x , y , z and w , the ordering of which is, for individuals 1, 2, and 3, as follows:

1:	w	x	y	z
2:	x	y	w	z
3:	y	z	x	w

Thus the individual preferences can be represented as single-peaked curves (Fig. 7.5.a).

Formally, this condition may be expressed in terms of the conditions on the ordering of the alternatives in the preference profile: we must be able to determine this ordering in such a way that all curves describing individual preferences are single-peaked (or have a peak containing more than one indifferent alternative). Obviously this condition is difficult to confirm in most realistic situations when the number of alternatives and individuals is large.

¹ Arrow (1963: 75–80), Vickrey (1960: 513–514), Rothenberg (1961: 280–287), Black (1958: 99–102); see Kassouf (1970: 83–84) for an enlightening presentation.

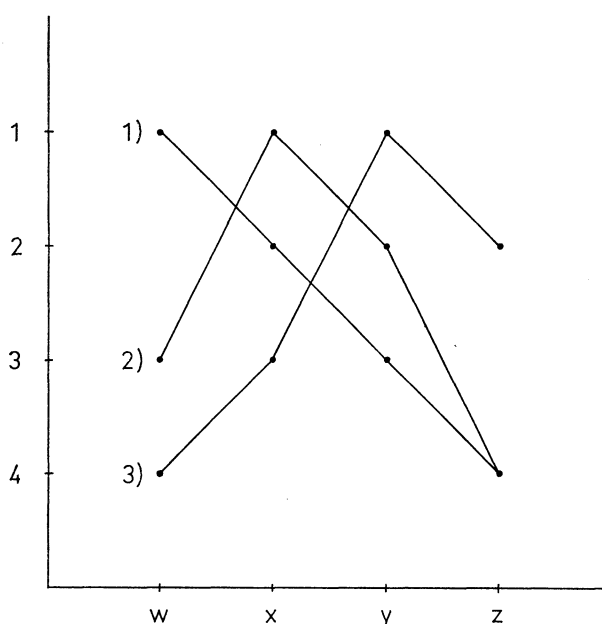


Fig. 7.5.a

We may then construct a welfare function that fulfills all of the other conditions. For instance, such a welfare function is the weighted majority rule (in which alternatives are weighted according to their orderings). With single-peaked preferences the choice is the median of the individual choices (Rothenberg 1961: 281, Luce—Raiffa 1957: 355). From this example it can easily be seen that the results from the single-peaked preferences condition are not necessarily particularly interesting. The proposal that society should choose the median party through this method would probably be acceptable only to those supporting the median party.

Single-peaked preferences have an interesting relationship to the problem of scalability and the construction of attitude scales. This problem has been studied especially by Coombs.¹ Specifically, the assumed relationship demands that if single-peakedness exists, there is a common qualitative dimension along which all preferences are ordered. The only quality required is the concept of betweenness, but no distances are necessary. Any alternative lying between two other alternatives is assumed to be indifferent with respect to them. This can be given the following rationalization:

¹ Coombs (1970); see also Koskela (1971: 35–37). This relationship has been first pointed out by Guilbaud (1968 (1952)), see Riker (1961: 907), Luce-Raiffa (1957: 354–355).

Every individual i has an ideal position on this continuum and he orders his preferences in such a way that they are related to the 'distances' (in the sense of order arrangement) of the alternatives from the ideal. This is the unfolding technique developed by Coombs (Fig. 7.5.b):

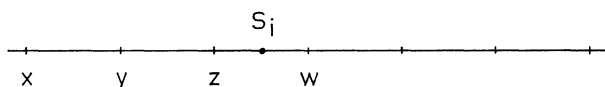


Fig. 7.5.b.

Single-peaked preferences allow for tactical considerations when applied in, for instance, the weighted majority decision rule. Anyone may try to move the median towards his own choice by preferring the extreme alternative in his end of choice (Rothenberg 1961: 288). This would imply that most individuals would desert the middle positions unless they had a strong conviction that their position was truly at the median. This may actually have happened in certain cases, but probably for other reasons than this.

The single most important restriction for single-peaked preferences is obviously the assumption of an unidimensional underlying ordering. Most social decision problems are clearly multidimensional and therefore will not allow for single-peakedness in this sense (Rothenberg 1961: 295–298).

The idea of single-peaked preferences can be extended. Tullock (1967: 256) has advocated the application of single-peakedness in a multidimensional base ordering. It is not very clear how such orderings could be constructed, and especially whether they would still produce the wanted results. According to Tullock the existence of multidimensional single-peakedness wholly eliminates the significance of the Arrow theorem. This view has not gained many adherents, (see e.g., Vickrey 1960: 516).

Arrow (1963: 81) has given single-peaked preferences the following philosophical interpretation. They form the foundations of the so-called idealist school of thought, exemplified by Kant and Rousseau. According to Arrow this school separates individual wills from the general will, while the latter is considered dominant. In single-peaked preferences, we can also speak of a 'general will' that determines the structure of the individual preferences. This is hardly the most plausible interpretation for the possible existence of single-peaked preferences.

A much more natural interpretation would be expressed in the form of the common interests of certain group of people. For example, for most members of the society, democracy is in their common interest. Or, the working class has common interests which create a basis for a special preference structure. Yet, as has been noted above, the concept of single-peaked preferences is rather restrictive and the rules that can be con-

structed on the basis of these alone is relatively uninteresting. At best they can be understood as a defence of the majority rule in many situations, and also as an explanation of why the majority rule breaks down in so many cases.

Proceeding from the case of single-peaked preferences, the next point of consideration is those extensions of the impossibility theorem not formulated in the theorem itself. These extensions will be considered only shortly as they are rather technical and cannot be analyzed here properly without the aid of demanding preparatory considerations.

Generally speaking, the above-mentioned extensions have largely manifested themselves in the form of new conditions for a social welfare function which have resulted in the widespread reconsideration of the utility of the theorem, as it was originally constructed by Arrow.

One of the most important of these results related to the conditions is that the impossibility theorem is true only for orderings, not for choice sets. In other words, the Arrow theorem is about social welfare functions and not about choice functions (this has been shown by Sen 1969, 1970). This is because for choice functions, transitivity is unnecessary. To ensure that an alternative will be chosen, already quasi-transitivity (i.e., transitivity of preference), and of course the much weaker acyclicity¹ of preference are enough. Although this is a very important conclusion, Sen emphasizes that it does not eliminate the importance of the Arrow theorem. Even if we can noticeably strengthen other conditions, if we are concerned with choice functions the Arrow theorem is still, according to Sen, the most economical and fundamental.

The fact is, however, that the additional conditions are rather interesting and through disregarding transitivity we arrive at much more realistic situations, where only partial rationality in the classical sense prevails.

I shall not treat these new conditions extensively in this monograph. It should be noted that especially quasi-transitivity is an interesting condition in its own right. It may be described as a condition that also takes into consideration the inability of individuals to discern small differences between the values of social states (Inada 1970: 29). This is, in fact, much more realistic than the requirement of full transitivity in preference orderings.²

¹ By acyclicity is meant the following property (see Sen 1970: 15–16): R is acyclical over S if and only if the following property holds.

For all x_1, x_2, \dots, x_j in S :

$$(x_1 P x_2 \& x_2 P x_3 \& \dots x_{j-1} P x_j) \rightarrow x_1 R x_j$$

² For a very extensive review of the content and relevance of the quasi-transitivity of indifference condition, see Koskela (1971), who very succinctly and comprehensively reviews the existing literature. Note also that quasi-transitivity implies cardinal utility.

But there are also problems involved. If we are satisfied with a choice function producing a set of best alternatives, we are in exactly the same situation as the classical welfare economists; that is, we have a set of alternatives from which we cannot choose, and another set of alternatives that we also cannot compare (i.e., the alternatives outside the choice set). Most people would say that such a problematic dichotomy is not much of an improvement over the original situation, whereas the social welfare function that produces an ordering would be much more appetizing.

In fact, personally I would prefer to disregard the condition of completeness, as it would be much more natural to have a partial ordering. However, the surrendering of this condition does not prove very helpful (see Hansson 1969: 536).

The two most interesting additional conditions for a social welfare function are those of *anonymity* and *neutrality*.¹

May (1952) was able to show that the simple majority rule was the only rule with the following four properties:

1. *decisiveness*, i.e., there is a social choice for every profile.
2. *positive responsiveness*, i.e., a situation where, if x and y are indifferent in social choice and if one more individual prefers x to y while no others' preferences change, the society must strictly prefer x to y (for a formal definition of these conditions, see Sen 1970: 72, Luce—Raiffa 1957: 357, May 1952).
3. *anonymity*: if the preference orderings of individuals i and j are interchanged, the social preference ordering is not affected.
4. *neutrality*: if the preference orderings concerning two alternatives y and x are interchanged in every individual's preference ordering, x and y exchange positions in the social ordering as well.

The positive responsiveness condition is a clear Pareto-type condition, (together with neutrality, it satisfies the strict Pareto principle (Sen 1970: 73)), but the remaining two are the more interesting ones. In a sense, both are intuitive preconditions for a certain type of equality. Sen (*ibid.*: 78) shows, as could be expected, that they are not fulfilled by the market mechanism under perfect competition: perfect competition and equality are rather distant principles. Majority rule also fulfills the independence of irrelevant alternatives conditions (Sen *ibid.*: 72). This is a direct consequence of the condition of neutrality. This is obvious, but Hansson (1969a: 51) has shown that with a rephrased version of the independence of irrelevant alternatives condition, the following result is obtained: assuming that a social welfare function fulfills the three conditions of anonymity,

¹ First suggested by May (1952), and extensively studied by Murakami (1968), Hansson (1969a), Dummett—Farquharson (1960), Sen—Pattanaik (1969), Sen (1966, 1970), and Guilbaud (1968).

neutrality and independence of irrelevant alternatives, if we have xP_iy for every i , we must have xIy , i.e., social indifference. This is clearly unacceptable and obviously violates the positive responsiveness condition. In other words, we are confronted with an interesting contradiction. The conditions of neutrality and anonymity considered together (as neutrality implies independence of irrelevant alternatives) are incompatible with the condition of positive responsiveness and with even stronger conditions.

There is something wrong with either the May theorem or the Hansson lemma (and the resultant theorem, *ibid.*: 54). It seems that the Hansson definition of independence of irrelevant alternatives is different from the Sen and May definitions. But the Hansson definition is interesting in its own right, and therefore his conclusions merit consideration. If the anonymity and neutrality conditions together are incompatible with an interpretation of the independence of irrelevant alternatives, then one or the other must collapse. In accordance with Hansson, I think that the independence of irrelevant alternatives (as Hansson has defined it) is the weaker. But in other versions they clearly are not incompatible, thus Hansson's claim that his theorem is an argument against the Arrowian condition of independence of irrelevant alternatives (*ibid.*) is based on a misinterpretation.

For most social decision situations, the conditions of neutrality and anonymity are unrealistic. It should be noted that the method of majority decision is not a social welfare function in the Arrowian sense (i.e., it does not fulfill the condition of collective rationality), nor is it a social decision function (it does not fulfill the condition of acyclicity). There most certainly exist individuals and alternatives that are more important than others. In particular, there are rules that weigh some individuals more heavily than others, and some alternatives that are barred from consideration (i.e., truly 'irrelevant' alternatives).

But as ideal conditions these are rather good. Their only fault is the one which prevails for all other Arrowian conditions, they do not consider the problem of social activity and power. But this is another question.

Schwartz (1970) has presented an interesting new development that also partly contradicts the claims of earlier writers. Schwartz claims that we can relax the independence of irrelevant alternatives condition and part of the collective rationality condition and the same result will nonetheless obtain. This is in clear contradiction of, for example, Sen's assertion that Arrow's result is very economical; if we relax any of its restrictions, the result collapses (1970: 49). It is difficult to assess the truth of Schwartz' claim, as his formulation of the crucial conditions somewhat differs from the Sen formulation. It is not my purpose to make them comparable in

the context of this monograph. Yet it is safe to say that if the Sen results are valid, then the Schwartz result loses its force, and vice versa.

The Schwartz results have a very high relevance to social policy as compared to those of Sen. What Schwartz has attempted to show is that the whole concept of maximizing choice in multidimensional decision situations is an impossibility. This argument sounds very plausible, especially in the light of the reasoning presented in the following chapter (about the level of living index).¹ But as it depends on a perhaps implausible proof,² I shall not risk making far-reaching inferences from it. Yet it opens new possibilities that are interesting especially with respect to social welfare, and may well prove to be one of the most important implications of the Arrow theorem.³

7.6. *The Implications of the Arrow Theorem*

I have now covered the essential problems of the Arrow theorem and discussed the importance of the various concurrent conditions. What remains to be discussed is the highly important problem of the general relevance of the Arrow theorem from the point of view of social welfare and social policy.

As noted above, the fundamental idea of the theorem is that social welfare is not definable other than through the social activity of individuals, expressed as 'voting', or preferences, (see Arrow 1963: 106). This idea differs substantially from the various attempts to define welfare 'externally', that is, semi-independent of individual activities. The implications of the Arrowian approach find expression most clearly in the so-called constitutionalist school of thought, whose interest is almost exclusively in the rules (i.e., a »constitution») for social intercourse. In and through these rules welfare, justice and equality are realized.

In the section where this approach is analyzed, I have noted that it is clearly inadequate to consider only rules of social activity when analyzing problems of welfare and justice. The same argument applies to the Arrow

¹ It is astonishing how some of the recent students of the Arrow theorem have written their contributions apparently unaware of the contradictory results present in earlier literature. Already in 1960 and later, especially 1966—1969, there have been many articles about quasi-transitivity and its implications.

² As one counter-example is enough to devalidate a proof, and it is very possible that the Sen counter-example (Sen 1970: 52—53) for instance, will prove sufficient.

³ With respect to the impossibility theorem one must always be on guard against misinterpretations, wrong theorems and the like. Compare for instance, the discussions of Contini (1966) and Majumdar (1969), where Majumdar refutes the claim of Contini that one of the Arrow conditions is irrelevant for connected choice spaces.

impossibility theorem and its later developments. We must also approach the content of social welfare, and not only its form, to use a classic metaphor. More specifically, we might speak of *external definitions* of welfare, in which welfare is defined in terms of the rules given for social decision-making and collective choice; and *internal definitions* of welfare, where welfare is defined through the nature of activities under any set of rules. The combination of these two will clearly be nearer to that which is understood as social welfare. Without the internal definitions of welfare we cannot — and this is important — circumvent situations in which external definitions break down; that is, situations where fundamentally necessary conditions are not fulfilled. On the other hand, we cannot fully consider the content of the rules unless we can analyze their results independently. This is why definitions of social welfare related to the concept of level of living are absolutely indispensable.

The importance of the Arrow approach is therefore, that it forms a basis for a 'constitutionalist' discussion about the rules that should be applied in social activities relevant to social welfare. These rules are extremely general in nature. They specify very little about the social structure, as well as about the actual conditions of the society, etc. Neither are they, as noted above, substantially specific about the content of the social welfare resulting from their application. It is therefore obvious that they are not very fruitful, except as a framework for welfare, and an extremely general framework at that. It is conceivable to consider a certain point and note that it fulfills certain conditions, after which we can specify its welfare relevance. In this respect, however, the fulfillment of the conditions is irrelevant.

Another question which the Arrow theorem and its extensions clearly ignore is the problem of the systemic, structural components of social decision-making. One individual may express his preferences in many different functions in society, depending on his power and nature of his activities. This is clearly dependent on the very narrow definition of social choice given by Arrow in the beginning of his book (1963: 1—2). This definition has not been challenged in later developments, not even by Sen (1970), who has a much broader view on the problem. There are, however, some notable exceptions (for instance Coleman 1966), but most have started from the Arrow characterization of social choice. Yet all the more interesting qualities of choice, i.e., the process of choice, the nature of social choice as a complicated social process containing both objective and subjective elements, are wholly eliminated. The implications of this omission are not very clear: what actually is lost? If our only interest is in the conditions, we lose little if anything. But if we are interested in realistic situations, and in the question of social welfare as a process itself, the Arrow

theorem is not of much pertinence. Thus Sen's dictum (1970: 1) that his book is only interesting to those not believing in the existence of independent collective welfare, is not strictly true: also those who wish to analyze the processes of welfare formulations have little to gain from the Arrow theorem and its extensions.¹

In effect, what I have said about the nature of the Pareto-optimum is valid in this connection as well: we must be aware of the means to reach the best or better situations, and knowledge concerning the ordering of situations is not sufficient.

The Arrow Impossibility result is also essentially an irreducibility result. If it is valid, it means that social preferences cannot be reduced to individual preferences, and vice versa. Proponents of extreme forms of methodological individualism have claimed exactly the opposite — that all societal facts can be deduced from individual facts (see Mandelbaum 1970, Israel 1970, Lukes 1970, Watkins 1968 and Koskela 1971: 42). Therefore, the impossibility theorem can be understood as an argument against methodological individualism in its extreme form. This was acknowledged by Arrow already in 1950 (1950: 165), when he emphasized that preference orderings of every individual are partly dominated by socio-ethical norms which have social origins. In a later article, he has developed this theme by explicitly criticizing the idea that social action can be reduced to units of individual action. Instead, a general theory should start with the concept of a social action, which is collective and interpersonal. Social choices should then be based on this concept (Arrow 1967: 8–10). In this article Arrow seems to think that one solution would be to relinquish the third condition, but this is obviously not the case, as the underlying individualistic assumptions will not be eliminated by denying the third assumption (*ibid.*: 19). But the idea Arrow has in mind is some form of extended sympathy concept, also analyzed by Rawls (1961).

Generally it does not make sense to speak of independent social entities, but under some conditions this is not so. If we define independence simply as a breach in the chain ultimately beginning from individual action, this is perfectly plausible and may lead to interesting results.

This is the way in which Marx and Engels (1970: 103–105) speak of the contradiction between general and individual interests.² In this pass-

¹ Lindblom (1964: 226) has emphasized that on the contrary, the resolution of the Arrow paradox would be meaningless, because then we would have the problem of creating a social welfare function from individual welfare functions. Thus in a sense the Arrow paradox makes life easier. But as I have noted, this «ease» may be illusory.

² «How is it that personal interests always develop, against the will of individuals, into class interests, into common interests which acquire independent existence in relation to the individual persons, and in their independence assume the form of *general* interests? How

age, Marx and Engels describe very succinctly the process of general interest freeing itself from the common interests of the members of the society. These problems are however, rather distant from the original purpose of the Arrow theorem, but there certainly exists a relationship between them.

7.7. *Constitutionalist Solutions*

The problem of social welfare, as we have noticed, is divided into two central and primary problems: that of the definition and determination of social welfare, and that of the nature of the social decision-making process — i.e., the question of how is social welfare to be «implemented». As noted earlier, the Arrow theorem is, in essence, an attempt to show that social decision-making is not possible under some general conditions. For those who are essentially interested in the social decision-making process, this has necessitated attempts to evade the Arrow problem by inventing procedures for social decision-making that circumvent the Arrow theorem. One of such attempts is the «constitutionalist» approach which has been suggested independently and simultaneously by many authors. I shall consider some of the aspects of the constitutionalist theories in order to see whether they can indeed provide a solution to our problem.¹

is it that as such they come into contradiction with actual individuals and in this contradiction, by which they are defined as *general* interests, they can be conceived by consciousness as ideal and even as religious, holy interests? How is it that in this process of private interests acquiring independent existence as class interests the personal behaviour of the individual is bound to undergo substantiation, alienation, and at the same time exists as a power independent of him and without him, created by intercourse, and becomes transformed into social relations, into a series of powers which determine and subordinate the individual, and which, therefore, appear in the imagination as 'holy' powers? . . .

»Theoretical communists . . . are distinguished precisely because they alone have *discovered* that throughout history the 'general interest' is created by individuals who are defined as 'private persons'. They know that this contradiction is only a *seeming* one because one side of it, the so-called 'general' is constantly being produced by the other side, private interest, and by no means opposes the latter as an independent force with an independent history — so that this contradiction is in practice being always destroyed and reproduced» (Marx—Engels 1970: 103—105).

¹ For instance Kaplan (1964: 58) says that the solution to the Arrow problem is to be found in the political process. This is the heart of the constitutionalist solution in its relation to the Arrow theorem, but I would like to emphasize that this is true on an even more general level. I will return to this in the last chapter.

As we shall presently see, this approach is fundamentally a classical solution, implying a return to the Good Old Days of *laissez-faire*.¹ The principle idea of constitutionalism is relatively easy to discern: instead of trying to devise a system which would guarantee social welfare in the sense of a welfare function — i.e., reacting to changes of welfare concurrently and continuously — the constitutionalist attempts to develop a system in which people would make agreements, a social contract, for a certain period under which all would be on their own. This contract provides the regulations for decisions of social policy during the given period. After this period, and on the basis of the results subsequently obtained, new agreements would be made (see for instance Runciman 1970: 219—220, Buchanan 1966). The essential point of the idea is that the »contract» or constitution approved is the only social decision made in the name of public interest. All other activities are based on attempts to maximize individual utility — for individual interest — within the bounds of the rules agreed upon, of course.

The major current proponents of this idea are John Rawls, who has suggested it as a solution for distributive justice (see Rawls 1961, 1968, and Buchanan—Tullock 1962, Buchanan 1966). who have been interested in it from a more general point of view, as a method for political decision-making. They have of course, many predecessors, for instance Hobbes (see Rawls 1961: 90) and Wicksell (see Coleman 1966: 1115; Wicksell proposed it as a requisite for just taxation). Also, the whole »contractarian» tradition should not be forgotten.

But indirectly, the idea of constitutionalism is closely related to the idea of a perfect market. Just as in the perfect market, where the actors must answer only to the rules of market, and each actor is supposed only to further his own interests, people in the constitutionalist system are acting by the rules, for their own interests, and each is assumed unable to effect the final outcome by himself.² Thus, we could say that the idea of constitutionalism roughly implies a return to the advocacy of *laissez-faire*, only in a more refined and modern form. This may not do justice to some of the ideas of Rawls, but certainly does with regard to the principles of Buchanan and Tullock. In addition to Rawls, Buchanan

¹ Thus the name of the Gordon Tullock article »A reply to a traditionalist» (1961) is certainly a misnomer; it nicely reveals the unhistorical nature of the constitutionalist argument. In fact the article against which Tullock argues in his paper (Downs 1961) is of a much newer tradition than that which Tullock represents.

² See Buchanan—Tullock (1962: 266, 303); Dahrendorf (1968: 219—220), conceives of planning as an antagonistic counterpoint to the constitutionalist-type agreements in the form of market rules (Coleman 1966: 1116).

and Tullock, many other modern writers have presented these same ideas.¹

I will concentrate here mainly on the presentation of Buchanan and Tullock, as it is most closely related to my analysis of the Arrow theorem and problems of welfare economics, and also because this approach is very comprehensive, and not restricted to some limited aspects of social decision-making, such as justice.

It should be noted that the constitutionalist approach is not only interesting because it implies a »solution» for the problem of social decision-making, but also because it contains strategic elements. As I emphasized above, the Arrow theorem eliminates strategic elements from the analysis thus making it rather unrealistic. The main idea behind the Buchanan and Tullock model is to incorporate strategic elements in the form of log-rolling or »horse-trading». Thus the constitutionalist approach is also connected with the theory of games, and especially with the problem of »fair deal» games (see Luce—Raiffa 1957: 361, 363—368). These games fall beyond the scope of this monograph, but for those interested in the problems of constitutionalism, they should not be forgotten.

Above I delineated shortly the essential qualities of a constitutionalist model. In the following we will examine certain central questions more thoroughly.

First of all, the main assumption of the constitutionalist approach, as exemplified by Buchanan and Tullock, is that the state is not an independent entity which could have aims or goals. The state is founded on individual consent and the political process can be subdivided into individual choices (Buchanan 1966: 25—27, Buchanan—Tullock 1962: 12—13).

Secondly, the rational individual, who is the central element in the political process, is assumed to minimize his external costs, incurred by the activity of others, and decision costs, i.e., costs due to collective decision making. Both types of costs, which Buchanan and Tullock classify together under the name of social interdependence costs, are mainly incurred by the activities of the state. Thus the rational individual is assumed to minimize collective action (see Buchanan—Tullock 1962: 46—47). In the terminology of Marx, the rational individual of Buchanan and Tullock is an isolated monad. He is not interested in collective activity as such,

¹ See for instance Leibenstein (1965), Coleman (1966), (who presents some additional ideas, however, not related to the idea of constitutionalism), Downs (1957) who in some points is in disagreement with Buchanan and Tullock as well as Arrow (1963: 106), who has a very interesting view on the matter; see also Rothenberg (1961), and Social Policy and the Distribution of Income in the Nation (1969).

but only as a means to further his own, private interests. This applies equally to political, economic and social activities.¹

Based on the further specification of both the external and decision cost functions, Buchanan and Tullock draw the conclusion that the only acceptable collective decisions are those about which there is complete unanimity. Only in situations where the decision-making costs would be very high, could decisions made with less than complete agreement be acceptable. According to Buchanan and Tullock, the unanimity rule for decision-making is especially applicable where procedures are agreed upon for certain situations and where the individual cannot be certain of the outcome (Buchanan—Tullock 1962: 78). In this situation the individual would be ready to make agreements which would be in the interests of all (see also Buchanan 1966: 30—32). Only in very rare cases would the individual make agreements which would further some group interests.²

Buchanan and Tullock think that these conditions are extremely unlikely to be fulfilled simultaneously. Of course the whole idea of agreement-making as Buchanan and Tullock define it is rather improbable, but it seems that if we accept the basic idea, there is certainly a great possibility that all these conditions can be fulfilled. As they themselves say (*ibid.*: 80), it would require a society of great equality for these conditions to be applicable (also Rawls 1961: 85). If the society contains a clear concentration of power and resources, the decision-making system suggested by them would break down. Interestingly, they seem to think that this is a conclusive argument for the acceptability of their theories, whereas any objective observer of the capitalist democracies of today would say that just this fact makes the approach completely unrealistic.

Actual decision-making under such a system would be comprised of the so-called »log-rolling» mechanism. To reach unanimity, it would be necessary to make agreements which are in the interests of everybody; i.e., to barter with political issues. This system is of course a well-known political practice, exemplified by the direct trading of votes, by the lobby system, and so on. In fact, one of the aims of the Buchanan—Tullock

¹ (*Ibid.*: 20). For Buchanan—Tullock it seems impossible that the same individual would behave differently in different roles: a fact well-known to all sociologists.

² According to Buchanan—Tullock only under the following conditions would this be possible:

1. The individual is able to predict which issues are going to be decided.
2. The outcome is predictable for one or more issues if we use the most efficient rule A.
3. The outcome for one or more issues is not so good for an individual if we employ the rule A, than if we would employ some other rule.
4. There is another rule B, under which outcomes would be more desirable for the individual.
5. The advantages of B are larger for the individual than the disadvantages from the un-employment of rule A.
6. It is possible to have rule B agreed upon (Buchanan—Tullock 1962: 78—79).

book is to make lobbying and political pressuring respectable (1962: 23). But for log-rolling to be really effective, it is necessary to have total agreement, otherwise the result is an ineffective log-rolling system, as Buchanan and Tullock attempt to show in an example (*ibid.*: 135–140) which has become rather famous.

The ideas of Buchanan and Tullock have been warmly supported by Coleman (1966), who thinks that the idea of log-rolling is extremely fruitful for the analysis of social decision-making. Also Arrow (1963) has analyzed extensively the idea of constitutionalism in relationship to his theorems. According to him, it is plausible to think that one of the components of an alternative of social choice is precisely the mechanism of choice itself. Thus the social alternative would consist of components of different orders: for instance, action components, law components, decision-making system components and so on. If we can assume that there is a component of order n , about which all can agree, we would in principle have solved the paradox: this agreement would determine all choice of the lower order (Arrow 1963: 90). Thus, in principle it is possible that the constitutionalist approach would eliminate the Arrow problem. But, of course, it does require quite far-reaching assumptions which are not normally fulfilled.¹

It should be noted that the unanimity rule of the Buchanan–Tullock thesis is simply the Pareto principle applied to political decision-making, in that the constitutionalist is not interested in the welfare of the people, but only in whether they are unanimous or not in a certain decision. But actually it is in connection with the Buchanan and Tullock argument that we can clearly see the absurdities to which the Pareto principle can lead us.

It is obvious that the constitutionalist argument can be subjected to severe criticism on many levels. This has in reality been the case, and the evidence has been, in my opinion, rather conclusive against the idea of constitutionalism in the form presented by Buchanan and Tullock. This does not exclude the possibility, however, that constitutionalist ideas based on some other assumptions would not be acceptable.

One of the most obvious forms of criticism can be directed against the extreme individualistic assumption presented by Buchanan and Tullock. The assumption that individuals would rather avoid any collective activities save those in which there is unanimous voluntary agreement (see Buchanan–Tullock 1962: 90), leads to impossible situations. Not to

¹ One indication of Arrow's interest in the constitutionalist solution is that he has replaced the term social welfare function by the term constitution in the second edition of his text (see Arrow 1963: 105). Thus he has very obviously attempted to emphasize that the constitutionalist solution by no means resolves the Arrow paradox. But as the true constitutionalist solution does include strategic aspects, it seems obvious that the Arrow theorem is not directly relevant to it.

mention the fact that, as Barry says, it is obvious that a society formed of such rational egoists that Buchanan and Tullock have in mind would not be a nice place to live in (Barry 1965: 243). Very few people would consider an ideal society to be a place where people keep completely to themselves unless there is something (such as external threat) which requires collective action. But it should be pointed out that Marx demonstrated precisely this state of affairs to be the bourgeois ideal, as expressed in the declaration of human rights of the French Revolution (Marx 1965). In such a society it would be meaningless to speak of social welfare, and of course, anything related to welfare would only be the business of isolated individuals.

The second criticism can be directed against the unanimity rule and the assumption of complete voluntarism. Buchanan and Tullock emphasize that majority rule, which is now being hailed as the »democratic« decision-making rule, should be replaced by unanimous rule.¹

In an ideal society this should certainly be the case, but in our very defective societies, unanimous rule could only bring more hardship. This can be illustrated by an example, also analyzed by Buchanan and Tullock themselves (*ibid.*: 91) — namely the problem of pollution. According to them if we do not witness voluntary action against the pollutant, the costs incurred by pollution are not real. Thus no governmental, non-voluntary action should be undertaken against pollution. This implies, as has been repeatedly pointed out, that anybody wishing to pollute air, rivers and so on, could freely do so, and afterwards it would be determined whether the costs are real or not. This is regrettably true in the present situation, but few would consider this situation ideal (see Barry 1965: 256—259).

Of course even more absurd situations can occur. The owner of the polluting factory could simply prevent antipollution measures by vetoing all action directed to such ends. It would be in his interests to control the rules which would ignore such situations or make effective safeguards for his business (see Sen 1970: 25).

But this leads us already to the third, and perhaps most important criticism against the constitutionalist approach. It can be pointed out that the constitutionalist situation requires men without attributes to make agreements: if we have the rich and the poor, capitalists and the workers, the educated and the ignorant, and so on, agreements will necessarily

¹ Buchanan—Tullock (1962: 96): »We have witnessed an inversion, whereby, for reasons to be examined later, majority rule has been elevated to the status which unanimity rule should occupy. At best, majority rule should be viewed as one among many practical expedients made necessary by the costs of securing widespread agreement on political issues when individual and group interests diverge.«

favor some group and be biased against others. The factory owner of our previous example would envision situations where his activities would perhaps arouse opposition, and ensure that no rules enabling the opposition to dominate would be accepted. This is of course, the situation in the real world, and this is the basic reason why the constitutionalist device breaks down (see Wolff 1966: 188, Runciman 1970: 220). This argument has been countered by the assertion that it is equally plausible to conceive that people are not aware of the effects of their attributes (see for instance Runciman 1970: 221, Buchanan 1966: 30–32), and that it is much easier to reach agreement on rules, than on the outcomes of situations. The latter argument is doubtlessly true, but even agreement on rules is exceedingly difficult to attain.

If an individual has an attribute useful to him only in very specific situations (such as a very rare language skill), it is difficult for him to know the effects of this attribute. He would be, in effect, involved in a lottery situation, which is the ideal state according to the Buchanan and Tullock principle. But if an individual has a very large amount of money or in general some negotiable resources, he possesses a very universal attribute which can make him expect to gain in most situations, except in those where his resources are not valuable. Thus, such an individual can have a very definite idea of which kinds of rules he should accept and which kinds of rules he should not. He should oppose rules which would imply control of resources by society and the utilization of resources for the general good. And his opposition would either entail the acceptance of rules not effectively curtailing the use of resources as an attribute, or would result in a paralysis of decision-making, which is not very probable.

This is also true in reverse, as Sen points out. People with less power are ready to make settlements which are not in their interests, but which they know to be the best they can get.¹ Coleman (1966b: 1117) has developed a model which has included the power of the individual as a factor. In his model, thus, we have a realistic situation where a person with intense preferences but no power is irrelevant to the final outcome.

In extreme cases the Buchanan and Tullock model can thus lead to a minority dictatorship, where one powerful individual, or small group, by blocking all rules which would work against them, can use their power unrestrictedly during the intermittent periods of contract. This is a case which is not considered feasible by Buchanan and Tullock. For them, it is more relevant to secure that everybody can prevent external costs incurred

¹ Sen (1970: 26): «A laborer in a monopsonistic labor market may accept certain terms of agreement feeling that he cannot hope to get anything better but this does not mean that it is unanimously preferred to an alternative set of terms.»

to them by collective action (Buchanan—Tullock 1962: 25). This is, of course, an important problem but it is perhaps even more important to hinder private individuals from incurring external costs to others by interfering with necessary action.¹

In any case, the problem of minority power which is very possible under the Buchanan and Tullock approach, is not correctly understood if we consider solely the rule-making *per se* (as does Barry 1965: 315). It is only the implementation of the possibility to eliminate rules which would restrict one's power which makes the minority rule really dangerous. This is precisely why it has been opposed by people interested in the democratization of society (see for instance Riepula 1969).

It is possible of course, to criticize many other aspects of the constitutionalist approach (see for instance Runciman 1966: 252—253, Rothenberg 1964, and Bower 1968: 137), but the above points can be considered the most conclusive. Thus we might say that the constitutionalist approach as presented by Rawls and Buchanan—Tullock is reactionary and includes many features which make it unrealistic for present-day societies. But as mentioned above, in an ideal society where all men are equal, well-informed and altruistic, the ideal method of decision-making would undoubtedly resemble some form of the constitutionalist model. This merely demonstrates the relationship of the ideal to the possible very well: if one would attempt to introduce such a decision-making system into a present day society, the results could well be disastrous.

8. An Operational Approach to Social Welfare:

Level of Living, Social Indicators and Level of Welfare

8.1. *General Remarks*

In the two previous chapters I have analyzed the problems of welfare economics and the Arrow theorem. The starting point in this analysis has been the individual and his welfare, a concept which has not yet been operationally defined. The problem has actually been how to make social wel-

¹ It is interesting that the contradiction between these principles has not been recognized very widely. The same groups may both be requiring more effective forms of control against collective activities and simultaneously require possibilities for more effective collective action. Of course, this is an apparent contradiction, resolved by the fact that different types of decisions are envisioned. But in principle it would be very difficult to specify which types of decisions should be covered by unanimous rule and in which types of decisions coercion could be exerted.

fare judgments if the content of welfare is intuitively known (but not specified) at the individual level.

The level of living and social indicators approaches are almost diametrically opposite the approach delineated above. The question is: *what is welfare* (social welfare), and how can it be measured; and more importantly, how could this measurement be implemented in social policy? This latter question has only recently been formulated, yet, the decision-making aspects are almost wholly ignored while the content of welfare is in the foreground. This has important 'ontological' implications: we are no longer interested in the problem of how to derive social welfare from some individual judgments, but instead go directly to the question of the possible content of social welfare in the form of social conditions necessary for individual welfare.¹

This indicates that unless we consider welfare economics (in a broad sense) and level of living as opposite approaches, we can see them as complementary, centering in different, but equally relevant problems of social welfare. As I emphasized previously, it is not reasonable to analyze only the 'formalistic' side of welfare, that is, the different rules and methods of making judgments about social welfare. And it is as equally insufficient an approach to consider only the 'content' of welfare, as it is to conceive solely of fundamental principles with no intermediate alternatives. Ultimately the theory of social welfare will need to contain both elements and more: the connection of social welfare with social reality, that is, with the structure and functioning of the society.

In the following I shall first review the development of the level of living concept and social indicators and then proceed to analyze the various gaps left unresolved by the existing approaches. Mainly I shall be emphasizing the above-mentioned issue of the connection of the level of living and social indicators with social reality, with social policy and social action.

I shall not be concerned with the technical details of the development of adequate indicators, but will remain on a more abstract level of discussion which centers on the problem of the dimensions of the level of living and social indicators,² nor shall I dwell on the history of the level of living analysis, except very briefly to illustrate some main tendencies.³

Traditionally a distinction has been made between the *standard*, *norm*,

¹ The attitude of welfare economists toward this approach has been rather well presented by William Vickrey (1960: 531): »... any welfare function for which the argument consists solely of objective data consisting of prices, incomes, institutions and the like, thus abstracting from the declared preferences of the individuals, is ultimately dictatorial in this sense (Big Brother sense)»; see also Little (1957: 1).

² See, for instance, Drewnowski (1968a, 1970) or Johansson (1970).

³ See Pipping (1953), Salavuo (1968) and Johansson (1970) for a fuller historical account.

and *level* of living.¹ In the United Nations report of 1954 this distinction was adopted and 'officialized' (Report on International Definition and Measurement 1954: 2—3). Shortly, the distinction was as follows:

1. the level of living is the measure of the actual living conditions of men (or of a people);
2. the standard of living indicates the aspirations or expectations of people, i.e., a sort of ideal level of living; and
3. the norm of living indicates some predetermined level of living which is considered 'adequate' according to some criteria. The norms could refer to a minimum, or comfort, or very good, and so on.

A modification of this is the Pipping distinction between the 'normal' or 'general' levels of living (or standard of living in Pipping's terminology, i.e., a kind of combination of standard and level), and the ideal standard of living.²

It is obvious that in particular the distinction between the 'standard' and 'level' of living does not withstand concrete analysis. Already the choice of components and indicators is related to some standards or 'ideals' about living conditions, i.e., to a conception about the good life (cf. my analysis on needs in chapter 5).³

I do not thus deem it necessary to make the separation between level and standard, but will use them interchangeably, with level of living as my fundamental concept.⁴ The current trend has been away from the use of standard of living toward the use of level of living, and in any case, the level of living is certainly more accurate and conveys a clearer idea of the meaning of the concept.

On the other hand, it may be reasonable to speak of a 'norm' of living, in the sense of an adequate or minimum level of living. These entail no absolute measures, as they are very much dependent on social judgments and social realities.⁵

In any case, this kind of norm of living is clearly dependent on the definition of level of living which is therefore, for the time being, the central problem.

One of the variants of this tripartition of concepts is the distinction

¹ For the probable origins see Bossard (1934: 152), who used the terms plane, standard and norm; International Labour Organization (ILO) report (1938); Pipping (1953: 116, 1936: 87—89) refers to a related distinction.

² Pipping (1953: 118—119); this has been adopted by Salovaara (1968: 18).

³ Note also that this is true especially for the weights of a level of living index which, therefore, cannot be 'objective' in this sense.

⁴ This is in accordance with the Finnish usage, where 'standard' has necessitated some very arbitrary terminological juggling; see Waris (1965), Salavuo (1968).

⁵ See Allardt (1972) who emphasizes this; Rescher (1966: 99).

between the objective and subjective levels of living (or welfare).¹ The most interesting explication is that given by Noponen and Sipilä who divide well-being into 'real' or objective welfare on the one hand, and the well-being experienced by the individual himself, which is termed subjective welfare (Noponen 1971: 15, Sipilä 1970). As I noted in chapter 4 above, this distinction is related to the distinction between happiness and welfare, which is not a particularly fruitful distinction, conceptually speaking. With respect to the problems of the level of living this is also true. It will certainly be necessary to include both subjective and 'objective' elements in any definition of the level of living that is to be practicable. It is very mechanistic to think that there could be a 'real' or 'actual' level of living abstracted from society or from the individual's experience.

Another distinction that is of interest here is that between the flow of welfare and the stock of welfare.²

This distinction has, however, mainly technical relevance and thus does not interest us here. It is obvious that almost anything affecting welfare should be a flow. For instance a stock of food has no welfare effects (except in security components) unless it is consumed, i.e., transformed into a flow. Thus stock concepts are not very relevant. However, it is generally easier to measure stocks than flows and this leads us to some very difficult problems in the operational measurement aspects.

8.2. *The Concept of the Level of Living*

It is probably safe to say that compared with other resources expended in social scientific pursuits, the research on the level of living has, at the level of published material (and also lately at the level of official resources) been more intensive in Finland than in any other country in the world. In fact, there have been so many theses, articles, monographs and abstracts about the level of living published in Finland lately, that one could almost speak of over-production.³ In addition, we can refer to the pioneering work by the Finnish economist Pipping (1934, 1953) with respect to the

¹ See for instance Salovaara (1968), Noponen (1971), Sipilä (1970); for older exponents see Hoyt (1938), Salovaara (1968: 24–25), Kyrk (1953):

² In Drewnowski's (1968b: 3–5) terminology the former is the level of living and the latter is the level of welfare, but from a practical point of view, and in accordance with popular usage, it would be better to consider the stock of welfare as the level of living, i.e., the more stable part, and the flow of welfare would be the level of well-being or welfare which is more transitional.

³ See Salavuo (1968, 1969), Vepsä (1966), Noponen (1971), Roos (1968), Salovaara (1968), Waris (1965), Allardt (1970, 1971).

level of living. This is not to say that the concept has not been studied outside Finland, but one could almost speak of a Finnish 'school' of level of living studies. (Although, one should add, this school is very heterogeneous.)

This is, of course, no reason for avoiding more analysis of this problem. It is obvious that the area has not been explored completely (by any means), not in Finland, nor anywhere else. On the other hand, the issue of the level of living and its connections with social welfare on the one hand and social policy on the other, is so central for much of social science that there is little fear of too much research. In addition, the existing attempts have many faults: in part, they are not based on a well-developed theory of society or even of social welfare.¹

The majority of approaches to the problem of level of living have been rather empirical; they are either efforts at suggesting empirical indicators for the measurement of level of living or actual attempts to illustrate, with the help of empirical material, the problems of measurement in the level of living. Actually this has led to 'misuse' of the concept of level of living in the same sense as there has been misuse of the concept of welfare in the economics of welfare: i.e., conceptualizations that are very far from the original idea of the concept (see e.g., the empirical analysis of Noponen 1971, or Salavuo 1969).

8.2.1. Fundamental Distinctions

Historically the concept of the level, or standard of living is relatively old. Already the classical economists and also the economists of the German liberal school used the concept of standard of life in a context roughly equivalent of that used today: i.e., referring to the 'necessities' and relevant aspects of an acceptable life (see Hertz 1961: 86, Myint 1948: 135, Pipping 1953). The standard of life was especially used in connection with the problem of the determination of wages. We can even speak of a specific »standard-of-life» theory of wages. But it was only in the twentieth century that a specific analysis of the concept of level of living was developed. Most of the fundamental problems of the level of living had been presented already in the 1920's and 30's. Especially the following were prevalent:

1. The distinction between a normative and non-normative standard of living was already presented in Bossard (1934), in the ILO report (1938)

¹ Waris (1965: 142) has noted that the trend has been from abstract theory formation toward more operational attempts, and from conceptual analysis to measurement techniques. The cycle has quite recently been completed by a trend to the opposite direction; in fact, we could speak of a peaceful coexistence of both trends.

that was to lay the foundation for the famous UN report (1954), in Pipping (1934), and in Hoyt (1938).

2. Most of the currently extant components of the level of living were also known. For instance Kirkpatrick (1929) presented a definition of the level of living including health, education, recreation, social relations, etc.¹
3. Many aspects of the problem were analyzed which only recently have regained attention. These are the connection of the standard of living with the social policy and social action, and with social structure. In this the pioneers have been Bossard (1927), Pipping (1935) and the ILO report (1938).

One of the most complete histories of the concept of level of living and standard of living is undoubtedly that presented by Pipping (1953).² But the Pipping analysis is not only historically relevant, but is also a theoretically significant contribution to which I shall return.

The next stage in the development of the concept of level of living began when the United Nations created a committee to define the level of living and to operationalize it with a view to international comparisons. This committee published its report in 1954. It contains much of the older tradition: especially the distinction between normative and non-normative levels, but also suggests some reforms. The reforms centered around the expansion of the use of components, of which the committee presented a very comprehensive list. The work of the commission was continued in the so-called interim report (1961), where the amount of components was restricted and the indicators specified.

The later developments of the concept of level of living have been largely related to the UN report. Especially the United Nations Research Institute for Social Development (UNRISD) has contributed much to the development along these lines. Its former research officer Jan Drewnowski has had an instrumental role in this process (see Drewnowski 1966, 1968, 1970).

It seems apparent that the recent interest in social indicators is essentially only a continuation of the level of living analysis on a lower theoretical level. The social indicators researchers have been astonishingly unaware of this, and have consequently missed many important developments. In effect we could speak of social indicators as a step backwards in the general line of development soon to be described. Later, however, both

See Salovaara (1968). Neurath (1970 (1944): 36–37) has also suggested the measurement of the «living conditions» in several components such as shelter, food, entertainment, friendship, etc.

² See also Salavuo (1968).

approaches have drawn nearer one another which should prove fruitful for both.¹

In the development of the concept of the level of living we can separate three distinct phases which, however, are not completely distinct in time, but are actually recurrent in the sense that they may be developed simultaneously:

1. The foundation of the level of living concept solely on the level of consumption, level of incomes, and the Gross National Product (GNP). This, in effect, implies that the concept is being based on wants, as distinct from needs. In other words, whatever a person or a nation has is part of the standard of living. This is still relatively common, especially in popular usage, but definitely on the decline.²
2. The subdivision of the level of living into separate and independent components, the classification of which is based on the classification of human *needs*, but in a rather restricted sense. This line of development has been relatively dominant.
3. The third stage is the anchoring of this concept in existing social reality: the regarding of both needs and resources in the concept of the level of living and the analysis of the relationships of the various components on the basis of a conception of social action and structure. Historically, this is the most diffuse stage: it has been present at various times.

These main trends of the level of living theories are by no means »pure», they are typologies, not »real» in the sense that every approach would be open to perfect classification into some of the categories (although it must be said that the distinction between GNP and other approaches is theoretically rather watertight).

It is obvious then, that the concept of the level of living has figured rather importantly in the development of welfare theory. Such a concept has many practical and intuitive advantages. To this day there do not

¹ There are of course many other approaches that are related to the concept of level of living. One of the most interesting is the so-called time-balance surveys. These have especially been developed in the socialist countries and they consist of a computation of a time budget for the various activities of the individual in the society. The components of a time budget coincide partly with the components of the level of living, which is of course natural, as most components of the level of living are actually time-consuming activities or very closely related to them, see Patroushev (1970), Friedrich (1970). Also the politological tradition of developing various 'polity' indicators has had much influence for the development of social indicators. To some extent, however, this politological tradition derives from the same source, namely that of level of living developments.

² It cannot be denied, of course, that consumption and the GNP certainly are important factors in the level of living, but there are also obvious differences between them to which I shall return.

exist any better measurements of the extent of well-being in human societies. It is clear that this concept must be developed further, and shall be developed, but one must bear in mind its fundamental importance.

8.2.2. The Development of the Level of Living Concept

If we analyze the three-stage division presented above, it is immediately obvious that the first stage offers us little of interest, although it is still very influential (see for instance Myint 1948: 84 *et seq.* for the historical origins of this usage). In its most unrefined form, it is based on the equation of the national income (or the national product) and social welfare. Here we can speak almost interchangeably of production, income and consumption. The differences between these in relationship to the level of living are relatively slight. They are distributed internationally and regionally in the same way. Income and aggregate consumption measured in money is almost the same thing: only individual differences in the rate of savings and taxation affect this. Neither expresses anything about the nature of consumption, its quality being the main factor in the level of living. The same goes for production which contains items that are even less immediately relevant for the level of living (production of machines, etc.). The criticisms against this approach are so well-known that they need not be reiterated.¹ Recently, criticism has especially been directed against the detrimental effects of production which are ignored completely in the national income and national product calculations. This social cost and external effects analysis is very closely related to the problems of the level of living, but I shall not take that matter up here.²

It can actually be said that the level of living comes into being as an independent concept only when we reject wants as its foundation. In this approach the concept of level of living refers to a property that is much more restricted, but on the other hand much more broadly based than the 'true' level of living.

Thus, even consumption must be discarded as a measure of level of living, although it more accurately reflects the living conditions of people, especially in a capitalist country where individual consumption is most characteristic of one's living conditions. But the same argument that leads to its negation, applies to any other comparable measure: increased consumption in itself is no guarantee for an increased level of living.³

¹ See Johansson (1970: 17–18), Drewnowski (1968b: 14, 23–25, 28), and Tsuru (1971) for the most lucid presentations relative to this monograph's approach.

² See Kapp (1950), Mishan (1967), Taylor (1970), Olson (1970a: 24), Drewnowski (1966: 5–7), Pipping (1953: 147–148), and Waris (1968: 83).

³ However, especially the early definitions of levels of living were based upon consumption;

Although the researchers who employed such concepts as national income, national product and consumption were aware of the discrepancies between level of living and these measures, the advantages of the use of such extremely aggregated, rather easily understandable measures that were certainly somehow related to the level of living weighed heavily. Especially comprehensive aggregation is important in this connection (see *Toward a Social Report* 1969: 98). As the aggregation of the components of level of living has proved difficult (some have in fact, considered it impossible), the temptation to lean on unsatisfactory solutions has been great.

The second important argument for the use of the monetary measures connected with the national product is very persuasive: only such measures are so closely connected with the manifest central activities of society. It is obvious that in the UN definition of level of living in particular, this connection was almost severed. What we must emphasize in this context, however, is not arbitrary equation but the analysis of causal relationships.

8.2.3. The Simple Need-Based Level of Living Concept

It seems obvious that a proper concept of level of living should be *ultimately* based on needs; it must reflect the process of need-satisfaction in a society as an adequate and interesting concept. This goes back, on the one hand to the relevance of needs in welfare, and on the other hand, to the relevance of needs for the working of society. Only when the concept of level of living reflects the interests of the members of society, can it be truly functional.

The question is, in what way should needs and the level of living be related. It is essentially to this question that I will seek an answer through analyzing the various alternatives.

The first existing alternative is what I will refer to as the *simple need-based concept of the level of living* (SNC).¹

This can be said to be the central and currently dominant phase of development, with its foremost promoter being various organs of the

see Pipping (1953: 114–115). Beginning with the concept of GNP, Tsuru (1971: 19–21) has suggested a new measure which would more faithfully reflect the welfare content of economic activity. This would be based on the distinction between capital and income made by Fisher (note that Drewnowski makes the same distinction). What one would essentially try to do is to construct a concept of social wealth sufficiently wide to reflect all the effects of economic growth. This is a very interesting suggestion which is related to the Drewnowski approach in more ways than one.

¹ In a way, it could also be called the *need-biased* level of living concept. This reflects the opinion that this alternative circumvents the essential point about welfare and level of living: its relation to social activity.

United Nations, especially UNRISD. In general terms the SNC is a concept based upon the following theory of needs: men have rather unchanging, general, similar needs (this especially with regard to basic needs) according to which the components of the level of living may be formed.

Here 'higher' needs have proved somewhat problematic, but lately this has been resolved in basically the same way as other needs. Therefore, one might claim that the simple need-based concept, in its essential points, has its roots in a need theory, the rudiments of which I have described in section 3 of chapter 5.¹

The essential qualities of such a relationship (re: footnote 1, this page) imply that for every need component there corresponds a component of the standard of living, that the intradimensional (need, level of living) intercomponential relationships are essentially arbitrary (although different components are perhaps allotted different weights), and that all needs have in principle the same status in the analysis.

The original proposal for this sort of SNC was defined by the UN committee in its report of 1954. As mentioned before, there were many related approaches earlier.²

The main emphasis in the committee's work was on the word »international»; they endeavored to find a definition conducive to the best possible comparability between nations. This of course, implied an emphasis very different from that which would have begun from the conditions of any specific national group, or even smaller unit.³

Comparability does not necessarily require complete equality of the basic needs, but only that the needs should vary between nations in a known fashion (see the Report on International Definition and Measurement 1954: 6).

It must be noted that the committee did not make a very explicit connection between needs and the level of living. As Johansson (1970: 20, 24) notes, the starting point of the committee was very empirical, with primary stress on operationality: the level of living was simply that which was to be measured. Its theoretical framework was rather obscure.

It was only later that their original structure manifested itself in the form of a SNC; i.e., a certain concept of level of living was later »embellished»

¹ There is, of course, no explicit, theoretically complete account of the connection between a theory of needs and a theory of level of living, which is unfortunate, but here I shall try to explicate some of the heretofore tacitly understood relationships.

² Here should especially be mentioned the definition of Getz Wold (1949: 68) where he defines standard of living as the composite of different consumption norms concerning living, food, clothing, leisure, time, etc. It may have affected the work of the commission considerably.

³ It is obvious that precisely this emphasis on comparability led the committee to formulate a rather »sterile» definition, i.e., a definition which would be as general and simple as possible.

with a theory of needs. Nonetheless, this does not alter the fact that it was eminently well-suited for such a theory.

The committee justified the division of the level of living into components and indicators on the basis that the level of living should constitute clearly restricted aspects of the whole life situation, and these aspects of the life situation are especially relevant when we present goals. Here is also a clear allusion to the nature of the level of living, which requires division into components, an allusion distinctly related to needs (Report on International Definition . . . 1954: 8).¹

The ILO committee (1938) had devised the following criteria for choice of components in compiling their list of indicators:

1. the importance of the component with regard to the well-being of the individual, according to generally accepted norms;
2. to what degree the deficiency in a certain component borne of »felt» needs creates problems;
3. to what extent it is possible to remove the deficiency through human action;
4. the capacity of the component to adapt to statistical measurement (Report on International Definition . . . 1954: 24).²

According to these criteria, the following components were chosen: (Report on International Definition . . . 1954: 26).³

1. Health, including demographic conditions
2. Food and nutrition
3. Education, including literacy and skills
4. Conditions of work
5. Employment situation
6. Aggregate consumption and saving
7. Transportation
8. Housing, including household facilities
9. Clothing
10. Recreation and entertainment
11. Social security
12. Human freedoms

The list of components shows clearly that the committee had envisioned a broad but undifferentiated concept of level of living, including transport, savings and social security, although these components are not directly related to human needs.

Consumption in particular is a problematic element: the most important

¹ But the division into components was also based on the fact that the UN was organizationally similarly constructed (see *idib.*: 23).

² The final criterion, however, was not highly influential, as can be seen from the components.

³ See also the ILO list: Worker's Standard of Living (1938: 28).

consumption groups are already included elsewhere in the list; this goes for saving as well, although in prospective. Transportation is a matter which apparently has effects upon the level of living only in an indirect sense.¹

Maybe the most problematic component was that of social security. In the ILO proposal, there was a component of »general security», but the UN committee strove for more specificity. But social security is contingent upon all other components of the level of living if it is to be complete, as Nieminen (1955) defines it. The goal of social security is to ensure a moderate level of living for all citizens. In other words, social security is a means to reach a certain level of living for the population. What this component therefore measured is in what way a certain country undertakes to fulfill its citizens' needs. As mentioned previously this is a very important question, as the strategy of collective or individual needs is one of the most central considerations in social policy.

If social security is to be used as a component, it would be natural to require the inclusion of the component of, for example, regional policy also into the analysis. Of course social security has indirect effects on the level of living of the people, in that it affects security, but this implies that there should be a general component of security to embrace all the sorts of warranties which the state provides its citizens.

These problems were partially resolved in the Interim Report of 1961 (Report on International Definition and Measurement 1961). Here components 6 and 7 were removed and components 4 and 5 combined. A social security component however was nonetheless retained in the list. The committee had previously created another group of components which were referred to as the resources of the level of living (Report on International Definition and Measurement 1954: 52). But this was not pursued to a sufficient degree: the resource components were not analyzed further, and their relationships to the proper components of the level of living was left unexamined. This effected some odd consequences: the concept of level of living did not include any resource components at all; economic conditions were not seen as components of the level of living. This has been severely criticized by Johansson, who also notes that ownership conditions were not even mentioned. A concept which considers clothing to be more important than income or wealth is not a proper level of living concept, claimed Johansson.²

¹ It is of note that the Committee's solution was obviously mixture of many different proposals. Pipping (1953), for example included a savings component as a very central factor in his analysis.

² By ownership conditions Johansson apparently means the concentration of ownership, etc. See Johansson (1970: 35).

The Interim Report committee's definition of level of living included the following components (Report on International Definition and Measurement 1961: 14):

- 1. Health
- 2. Nourishment
- 3. Education
- 4. Employment and conditions of work
- 5. Housing
- 6. Clothing
- 7. Social security
- 8. Leisure, recreation
- 9. Freedom

Here we can observe an explicit connection with needs: most of those components not directly related to needs were eliminated. This solution has formed the basis for most later attempts to define the level of living, especially that of UNRISD as well as for those, for instance, in Finland, and it is certainly a rather purely need-based level-of-living solution.

But it was in the work of UNRISD that the level of living was explicitly defined as the level of satisfaction of needs, effected by the goods and services consumed in a certain time period (Drewnowski-Scott 1966: 1, Drewnowski 1968a: 2). In Finland this was adopted by most of the level of living studies (Waris 1965: 145, 1969: 84; Koskiahio 1969: 10; Vepsä 1972).

As a result of this, for the first time, the components were explicitly divided according to the nature of needs:

Components	Corresponding needs
	I Basic needs
	Physical needs
1. Nutrition	prevention of hunger
2. Shelter	prevention of exposure
3. Health	prevention of disease
	Cultural needs
4. Education	prevention of ignorance
5. Leisure and recreation	prevention of overwork
6. Security	prevention of fear
	II Higher needs
7. Surplus income	

(Drewnowski-Scott 1966: 13–14).

What is interesting is that the higher needs are left completely to the whims of the consumer, while on the other hand, the basic needs compo-

nents include some elements which could be easily considered as higher in the classic sense.¹

However this representation of the higher needs was not permanent; already two years later, Drewnowski presented another formulation. But his reasons for the revision were connected with the construction of the level of living index: it would be more difficult to devise the index were we not to eliminate the double standard created in this way (Drewnowski 1968b: 10—11).

The result was the following list of components:

1. Nutrition
2. Shelter
3. Health
4. Education
5. Leisure
6. Security
7. Environment (social and physical, social contacts and recreation)
 - a. communications
 - b. travel
 - c. sports
 - d. cultural activities
 - e. clothing
 - f. physical environment (see Drewnowski 1968b: 37, 1970: 63).

During this period of development, the basic components which have remained the same were nutrition, housing, health and education. These components are those which are best susceptible to measurement, but there are also good theoretical reasons for their inclusion: they are by far the most central of components.

The other components have not been so stable: their designations and natures have changed. Leisure, for instance, has been on the lists, but to my knowledge there have not been any suggestions as to its measurement.

The new component, environment, includes a catalog which could probably be continued indefinitely, but still seems rather important. It reflects the direct individual and collective consumption of the citizens and revives the component of consumption in another form. The component

¹ In other words, this represents a digression from the needs approach: in fact, the surplus-income conception can be said to be related with preferences instead of needs. Allardt (1971a: 306) has suggested that every component of the level of living should be related both to needs and preferences, which would imply that the surplus income approach would cover all the components. As I have previously stated, the nature of the level of living concept is such that it should not be connected with preferences. On the contrary, the level of living should be retained as a basic element of social welfare, connected with the primary fundamental factors of social welfare.

of social security has appeared as security, a change which is nonetheless problematic.

One important component has been left out: the component of employment and conditions of work. As people work a very large part of their time, including the majority of their conscious hours, it is very important to reflect this fact in a definition of the level of living. It is obvious that this component is very difficult to measure and compare internationally, but on a local level and intranationally it should be possible to some extent.¹

All this juggling with components does not change the fact that they are based on a very scant theoretical foundation. They have been the consequences of practical and direct approaches with little connection to macroscopic theoretical analysis. Of course they must rely upon some implicit theoretical paradigm, which is also suggested here, but in any case, it seems that in co-ordination with the increasingly specific work on indicators, there should be an analysis of what theoretical foundations a theory of level of living could have, i.e., not solely a concept but a theory. Only through this theoretical development — it is the view of this author — is it possible to increase the concrete, practical relevance of the level of living approach.

It should be emphasized that many practical problems have received extensive attention in a way which shall be of lasting use. This includes the work on the flow-stock distinction, the construction of critical points, the problems of ordinality, and in general the construction of indicators on the basis of these components. I shall not take up these problems here, except shortly when discussing social indicators, but their practical significance should be recognized (see especially Drewnowski 1968b, 1970). But of course, the relative weight of these advancements depends greatly upon the theoretical decisions and solutions which have not yet been reached.

One problem at the indicator level has been their applicability to the comparison of nations. If one would wish — as is appropriate — to measure the indicators of the level of living on an individual basis, many of the indicators would have to be revised. This must be remembered in practical measurement: there are no reliable level of living indicators on an individual (nor family) basis.

8.3. *The Level of Living Index*

As was previously mentioned, the work of Drewnowski has been largely oriented toward the development of a unitary index of the level of living

¹ For instance such indicators as work time, nature of employment, number of industrial accidents, the prevalence of work-related sickness, etc., come to mind (see also Hasan (1972)).

which would serve as a measure as comparable as the per capita GNP is presently. In the following I shall examine some aspects of the controversy around this problem, as it has some relevance to the more general problem of the relationships of the components of the level of living.

In short, the construction of an index of the level of living consists of finding weights, first for indicators, then for components. Actually the procedure occurs in three stages. First we must designate proper weights to the *distribution* of the indicator; only then can we weight the indicators. Drewnowski (1968b: 14–21), who has been the most persistent index developer, has proposed a weighting system within the indicators, which consists of defining the so-called critical points. These are based on the conceptions of experts about how necessary a certain measure of the indicator in question is for a man. The most important critical point is the survival point which essentially defines the ultimate importance of the indicator (see Drewnowski 1968b: 17). When we know the actual value of the indicator, and relate it to the critical points, we already have valuable information about its weight.¹

But we need more than this; some other measures of the importance of individual indicators and of the respective components are required. Drewnowski has suggested the following solutions:

1. The weights would be based on expressed social goals, for instance, international or national programs and declarations (Frisch has recently attempted to develop a system on this basis; see Frisch 1970).
2. Weights would be based on implicit social goals. In this method one would utilize the actions of the decision-makers to deduce their goals.
3. A »conventional» method would be to build the index in consultation with experts, in which the systems of weights would be as simple and clear as possible. Here we can use equal weights or gliding weights, where the weight of the indicator is inversely related to its value (relative to the critical points; Drewnowski 1968b: 19–21).
4. The fourth possibility, the construction of a weighting method based on individual preferences, is not considered possible by Drewnowski, who refers to the Arrow theorem (Drewnowski 1968b: 22). There are those, however, who consider this very much a possibility (see for instance Theil 1969). The weighting problem does not restrict itself to the weighting of the indicators and components of the level of living.

David Alberts, in a recent book (Alberts 1970: 50–51), has presented an extremely simplistic and optimistic solution (based on »operation

See also Ahmavaara (1969), who emphasizes that basic needs have critical points under which the entirety of well-being is reduced to zero; this implies that the weight of such an indicator would be infinite.

research») to the problem of weighting. He sees it essentially as a rational decision-making problem, with the following components:

- a. available course of action,
- b. the probability that an individual might select each of the courses of action,
- c. the possible outcomes,
- d. the utility of the outcome to the individual,
- e. the efficiency of a course of action resulting in an outcome; in other words, a traditional decision-theory situation. On the basis of this information it should be entirely possible, through a few simple operations, to determine the weights with the help of regression analysis! Nowhere does Alberts seem to stop to consider why his approach — so time-honoured and well-worn (although he does not mention this at all) — has never been utilized in practice.¹

The same problem exists in the welfare function itself, and all practical attempts to develop decision-making criteria for social policy must resolve weighting problems.

But these are technical difficulties, and although they may, perhaps, contain the solution to the problem, I am presently more interested in the theoretical aspects of the question (even should someone develop an eminently pragmatic method of weighting, this would not dispose of the discussion of the theoretical advantages and disadvantages of the method: the practical method of weighting would not eliminate the problems which cast doubt upon the whole approach of weighting).

For, despite the attempts of Alberts, Drewnowski, and others, the construction of a level of living index has been viewed rather skeptically, and most writers have considered it either impossible or not recommendable.²

It should be remembered that also the UN Committee in its 1954 report took a stand against the unitary measure (Report on International Definition and Measurement 1954: 52) which it considered impossible. But as I have said previously, it is not so much a question of impossibility or possibility as a question of whether or not a unitary index is desirable.³

The arguments *for* the development of the unitary index are rather simple. The main reason is that of comparability. A rise or decrease in welfare must be presented as one figure, otherwise comparisons in time and

¹ See his own application (*ibid.*: 70), for an exercise in triviality.

² Allardt (1971a), Neurath (1970), Radomysler (1969), Johansson (1970), Toward a Social Report (1969).

³ It is interesting to note, that the UNRISD itself has apparently given up the development of a level of living index and now concentrates on devising better and more accurate multi-dimensional measures; see Social Development Review, No. 3 (1971).

space (and also with respect to the effects of different projects in the same time and place) would be impossible. And as the GNP per capita measure is so over-worked, it is obvious that a better measure is needed (Drewnowski 1968b: 14).

The second reason presented by Drewnowski is simply that it is *possible* to construct such a measure. It is merely a question of putting the weighting of social goals on a firmer basis (*ibid.*). The reasons given by Drewnowski are very straightforward. As to the possibility of the measure (which in my opinion is not the central question), Allardt has pointed out that in the first place, we have no theory concerning the relationships of the components, which makes the construction of an index arbitrary. And once we develop an unitary measure, it is extremely difficult to say what it is — exactly — that we are measuring (Allardt 1971a: 302). Olson has pointed out the essential incomparability of components which makes the whole attempt impossible (Toward a Social Report 1969: 99).

Drewnowski's first argument, that of the necessity of being able to make comparisons, is more relevant. It is obvious that comparability is a desirable property. But must comparison necessarily be unidimensional? For instance, the arbitrariness of the unidimensional measure of the GNP is well known. What is the significance of the fact that the common standard of most of the items of the GNP are exchange values? Why should it be necessary to exchange the arbitrary basis for the GNP to another, probably even more arbitrary foundation? We are presently equipped with many methods to compare multi-dimensional measures with one another, thus there is no reason why the fact that not all dimensions give the same ordering should disturb us. On the contrary, we would achieve a much more interesting picture of the whole. To recognize that the GNP is an absurd measurement does not mean that it should be replaced by one equally preposterous. Otto Neurath (1970: 32–33) phrased this eloquently already some thirty years ago: »Some of the sociologists are prepared to handle silhouettes (Neurath's term for multi-dimensional measures) but not a few try to avoid this type of procedure, based on a multi-dimensional comparison. They attempt to reach by some calculations, a single number indicating a »degree of 'something' and often they cannot even tell us to what this 'something' should be correlated . . .»

Also other authors have come out rather strongly against the single measure of well-being, for various reasons (see Radomysler 1969: 91–92, Myrdal 1971: 193–195).

According to Johansson the actual concept of the level of living would be lost from sight by the construction of a unitary index (Johansson 1970: 38). This is certainly true. The advantage of a multi-dimensional measure is that it is much more descriptive and informative. For most of its pur-

poses, it is more practical than a unitary measure. For instance when measuring inequality, it is much more useful to apply a multi-dimensional concept than a unidimensional one, as the latter could not yield information of much relevance.

As I noted in chapter 4, the concept of welfare is essentially a multi-dimensional quantity. There is no reason why it should be reduced to one single dimension, as its essential qualities would thereby be lost.

There is another, more technical argument. This is based on the method of constructing the level of living index according to the Drewnowski approach. Determining relationships between the components of the level of living is not only a problem of weighting, i.e., one of adding independent components.¹

It is not only that the weights given to different components must be determined on the basis of the social importance of these components, but also that one must determine the *interactions* between the components, i.e., their dependencies. According to Tinbergen these two problems should be separated (1970: 14), but this is not possible: the weights of the components clearly depend on the interrelationships between them, and therefore the weight of one component is dependent upon the level of another. Assume that a hungry person cannot follow instructions and cannot learn as well as others. Then the weight of education would clearly depend on the level of nourishment, the weight of education ultimately being zero if all children of school age are starving. But if education directly affects the level of nutrition, this argument will have to be modified.

Interactions can also be noted in the qualitative changes of the level of living. As Salavuo notes, we can speak of stages of the level of living where completely different items are consumed and different components or parts of the components become important.² This implies that interactions between the components and outside factors change the whole structure of the level of living.

8.4. *The Problem of »Dimensions«*

In the consideration of dimensions, we confront the basic componential distinctions of welfare mentioned earlier. Whereas the components of health, employment, and so on, clearly signify different aspects of man's

¹ As is assumed, for example, in Cost-benefit analysis of social projects (1966: 20).

² See Salavuo (1969: 107—108); this phenomenon is also referred to by Johansson (1970: 33), when he notes that in the case of Sweden, nutrition is no longer as pertinent a factor as are patterns of diet. An extremely interesting analysis of this problem can be found in Waltuch (1972).

social activities and characteristics related to needs, the component of security must obviously signify the quality of these activities: a general characteristic of these activities. We distinguished many such »dimensions» of welfare, such as justice, equality, freedom, and security. Thus the question before us is how to account for the dimensions of welfare in concrete analysis.

In the first place, it is apparent that these dimensions traverse all the components of welfare. For example, a person may well be healthy all his life, but if there exist no medical facilities capable of caring for him at a reasonable cost, his situation with respect to health is very insecure; the same is true of other components. Thus security, as well as the other dimensions, is relevant to each component of welfare.

This is precisely the reason that the concept of the level of living is also relevant to such problems as inequality. With the aid of the level of living concept, we can construct a considerably more comprehensive and multifaceted picture of inequality or of insecurity.

This can be exemplified by the analysis of inequality, or in other words, the distributional aspects of the level of living.

It is well known that the majority of measures now in use (such as the GNP and even the level of living index) do not accurately reflect the distribution of the level of living. In other words, however unevenly the GNP for instance may be distributed, this is not at all reflected in the GNP. This implies a very serious requisite for analysis: not only the multi-dimensionality of the concept itself, but also its uneven distribution, must be taken into consideration. This is a very common problem (see Mäkelä 1971: 2, 18–19, who emphasizes this in connection with another problem complex).

In the development of the level of living concept this question has been raised a number of times. Already the UN committee of 1954 considered this problem and emphasized that for all components, information concerning distribution should also be acquired (Report on International Definition and Measurement 1954: 14). Drewnowski (1968a: 2) has suggested some practical solutions for this dilemma on the basis of his SNC formulation. Drewnowski's basic assumption is that all men must be equal. The only legitimate reasons for inequality must be reflected in differences in needs, never in differences in their satisfaction of needs (Drewnowski 1968b: 9; cf. also Noponen 1971: 42). This suggests that we may assume that for all components complete equality is the best alternative. There are several possible alternatives to account for this (Drewnowski (1968a).

1. We could define a specific component of distribution for the level of living (as has been attempted for security). According to Drewnowski

this is not particularly satisfactory, as it would also be, in essence, a transversal component.

2. We could eliminate the upper-most, or several upper fractiles from the distribution of a component. This makes the mean value more valid, as it is sensitive to deviating values, and high deviations are not desirable (a high value relative to other values implies great inequalities).
3. The best method, according to Drewnowski, is to correct each indicator by multiplying it by its Gini-coefficient, or some other coefficient based on the Lorentz curve. In this way, the more unequal the distribution of the indicator, the more strongly the distribution coefficient would lower the value of the indicator.

Alberts has suggested a »fairness function» in which the function would be dependent upon the distribution below the mean, but independent above it. The function itself is not specified, and takes the form of a simple integral:

$$A = \int_{-\infty}^{\infty} g(A_k(\omega)) A_k(\omega) d\omega$$

K = number of individuals

A = value of distribution

$g(A_k(\omega))$ = fairness function

(Alberts 1970: 53).

This function is actually a specific solution of type 1, though not significantly relevant, as Alberts has not made any specifications.

Another simple but efficient way to account for distributional effects, especially in cases where the whole of the distribution is not known, is to concentrate upon the lowest fractiles alone (for instance, to the lowest quartile) relative to the general level of living measurements. Comparison of this cross-section to the average level of living would be of utmost interest. Utilizing this method we could gain valuable information about the so-called »risk-groups» of society, which the effects of social policies either hit hardest or not at all.¹ Many policies which have small or unimportant effects upon the middle groups can be disastrous to these risk groups, as they actually live at, or near, the minimum income level. It should be

¹ A policy concerning the moderate raising of consumer prices has important repercussions within this group, which are not reflected in the average level of living; on the other hand introduction of sickness benefits of the type prevalent in Finland are not of much assistance.

rather easy take these groups into consideration.¹ This analysis could be extended to other dimensions as well. But again, I am more interested in questions of principle; i.e., what would be the general solution to this problem of accounting for dimensions.

Dimensions were said to describe the nature of the welfare arrangement expressed by components. As previously noted, we do not arrive at a very satisfactory solution if we over-isolate the different dimensions. In general, as I have noted above, the quality of welfare can be best examined in this context. The quality of welfare is that which is most closely related to the structural aspects of the level of living analysis. It is understandable that these have been avoided in international comparison, although it is obvious that the quality of welfare is much less conducive to measurement than the »quantity» — the components — of welfare.

Thus it is impossible to account for quality aspects through arrangements similar to those used with respect to components. That is, we can not just add another set of components (although, as I have indicated neither is this very advisable for original components). A solution must be sought along other lines.

8.5. *Indicators of the Level of Living: Social Indicators*

As I have repeatedly noted, to reach an adequate level of disaggregation in the measurement of social welfare, it is insufficient to remain at the level of components. We need to determine actual units of measurement — indicators — for social phenomena. For this purpose, the UN committee of 1954 made suggestions for indicators to be used in the measurement of the level of living (Report on International Definition and Measurement 1954). One might therefore speak of a simple type of »relevance-tree» in this context as illustrated below (Fig. 8.5.a).

Much of the development of the level of living concept has actually consisted of the development of indicators for this purpose. These indicators have one primary purpose: to express comprehensively and unbiasedly the theoretical and practical concept of the level of living. From the one indicator of the GNP per capita, we have, through the development of the concept of level of living, reached a proliferation of various indicators.²

¹ In the spring of 1971 there was great commotion in Finland concerning claims that the »change in price index is only 1.6 per cent» implying that talk about a price »treadmill», or explosion, were not founded upon fact. However, it would have been interesting to construct a cost of living index for the poorest group alone, and observe its internal changes.

² For suggestions for such indicators, see Report on International Measurement and Definition ... (1954, 1961), and Drewnowski (1968a,b; 1970; 1971: 90–91).

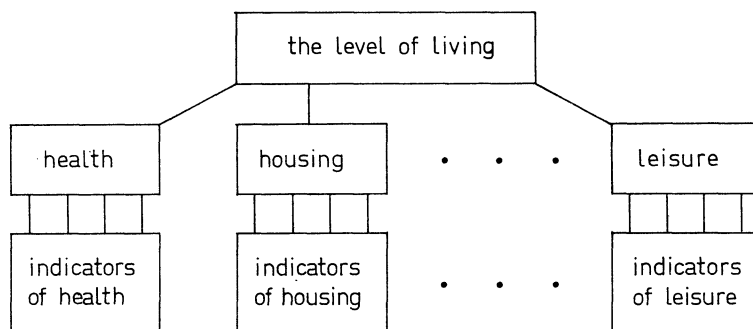


Fig. 8.5.a

Closely related to these developments has been the subject of social indicators, which has aroused a very widespread interest. As the problem of the development of indicators of the level of living (as a theoretical and practical problem) is akin to that of social indicators, I have chosen to treat them together.

There are, of course, some differences between the indicators of the level of living and social indicators. While the former represent a theoretically well-anchored development, where indicators have a clear aim — to represent the level of living — social indicators are much more ambiguous and their aims or connections are the subject of heated dispute. But fundamentally, as we shall see, social indicators and the indicators of the level of living are very closely connected.

8.5.1. The Development of Social Indicators

The development of social indicators is a textbook example of isolated, simultaneous development occurring along similar lines in separate fields. The concept of «social indicators» probably originated from the suggestion of Bertram M. Gross, among others, to complement the main economic indicators used in the decision-making process of public policy in the United States (Springer 1970). The term was most likely coined in the beginning of the 'sixties. The suggestion gained official recognition and there soon appeared an innumerable stream of papers, official as well as not, concerning social indicators (for the official, see Toward a Social Report, Full Opportunity Act 1970).

A similar approach was presented in France (see Baudot 1969, also French Experience . . . 1969) in connection with Le Plan, probably somewhat earlier. In any case, there has been widespread public interest towards

the social indicators approach. There even exist somewhat coordinated attempts among the countries belonging to the Economic Commission for Europe (ECE), at the instigation of this organization, to develop social-indicator systems (see *Methodology of Long-Term Studies* 1970), which has also led to the creation of research groups in Finland.

The development of social indicators has taken place in almost complete isolation from the level-of-living research. The most important predecessor to social indicators is seen to be *Recent Social Trends*, edited by William F. Ogburn (1933).

It is understandable that the bibliographies on social indicators published in the United States reveal the same type of ignorance (*Annals of the American Academy of Political and Social Science* 1970, *Full Opportunity Act* 1970). As to the situation in France, Baudot (1969: 47) refers to Quetelet, Durkheim, Sorokin and Simiand as developers of measures comparable to social indicators.

Thus, it should be clear that Allardt is wrong in associating the interest towards social indicators with the scepticism about unitary measures, as the developers of the social indicators were obviously not aware of existing attempts to develop unitary measures (excepting of course the GNP; Allardt 1971a: 303). Rather, the true reason for the development of social indicators was simply a wish to develop indicators of a similar nature and importance to those of economic life (see Olson 1970c: 123, Gross 1966: 257), and thus, at best, to effect a widening of the scope of national statistics.¹

8.5.2. Social Indicators and Social Welfare

Upon examining definitions of social indicators, we observe that although various definitions differ, they all refer mainly to the functioning of society and to well-being. Olson's well-known definition (1970a: 27, *Toward a Social Report* 1969: 97), for instance, says that »a social indicator . . . may be defined to be a statistic of direct normative interest, which facilitates concise, comprehensive and balanced judgments about the condition of

¹ Gross (1966: 158), for example, refers to the UN report of 1954 passingly and obviously without being aware of the connection. The ignorance about developments in level of living research is in exemplary evidence in Mancur Olson's comments (1969: 138, 1970b: 113) about his *Toward a Social Report* (1969): »This was the first systematic attempt to assess the well-being of a society! (See also Galnoor (1971)). This very simple report is, however, in structure almost identical to the well-known reports of the World Social Situation, the first of which was published in 1955, and which are explicitly based on the Report on International Definition and Measurement . . . (1954).

major aspects of a society. *It is in all cases a direct measure of welfare . . .*» This means that the Olson definition has great resemblance to the SNC definition of level of living: i.e., in its emphasis that it is a direct measure of welfare. No wider aspects are considered. This has been seen as an undue restriction even with respect to the SNC of welfare (see Springer 1970: 11), especially as it eliminates all other indicators except direct goal indicators. Some writers have opposed this because they feel that »normative» information is not appropriate, and that all kinds of »key time series» should be open to consideration as social indicators (Moss 1969: 7, Moser 1969: 12–13). This type of attitude results in a totally atheoretical approach toward social indicators which, unfortunately is reflected in current reality, as just this has happened and is happening in the development of social indicators.¹ In the definition of social indicators, one of the main problems to arise has concerned whether indicators should refer exclusively to goals or whether they should reflect the whole spectrum of relevant variables of social activity (see for instance Baudot 1969: 52, Methodology of Long-Term Studies in the Social Area 1970: 6). Most of the developers of social indicators seem to concur with the latter conception, which is in accordance with level of living theory.

But even more ambitious possibilities are reflected in the distinction between social indicators which measure the state of the system and those which measure the nature of systems (Biderman 1966a: 71, Baudot 1969: 48). By the former is meant indicators which express existing conditions, and by the latter, indicators which form a conceptual model which expresses the basic structure and dimensions of the society. In other words, it is a question of whether social indicators are understood as isolated state variables or whether they are seen as building bricks of a theory, in other words as related measures. This latter possibility has aroused considerable interest.²

This, once again, implies the necessity to develop a theory of society, the variables of which would be social indicators. One element of this theory is undoubtedly level of living theory, but alone it is not sufficient. However, I shall restrict my examination of this problem to the component level as it would be far too complicated a process to consider all pertinent indicators (see next section). Thus, in this context, I am only interested in indicators because of their relationship to the component approach.

¹ This is an important problem. The existing systems of statistics, including the new SNA, are quite restricted and it is obviously necessary to develop systems which either complement or replace the existing systems; see for instance Hjerppe–Niitamo (1971), Niitamo (1971), Moss (1969), Gross (1966: 258), Partanen (1971).

² Hjerppe–Niitamo (1971), Etzioni–Lehman (1967: 7), Kamrany–Christakis (1970: 211), Baudot (1969: 52), Biderman (1966a: 69–70), Deutsch (1966: 9), Allardt (1972).

I shall not dwell on the requirements and properties of indicators at this time. It is obvious that these questions belong to the sphere of general sociological methodology: i.e., what kinds of variables do we collect and what kinds of requirements do we assign to these variables. There are many different types of indicators possible from absolute to relative indicators,¹ as well as macro- and micro-indicators, that is, indicators about personal properties or about collective properties (Report on International Definition and Measurement of Level of Living 1954: 11). All of these indicators are possible alternatives when measuring social welfare.

To choose among indicators, the following criteria have been suggested.²

1. The indicator should be exclusive: it should not be replaceable by any other indicator.
2. The indicator should be valid.
3. The indicator should be sensitive.
4. Changes in the indicator should be conducive to clear interpretation. I.e., a change of indicator should always measure the same thing.
5. The indicator should be exact and not contain error.

These are all acceptable technical requirements. Niitamo and Hjerppe—Niitamo (1971: Annex 2) give some additional quasi-technical requirements, some of which are to some extent questionable:

6. Instrumentality (this is also mentioned in Kamrany—Christakis 1970: 209). This means that the indicator should be open to manipulation by public authorities. This is in my opinion an erroneous assumption. There are numerous circumstances in our society which are not available to control by public authorities, but which nonetheless constitute an important part of the social reality to be rescribed. This is especially applicable for many institutions which deeply affect men's lives. In a deeper, theoretical sense, this requirement is obviously possible only in the case where all relevant aspects of the functioning of society are subject to change by some conscious activity. This is as yet impossible.³

¹ See Kamrany—Christakis (1970), who also speak of autonomous indicators, by which they mean regional indicators.

² See e.g., Baudot (1969: 49—50), Niitamo (1971: 15—16), Hjerppe—Niitamo (1971: Annex 2), Biderman (1966a: 80).

³ Etzioni (1971: 11—12) has also emphasized the necessity that the variables used be «malleable» and «moveable». For instance a variable such as sex, which is not easily affected, should not interest the policy scientist. To this a reviewer of Etzioni's paper remarked: «So, if women are up in arms about discrimination by sex, we mustn't tell policy-makers about it because sex can't be changed?» Etzioni concedes that certain invariable situations are occasionally of interest to policy-makers, but does not take into consideration the central point mentioned above: non-malleable variables are, for policy purposes, equally interesting, and sometimes even more interesting than malleable variables. This is exactly why weather forecasting is so important for everybody. When Etzioni remarks that «The waste of considerable energy

7. Quantifiability is another »technical» requirement which is relatively suspect. We should also be aware of other than quantifiable variables, which requires that we describe them in some other terms. I shall return to the problem of quantifying in the concluding chapter.¹

8.5.3. The Relationship Between Social and Level of Living Indicators

Drewnowski (1971: 85—86) has suggested that the connection between level of living and social indicators is as follows. There are four types of indicators:

1. flow of welfare indicators,
2. state of welfare indicators,
3. welfare-effect indicators (i.e., »ratios of the movement of welfare flow indicators to the movements of economic resources which were or can be used in order to generate that welfare»), and
4. productivity-effect indicators (these are inverse to the welfare-effect indicators: they express how a given flow of welfare affects a certain type of economic activity).

The flow of welfare indicators thus form the basic category and all other indicators are derived from them. This makes it necessary, according to Drewnowski, that level of living indicators should be elaborated first.

More appropriate than to speak of categories three and four as indicators would be to speak of them as relationships, and note that the Drewnowski's scheme actually describes the relationships between welfare and social and economic activity. This is precisely the problem of a *theory of the level of living*, or that of the social welfare function.

A sensible social indicator theory would start from a theory of social welfare (or a conception of social welfare) but be nonetheless anchored in a descriptive model of society (see figure 8.5.b).

Hence, it should be obvious that developments in the field of social indicators are partly linked to the level of living approach and partly to more general theories of society, depending on the interests of the developer. This has also occurred on the practical level.

Thus we could define *social indicators* as the operationalized variables of some given theory of society (specifically of the theory of the structure

on challenging windmills rather than fuelling change is one of the key characteristics of liberal elites and radical movements», his attitude can be called simplistic reformatory, or opportunistic. It has nothing to do with social criticism in the sense Etzioni himself speaks of it.

¹ About the purely technical questions of constructing indicators see Baudot (1969), Drewnowski (1968b, 1970), Johansson (1970) and Moser (1969). This aspect will not be taken up at this time.

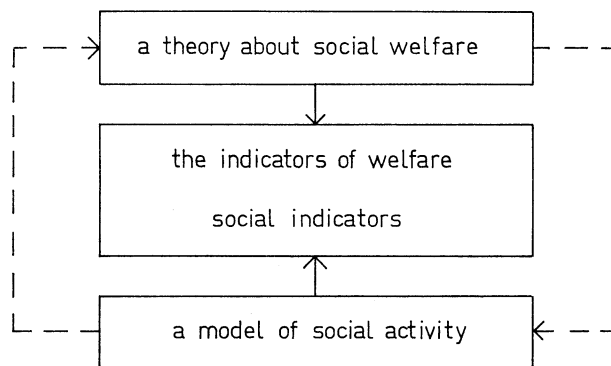


Fig. 8.5.b

and functioning of the society). In this way, social indicators must be considered to be a wider concept than the indicators of the level of living, which are the operationalized variables of some given concept (or theory) of social welfare. But their connection would be clear: level of living and welfare indicators are included as the central social indicators, and the subsequent relationships of the social indicators (or theory of society) would in actual fact be explicated in the social welfare function based on this theory.

It is worth noting that the development of social indicators, although begun from a completely or nearly atheoretical basis (lacking, at least, an explicit theory), has resulted in component-type classifications. Thus in *Toward a Social Report* (1969: xivxx), for instance, the following »components» are mentioned: health and illness, social mobility, physical environments, income and poverty, public order and safety, learning, science and art, as well as participation and alienation. These components obviously express the classifications of social problems in the United States and little else. This *is* however, a classification of social needs, but in a very superficial manner. An even more inadequate classification is that of the French Commissariat du Plan:

1. demographic, health and family component
2. education
3. employment and social mobility
4. standard of living and level of consumption (ECE: French Experience 1969: 4). In other words, the result is components which are largely useless, as they are constructed without clear criteria in mind.

There exists no innate development towards theory in social indicators research (nor in level of living research). It is obvious however, that a

theory is necessary for two major reasons. First, without a theoretical foundation it is impossible to discriminate between indicators which are important and those which are not.¹ Indicators in particular, must be connected with the central concepts of a theory.

Secondly, without a theory (of welfare and social activity) the relationships between indicators are completely arbitrary. This is especially applicable for the relationships of ends and means, if we look at the matter from the decision-maker's point of view (Baudot 1969: 52—53, Gross 1966: 162, Niitamo 1971: 3, Allardt 1972).

Thus it should be very clear that a theory of welfare and its connections to society is urgent. But this is not merely a question of »theory», in an abstract sense. What the present situation demands is a context in which all the innumerable variables we observe could be somehow combined. For the conscious direction of society this is an absolute necessity, although in itself insufficient. Even the best of theories is little more than a cardboard dragon, if it lacks conditions which allow for its use in implementing the goals of welfare research and social indicators: the welfare of the members of society.

8.6. *The Level of Welfare: New Developments*

The SNC which was analyzed above is not beyond criticism. In a well-developed form, it is rather restricted and does not envelop an amply broad area. Even its foremost developer, Drewnowski, has admitted that the SNC is not highly acceptable.²

If we consider needs as isolated entities, irrespective of how they are formed and how they are related to one another, the resulting definitions and theories are rather meager. To be able to analyze welfare from the point of view of social policy, it is not enough to limit oneself to the simple categories of needs which should be considered.

It is obvious that the SNC approach has gained ground due to its conceptual simplicity and propensity for international comparison (to compare *systems* of the level of living is well-nigh impossible). It seems that when operational requirements win, theory loses; i.e., the relationship between theory and practice has been improperly balanced.

¹ See Biderman (1966a: 84); I might point out, on the other hand, that we are always equipped with an implicit theory which enables us to choose, and that these choices depend on some conception of reality.

² »The social variables that are to be measured refer to the satisfaction of the needs of population. It must be admitted that such a concept of welfare is rather narrow. It leaves out many aspects of the social situation. Some are not liable to numerical expression in the present state of our knowledge» (Drewnowski 1970: 77).

Already in the classic works (with respect to level of living theory) of Hugo Pipping, there are arguments for a concept of the level of living, in which the systemic »sociological» aspects would also be considered (Pipping 1935: 138, 1953: 74; see also Salavuo 1968: 9–10).

Recently, criticisms against the Drewnowski approach have produced some »constructive» new suggestions for the definition of the level of living. One of these new alternatives, or complements, has been developed by Drewnowski himself (Drewnowski 1970).

Another has been suggested by the UN secretariat in the report »Social policy and the distribution of income in the nation» (1969: 2–3), in which four groups of indicators are suggested:

1. the »natural» indicators of level of living conditions related to the components of health, education, housing, etc.;
2. the monetary indicators of total and disposable income and wealth;
3. the total goods and services supplied by public authorities, non-profit private organizations and other groups; and
4. the total goods of services received and utilized.

This proposal, although it does not make specifications concerning indicator relations, considerably broadens the scope of the level of living. In particular, the consideration of collective goods as a specific group is an important point which has also been emphasized by, for instance, Gorz (1971: 96–97), who notes that the development of society leads to certain patterns of consumption and to the elimination of what previously was a collective good. For this reason, collective goods should be regarded specifically.

Titmuss (1969) and Johansson (1970: 24) have suggested that the SNC pictures man as a consumer, as a passive receiver. Opposed to this, Titmuss and Johansson present a definition of man as an actor and user of resources. Such a stand is, in other words, a plea for components which reflect the resources of man: his activities. In fact, Johansson has abandoned needs as a basis for the level of living, and endeavors to found his research totally on resources.¹ His definition of the level of living is as follows:

»Level of living is the possibility of the individual to use those resources (money, ownership, knowledge, psychical and physical energy, social relationships, security) with which he can control and consciously direct his life condition» (Johansson 1970: 25). Here we see that the »resource» concept of Johansson is rather encompassing: in normal language one

¹ In their paper on the dimensions of welfare, Allardt and Uusitalo (1972) have considered the resource approach to be the more restricted approach to welfare, whereas the SNC approach has been considered of a broader capacity. This is true if we restrict ourselves to resources alone, as Johansson suggests.

would not generally refer to security as a resource. Apparently then, what Johansson is up to is to define a concept of the level of living which is, in truth, a mixture of needs and resources.

Johansson suggests the following components:

1. Health
2. Dietary habits
3. Housing
4. Conditions for growing up and family relations
5. Education
6. Employment and conditions of work
7. Economic resources
8. Political resources
9. Leisure and recreation (*ibid.* : 32—37).

Of these components, health is for Johansson the most important and one which he obviously identifies with well-being in a restricted sense. The central additions are clearly components 4, 7, and 8. It is obvious that the component of family relations and the conditions of growing up is not conducive to simple operationalization. Johansson apparently conceives of some sort of scale of «familial compatibility» in addition to the historical aspect of an individual's level of living, but these are extremely difficult to chart.

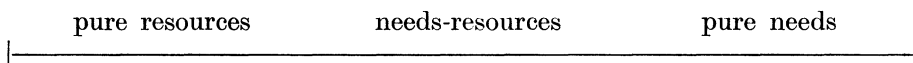
The component of economic resources is by far the most pertinent addition. At this time, I will discuss the problem of resources in general, as Johansson's proposal has been accepted whole-heartedly by some writers as an entirely «new» approach to the measurement of well-being (see Hjerpe—Niitamo 1971).¹

I have already in passing mentioned the problem of resources, or the means to satisfy needs. In practice it is immensely difficult to separate needs and resources and the measurement of a need — in the abstract, not in terms of existing means of satisfaction: the *objects* of need — is certainly difficult if not impossible. In this sense then, we are actually speaking of resources. For clarification, we should inquire, what is a resource? It might be defined as anything which can be used, directly or indirectly to obtain anything.² This is a very general definition. We might recall however the definition of needs presented in chapter five, where they were said to be the motive for human action, the goal of which was welfare. Therefore the object of a need (a concept on the same level as resource) is anything which can be used to affect one's welfare positively. It can be seen that resource is not always an object of need, but an object

¹ The present author has suggested rudiments of such a concept in his monograph *Welfare as an Objective of Social Policy* (1968).

² For a slightly different definition, see Allardt and Uusitalo (1972: 3).

of need, on the other hand, is always a resource. But if we define a »pure» resource as a resource which cannot be used directly to fulfill a need (e.g., money), and a »pure» need object as something which is directly connected with a need (say a loaf of bread to be eaten immediately) we may construct the following continuum:



From this we see that to emphasize needs or to emphasize resources leads actually to the selection of only slightly different items.

It is therefore difficult to accept the introduction of the resources concept as a substitute for needs as a »revolutionary» measure in welfare analysis (see Johansson 1970, Titmuss 1958, Hjerppe—Niitamo 1971).

According to Johansson, the following problems arise with the concept of needs satisfaction:

1. the determination of the needs to be satisfied;
2. the means by which they are to be satisfied;
3. when can needs be considered to be satisfied.

It is possible to surmount these obstacles, according to Johansson, in two ways:

1. by starting from the conceptions of the individual, or by
2. constructing a list of the fundamental human needs on the basis of some theory of social science or moral philosophy (Johansson 1970: 26).

According to Johansson, both approaches lead to difficulties: the first, because men are not reliable, and the second because differentiation and comparison are difficult. It is easiest to criticize Johansson's position on the basis of the fact that his alternatives are in no way separable. Both individual conceptions and »scientific theories» depend upon social processes, upon certain paradigms. As it is not possible to separate an atheoretical and a theoretical approach, the only question is of who interprets the theories, and the practice behind them.

Even were we to accept this distinction we are still confronted with the dilemma, due to the existence of the needs-resources continuum, that the same problems should apply to resources as well as needs: i.e., the questions of which resources are »needed», how to satisfy the resources, and how to determine when they are satisfied. This does not, however, dispose of the problem noted by Johansson: if any individual has a large amount of resources he may employ them to fulfill many different needs. Therefore to specify needs in this case would be futile (Johansson 1970: 27, see also Hjerppe—Niitamo 1971).

In other words, Johansson assumes a practically limitless complex — a proliferation — of needs. On the other hand we would refer to the axiom that needs are socially determined: in any specific society or social formation there is a relatively restricted amount of legitimate ways to satisfy needs. As a possession of a large amount of some resource enables one to exchange it for other, it is obvious that we are still faced with the same problem. Fundamentally, the resources approach and the needs approach cannot therefore be separated.¹

One final advantage of needs over resources (should we have to choose between them, which, in my opinion, is not at all necessary) is that in resources we are again faced with the dilemma of needs versus wants, i.e., of the nature of the use of resources. Not all ways of using resources are beneficial from the point of view of human welfare.

Another difficult point is the problem of collective and individual goods: i.e., whether or not needs are satisfied individually. Whenever society progresses in the direction of collective needs satisfaction, the distinction between resources and needs becomes hazy. But if we are interested in pure resources which cannot be «eaten», such as money, it is obvious that the resource approach results in the choice of providing people with money instead of free food, housing, education, health services, etc. This is probably something which neither Johansson nor Hjerppe and Niitamo would wish — a classical Friedman-type solution.²

The fundamental advantage of introducing resources is precisely the reason why Titmuss proposed their use in his analysis: they provide a connection between well-being, social activity and material production. Resources are directly created through social activity, while needs, in non-Marxist analysis, are something innate. But when this conception is disposed of, the contradiction, or distinction, between needs and resources disappears.

8.7. *The Marxist Approach to the Level of Living*³

In the present monograph, I have not previously referred to any Marxist definitions of the level of living concept. There is however, a clear Marxist

¹ See also Hjerppe and Niitamo's list of the resources they propose to use, namely economic, information (education), environmental safety and power goods (Hjerppe—Niitamo 1971: 5); this cannot be distinguished to any great degree from any sensible list of needs, but we have the advantage of having an idea of the relationships between the various needs.

² But which is, for instance, suggested by Lars Söderström in his book *Låginkomstproblemet* (1972a).

³ This section is of relatively early origin. After it was written, a sundry of new books and articles have become available about the socialist concept of the level of living. These corroborate

tradition, and very recently there has been an upsurge of interest in this concept. Already Marx, in the first volume of *Capital*, devoted a great deal of space to a detailed analysis of the living conditions of workers (Marx 1967a) especially housing and conditions of work. Even earlier Engels had written a classic work on the condition of the English working class, which covered systematically most of the components of the level of living referred to earlier.¹

The specific analysis of the concept of level of living and its development has not been very common among Marxist writers. Yet, there have been some ventures in this area, such as the Budapest conference on the standard of living (see Mod 1962) which contains some thought-provoking ideas about the nature of the standard of living. Also, as is well known, the famous fundamental economic law of socialism, according to which the main objective of socialism is the fulfillment of the needs of the members of society, has been described in Soviet five-year plans as the raising of the peoples's living standard. Essentially this has been considered a very straightforward and practical matter, related on the one hand, to real incomes, i.e., private consumption, and on the other hand to societal consumption funds, i.e., collective consumption (Zlomanov—Mihejeva 1971: 16—17; but see Fedorenko 1972).

In a sense we are dealing with a definition of the level of living similar to that of Johansson (1970): economic resources form one component as do societal consumption funds (which, as is well known, are allocations for sickness benefits, housing, and so on). In the explicit definition of the level of living (*lebensstandard*) of the *Wörterbuch der marxistisch-leninistischen Soziologie* (1969: 266) this view is confirmed: The level of living is the »gesamtheit der Lebensbedingungen der Bevölkerung einer gegebenen Gesellschaft oder Gruppen von Menschen. Zum Lebensstandard gehören Niveau, Umfang und Art der Befriedigung der materiellen und ideellen Bedürfnisse sowie die politischen Lebensbedingungen. Dabei sind folgende Gruppen von Faktoren (in my terminology, components) bestimmend: Realeinkommen, Sicherheit des Arbeitsplatzes, Arbeitsbedingungen (wie

in many ways what is said here, but on the other hand it would now be possible to present a much more detailed and complete picture of the Marxist approach to the level of living. This would, however, affect much of what follows as well. Thus I have decided to bypass it for the time being, and will give it extensive treatment in connection with a comprehensive analysis of the planning of the level of living and welfare under socialism which is to be included in a larger study of social planning on which I am presently working. The most important of the more recent literature includes: Aganbegjan—Waltuch (1972), Fedorenko (1972), Soviet Economic Reform (1972), Manz (1972), and Waltuch (1972). See also Roos (1972b).

¹ Engels (1972); the first edition was published in 1845, when Engels was twenty-four, see also Manz 1972: 12—13.

länge des Arbeitstages, Unfallschutz), soziale Unterstützung bei Krankheit und im Alter (System der Sozial- und Krankenversicherung), Bildungssystem, materielle und ideelle Unterstützung bei der Erziehung der Kinder. Der Lebensstandard, sein Niveau und seine Entwicklungsrichtung sind massgeblich durch den Entwicklungsstand der Produktivkräfte und den Charakter der Produktionsverhältnisse bestimmt.»

In other words, the earlier-mentioned components of Johansson and Drewnowski have reappeared in a slightly different form. However, it is emphasized that through changes in components and in emphasis, it is possible to alter the concept of the level of living to become appropriate, as they say, »seine besondere Eignung für die Apologetik des imperialistischen Systems durch bürgerliche Ideologen».

What is »new», is their emphasis of the necessity that the level of living depends upon the state of development of the productive forces and the nature of the production relations. This is of course consistent with the Marxist view. But the indispensability of relating the level of living to social reality should be apparent to everybody.

It seems appropriate to note that while the *content* of the level of living in socialist and capitalist countries certainly differs, the *form* of the more developed definitions in capitalist countries is approximately equivalent to the principle definitions in socialist countries.

8.8. *The »Systemic» Approach to Welfare Measurement*

I have mentioned above several approaches which contain improvements upon the original SNC approach; they complement its characteristics in an important way. However, they still fail to necessitate the analysis of the relationships between the components of the level of living — in other words, the systemic aspect of the level of living (except the Marxist conception; see Manz 1972). It is clear that the components of any of the above-mentioned concepts of the level of living are not independent. They form a closely related complex of factors which largely determine man's well-being. A change in one component necessarily affects other components in a significant way. It is therefore urgent to try to chart these relationships. This is, however, only a first stage: to complete the approach we must seek to determine the most important factors affecting the level of living.¹ In the following passages I will examine both approaches as well

¹ Drewnowski (1968b) has suggested precisely this when he proposes that first we should analyze the feedback effect of the level of living to the society, social production; and secondly, that we should analyze and develop the *welfare generation function*, i.e., a function of the generation of welfare through social processes. This is exactly what construction of relationships between the components and their social factors implies.

as the few attempts to construct such concepts of the level of living. But this extends so far from the original SNC definition of the level of living, that it is perhaps appropriate to call it by a new name. In the spirit of the Drewnowski improvement, we might refer to it as a *level of welfare concept* (LWC) by which is meant a concept which encompasses, as completely as possible, all aspects which belong to human social welfare, as well as all the relationships between these aspects. It is this LWC that I will then attempt to relate to social reality.

A recent definition by Drewnowski (1970) which points toward my line of development, perhaps provides a cogent example as well as an introduction to this concept. In this suggestion, which is intended to complement his previous SNC approach, Drewnowski distinguishes between a level of living (flow of welfare), and the level of welfare, which is the stock of welfare. The relationships between these two concepts are analogous to those between the integral and its derivative (*ibid.*: 77–78). The following three basic aspects are considered parts of the level of welfare by Drewnowski:

1. somatic status (the condition of the bodies of the members of the population)
2. cultural status (the state of the development of the mental capacities of the members of the population)
3. social status (the integration and participation of individuals).

In the words of Drewnowski: »The three level of welfare components¹ refer to the state of human body, human mind and the comfort resulting from attitudes towards other people and the society. They are supposed to cover between them all the main aspects of the state of human welfare, which can be observed at any given moment» (*ibid.*: 94).

In a sense then, Drewnowski proposes a healthy spirit in a healthy body in a healthy society principle, seen however very mechanically. This mechanistic view is also evident in Drewnowski's previous approaches. What this approach has to offer however, is the introduction of the social structure as an explicit aspect of the level of living. This is missing from all other approaches, except from that of Pipping. But Drewnowski's way of accounting for the social structure is extremely simplistic, which is to say unrealistic. The structure of society cannot form a special component or group of components, but must provide the entire framework for the analysis. It should be expressed in the relationships between the components, and in the relationships between the properties of the society and the components of level of living, in a systems view of these components.

¹ If component is to be used as a technical term, it is inappropriate to refer to the parts of the level of welfare as components, because in actuality they are themselves componential in structure.

To begin with, the above approaches have shown that there are, in fact, three types of components (I am disregarding dimensions for the time being):

1. Pure resource components such as income, wealth, political and economic power and employment. These are not necessities as such, but only as a means to some ends.¹
2. Components which are both resources and at the same time fulfill some needs: this goes for most of the components mentioned above, such as education, participation, etc.
3. Pure need components, which are resources only marginally, as a reflection of the fact that some degree of fulfillment is necessary for the adequate functioning of man. Such components are the conditions of work, leisure, housing, nutrition, and health. All of these components are *primarily* needs components. It is obvious that living accommodations form a resource in the sense that without it, work is impossible. After this dichotomous case, a place to live is centrally to fulfill man's need for shelter and security, and little else.

We may therefore speak of the LWC as a multi-level concept, in which all components are not of the same level. In other words, we are concerned with a rather complicated relationship. The general relationship between resources, needs-resources, and needs components can be illustrated by the following (Fig. 8.8.a):

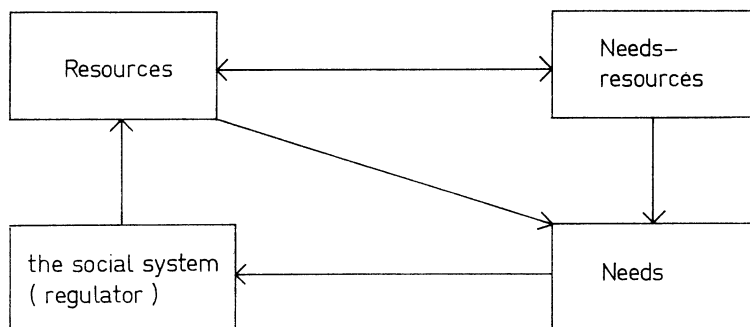


Fig. 8.8.a

Changes in needs components feed back to resources, but not directly. This occurs through a regulator element which may, at this level, be called the »social system».

To put it another way, the functioning of the social processes depends on how the fulfillment of needs affects the resources available to the mem-

¹ Although some may claim that power is desired for its own sake, which may be true, for the majority, the need for power, *per se*, represents nothing of value.

bers of the society. This implies that to analyze the relationships between resources and needs, we need a theory of society — a theory of social processes (in the Marxist definition, this is specified as an analysis of the productive forces and the production relations).

In essence we have now travelled a full circle, or rather, a spiral. From the welfare function, which was rejected in its welfare economic formulation, we have reformulated the SNC and emerged with what is essentially a welfare function, but now on a much higher level, as an attempt to truly specify the form and content of welfare. This is not, of course, the place to begin to make any conclusive proposals (it would require much empirical material), but I can indicate some of the most interesting implications and their possible resolutions.

The LWC-type social welfare function should combine the advantages of the previous attempts at defining a welfare function with the advantages of the level of living approach, which offers us the essential components of the well-being of man. As the economic welfare function was left completely unspecified, now it is time to attempt the most central specifications.

From the point of view of social policy, the construction of a social welfare function of this type is certainly not an irrelevant matter. As I have previously noted, the social welfare function must not replace politics by any means: it should be a reliable tool of social policy as politics — as democratic decision-making. And it can only express a part of well-being in any case: the subjective activities of man — his creative, conscious activities — are only very indirectly reflected in the social welfare function, and justly so. There is no reason to replace man's political and social activities with their measurement, except only as an external indicator, or even better, with scientific analysis as an aid to the consciousness of man.

The interdependence of the components of the LWC is rather generally acknowledged. Also the social processes that affect the level of living are often mentioned. But there have been few attempts at developing theories which would comprehend such matters.

Here I shall examine some relationships between components of the level of welfare. With this in mind, I shall employ the following list of components:

1. Economic resources and economic power
2. »Political» resources, or the ability to participate in political decision-making; this might be called *participation*
3. Employment
4. Education
5. Family conditions
6. Conditions of work

7. Environmental quality
8. Leisure
9. Housing
10. Nutrition and eating habits
11. Health

I have attempted to construct a hierarchy ranging from the most pure resource component to a pure need component (the purest of which is survival). It is obvious that in order to have a truly realistic model of the relationships these components should be extensively subdivided, but for the present purposes of preliminary analysis, these will do.

In formulating this list I have utilized previous component classifications, especially those of Drewnowski and Johansson. Some comments concerning the other components are in order. The component of economic resources and power is not easy to define. It seems justified, however, to separate economic power from political resources, as there is an obvious causal connection. Generally we might say that the economic power of most individuals approaches zero as does that of some social groups. Most people have some economic resources which are significant to their own welfare. The resources which are no longer directly relevant to their welfare could be termed economic power. The component of participation is closely connected with economic resources but not totally, as education, for instance, is also a relevant factor. By employment is meant, as in the original level of living definition, primarily the question of whether a person is unemployed or not, but it also includes situations of partial employment, being a housewife, and so on. By family conditions is meant such factors as the number of children in the family, the nature of the familial unit (is it stable or not), and the conditions affecting the maturation process within the family. By conditions of work, I mean elements such as the nature of the work, the length of the working day, the conditions at the place of employment, and so on. The rest of the components have been commented up on earlier.

In table 8.8.1, I have presented the general relationships between the components.

I have not excluded two-way relationships, although I am not, for the present, explicitly considering dynamic aspects. The central component is that of economic resources, a fluctuation in which has repercussions for almost all of the components, with feedback from some of them. There are also many indirect relationships which can best be seen in the figure 8.8.b.

It should be noted that health, which in principle signifies the survival component, ultimately affects all the remaining components: if a person dies, it is irrelevant to speak of welfare. The same applies to nutrition.

Table 8.8.1.

The cause

The effect	1 Econ- omic resources	2 Partici- pation	3 Employ- ment	4 Edu- cation	5 Con- ditions of family	6 Con- ditions of work	7 Environ- mental quality	8 Leisure	9 Hous- ing	10 Nutri- tion	11 Health
1. Economic resources	—		×	×			(×)				
2. Participation	×	—		×	×			(×)			
3. Employment	×		—	×							
4. Education	×			—	×						
5. Conditions of family	×		×	×	—				×	×	
6. Conditions of work		×	×	×		—					
7. Environmental quality	×(±)	×					—				
8. Leisure	×	×	×	×	(×)			—			
9. Housing	×								—		
10. Nutrition	×			×						—	
11. Health	×	(×)			×	×	×	×	×	×	—

Minor or uncertain relationships are given in parentheses.

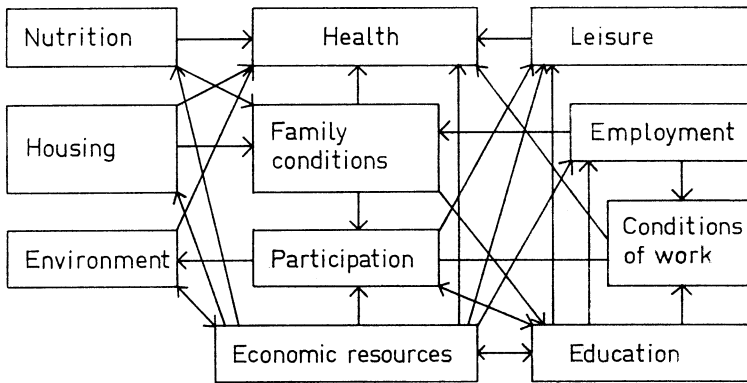


Fig. 8.8.b

In the table, I have described the relationships in the case of smaller changes.

The relationships indicated in the table and in the figure are, of course, perfectly arbitrary. We only assume their existence. But they form a basis for a more developed theoretical approach to the problem. From these we can try to develop either simple econometric models for welfare analysis, or then more complicated dynamic models.

To summarize, welfare is a three-level concept.¹ At the first level we have relatively pure resource components such as economic resources and participation. They cannot, however, be described as exogenous variables, but as variables which are only indirectly related to the central aspects of welfare. In my opinion, they do, however, belong to welfare in a broad, but meaningful sense.

At the second level are such intermediate components as family conditions, work, and employment, which are connected both directly with the central aspects of welfare, and with resource aspects. At the third level we have health and those components most immediately associated with it, namely nutrition, housing and leisure. Thus we might say that the nucleus of welfare is health (in a very broad sense), but that health alone does not determine welfare.

As I have emphasized earlier, it is only the totality of human actions that can constitute welfare; to restrict welfare to some single aspects of human activity, is to lose grasp of its essential nature.

¹ This is connected with Uusitalo's idea (Allardt—Uusitalo (1972)) that the components of the level of living are at different distances from welfare. But he is operating with a very restricted conception of welfare. This is, of course, only a matter of opinion: one can ask, however, what exactly is welfare when leisure, health, etc., are not?

Technically speaking, this scheme is not practicable for any pragmatic purposes. Only after the decomposition of the components, the specification of the relationships through time, and the determination of the nature of the relationships could we build an exact model of welfare. This is not, however, undertaken here.¹ One can think of the scheme in a more elementary systems analysis sense, as the specification of relationships between a set of black boxes, or subsystems, each having more than one variable and their own internal relationships.

It should be noted that with the exception of one relationship (that between economic resources and environmental quality), all the relationships are considered positive. This is, however, only superficially so. If we impose the necessary constraints on the resource components and their relationships, this will result in a model in which a positive change in one component may well result in a negative feedback in the same and also other components. The nature of these restrictions depends upon whether we work at the micro- or macro-level, or at both.

An alternative to the welfare function approach, in the above sense, is the methodology of input-output analysis. Especially with respect to practical applicability, this approach seems to be highly fruitful. However, the practical results would probably not differ greatly. In the input-output methods, information is obtained concerning the relationships between different sorts of welfare inputs and outputs, on the basis of which we are able to determine what sorts of inputs should be employed to get the desired outputs. In the welfare function approach we would primarily seek information about the structure of welfare in a deeper sense. Most of the results, however, would be the same.

Niitamo (1971b)¹ has also cautioned researchers against too »slavish» an acceptance of the normal input-output approaches of national accounting systems. His suggestion is that we should not try to express all the components of the input-output table in equivalent values, but allow them to be expressed in their own »currency». Only then can we avoid the extremely arbitrary solutions of a wider national accounting system.

The use of input-output models presents the same advantages as the use of econometric welfare function analyses: there exist ready-made, applicable methods of analysis which seem conducive to application without greatly sacrificing the principles of welfare themselves.

It has also the same disadvantages, although the use of lagged variables is possible, and the analysis of lags is relevant, as its coefficients are static.

¹ See my forthcoming paper on »The level of welfare function».

² See also Lange (1970), who has briefly presented some of the implications of the input-output approach to the study of total welfare.

We must thus assume (or develop) a fixed model of the relationships of welfare, thus eliminating the dynamic element with respect to coefficients.

Yet it seems that, because the existing accounting systems predominantly apply methods of input-output analysis, that this method will similarly be used when developing the necessary accounting systems for welfare. This will undoubtedly in many ways produce interesting results. I shall however, for the time being, proceed directly to some broader perspectives of the »systemic» analysis of welfare.

9. Welfare Policy: Problems of Welfare, Politics and Science

9.1. *The Problem of Social Control*

The entire analysis of this chapter can be termed, as I have done, a study in »welfare policy». By welfare policy I am referring to the problem of how, in what way, and by whom is social welfare to be defined and realized in society. Thus welfare policy constitutes an essential part of social policies in general; essential in the sense that without it, no social policies would prevail.

The nucleus of welfare policy is the analysis of the relationship of welfare to actual social policy. This is closely related to the problem of how social welfare shall be determined: in essence, they are actually the same question. In the former we emphasize »practical» aspects, while in the latter the »theoretical» aspects are stressed. But as we shall see, they cannot be separated: social welfare is essentially a practical problem, thus a political problem.

In the preceding chapters I have examined the following main types of approaches to social welfare:

First, the attempt to determine changes of social welfare objectively, but in a restricted sense, as changes about which there is unanimity. Yet the approach itself was deductive, rather than inductive, and was not based upon actual knowledge of unanimity, but only on simplified assumptions about the behavior of men.

Second, an attempt to derive a system of rules under which men could consistently determine what is advantageous to social welfare. This approach assumed nothing more than knowledge about the preference orderings of individuals, and in a sense was inverse to all the technocratic attempts: it proved the impossibility of reaching agreement about social welfare under certain specific conditions.

Third, to find empirically the variables which could approximate

social welfare most accurately, and thus be able to determine changes and the nature of social welfare in societies.

The factor common to these approaches has been their universal assumption of the following premises:

1. The goal of public policy-makers is the welfare of the people, for whom, and instead of whom they make their decisions.
2. The information and advice provided the policy-makers, is given in the interests of the people.
3. The people are external to all of this, acting as an object rather than as a subject, the welfare of which is to be measured externally.

In sum, all these measures have overly abstracted the problem of how to develop models which would account for the interaction between »scientific« analysis of welfare and social welfare, as a *process* of social activity; in other words, as *praxis*.

The consideration of praxis is laced with problems, among the most central of which is the question of in what way needs are to be fulfilled. As Andre Gorz (and many others) has shown, capitalist society causes whole groups of needs to disappear only to be resurrected as needs only capable of fulfillment through private activity. Thus fresh air, which is, in most cases, still a collective good available to all, is rapidly becoming a marketable good, a good which must be bought privately.¹ There are no channels through which people could demand collective needs fulfillment for certain needs; their only alternative is to submit to market mechanisms and purchase what they want. Thus measures of welfare which ignore this distinction — considering individually bought welfare components as equally as satisfactory as collective welfare components — ignore a very pertinent aspect of the political praxis.

But to be able to discuss more deeply these problems we must first go into the question of social control. We need to formulate the obvious questions: What is actually meant by social control? How is it related to welfare?

In the second chapter, we observed that the essential quality of policy was its conscious nature — a quality which is also central in control. But control is, of course, significantly more comprehensive than policy. Policy might be interpreted as a process through which we attempt to adapt ourselves to some uncontrollable force: one can thus conceive of emergency policies. However, to be able to *control* a situation is something else entirely.

¹ In a package deal along with holiday resorts, outings, and so on; see Gorz (1971: 96–98): »The individual has a certain degree of opportunity to some day, perhaps, have a washing machine, his own car, and the necessary pay increase, but he has no chances at all to procure public transportation, public parks within ten minutes of his home, or even an acceptable apartment at market prices«.

»Adequate» control is the natural aim of policy. Our aim is to find such policies which make control possible. In every society, control is an inherent factor (Afanasyev 1971: 32), but both the forms and the nature of control may differ greatly.

It should be firmly emphasized that complete, conscious social control is not, by any means, possible (nor, perhaps, even desirable) in any of the existing societies of today. To believe otherwise presumes acceptance of the fallacy of power, which is particularly evident in the writings of the more zealous protagonists of planning and policy sciences in the capitalist countries. Their fundamental idea seems to be that control, although presently impossible, can be achieved through the razing of some minor barriers, which might occur through changes in attitudes or values.¹

Neither are socialist societies completely »controllable». As some Marxist theorists have indicated, there are many areas of a socialist society not yet subjected to conscious control (see Glezerman 1969: 13—17).

We can, in some sense, even speak of spontaneous control, such as in perfect market, where the results of human activities are ultimately determined by blind forces beyond the control of the actors themselves. There are also many who find this kind of control appealing — the »invisible hand» being to them more efficient and just than any of human design (see for instance Hayek 1935, Dahrendorf 1968). But if we wish to analyze the problem of control as a subject-object problem — that is, as a problem of who can control and what — we are in the realm of conscious social control. And it is with this phenomenon that I am primarily concerned in this paper (see also Afanasyev 1971: 35—36).

The main argument of those who advocate spontaneous control is based on the premise that, in general, control is the anathema of freedom. Control negates freedom, and vice versa. This is, however, a stale controversy. If we define freedom in the positive sense (see above, chapter 4) it should be apparent that freedom is essentially *identical* with control, or with a certain type of control, namely that of conscious social control by the members of society themselves. A situation in which the human objects of control are also subjects of control is one of positive freedom. Clearly much of this control is actually the control of other than human objects, and some feel that all control should ultimately be that of objects other than human.

Usually control is understood as *bureaucratic control*: the control of one body over another; control from the top down (see Mills 1959: 116,

¹ See for instance Dror (1968: 287) and Kahn (1969: 28, 51); Toffler (1971) has a more pessimistic general view, but in the end he succumbs to the same optimism, seeing good omens in the behavior of some private funds and foundations, etc. See also Roos (1972a) for further discussion.

Toffler 1971: 427). But there are other possibilities as to the forms and nature of control. We can speak of control from the bottom up, i.e., control of the controllers by the controlled. But even this implies a detachment of the subjects from the objects of control. The ultimate ideal of control would be the control of the people by themselves. Men should be able to control themselves, control their society by themselves — a total negation of bureaucratic control, in fact, of the classical conception of control (Mills 1959, Ahmavaara 1970: 162).

In Marx' and Engels' descriptions of the communist society (Marx—Engels 1970; see also Bukharin 1969, Bukharin—Preobrazhensky 1969) we can distinguish rather clearly an idea of spontaneous control; i.e., a situation in which solely the control of non-human objects is required, while the control of men is not. This is, of course, a form of spontaneity different that of the market control. However, it seems obvious that collective activity requires some forms of control, and that this control can never be restricted solely to the control of non-human objects, nor to men as non-human objects, which is clearly the ultimate manifestation of bureaucratic control.

Existing societies certainly fall rather short of the ideal of collective self-control by all members of the society. Various combinations of bureaucratic control, self-control by the people, control by various »powerful« individuals, and so on, are the dominating social structural themes. Some writers have even suggested that a mixture of control forms constitutes the best possible situation.¹ It may very well be true that bureaucratic control is perfectly acceptable and possibly necessary in some areas, but one thing is clear: there is much to be done to cultivate the self-control of society by all of its members, including broadening its scope, and implementing this form of control in *all* situations where it is the best possible form. And it is clear that especially in situations involving the determination of welfare, collective self-control of society is in all ways the superior form.²

It should be stressed that conscious social control of any type is not a simple matter. It depends primarily on the level of development of the society, and on the control resources at its disposal (Afanasyev 1971: 36, Mannheim 1940). There are societies where almost any form of conscious social control is practically impossible, and, on the other hand, societies in reference to which we can speak of great control capabilities. Etzioni

¹ Sen (1970: 200); this does not, of course, require that precisely the amalgamation existing in the capitalist societies of today would be the ideal.

² Very subtle distinctions can be made in this respect (see for example, Runciman—Sen (1970: 225—226)). For instance Mannheim (1940), often stresses the necessity of control over men in terms of control over attitudes, and so on. Thus, in the final analysis he endorses a nearly bureaucratic view of control problems, as we shall see.

(1969: 7—9) has distinguished the following control characteristics (or guidance characteristics, which is perhaps a less obtrusive term): the cybernetic capacities of the society, the power of the society, and the ability of the society to generate consensus. This enables him to classify types of societies into four categories according to their control capacities: namely, the passive society, the active society, the overmanaged society and the drifting society (*ibid.*: 24—28). The active society, which is Etzioni's conception of ideal form of society, has large cybernetic, as well as consensus capacities. Thus consensus would be closely connected with control in an ideal control situation. It is obvious that consensus is indeed one requisite, but its realization depends on the means of control available. The optimal forms of control are certainly not possible in a society torn by wide divergencies of interests, and class antagonisms.¹

What Etzioni termed as society's consensus capabilities, I am inclined to rechristen the *welfare capabilities of society*, in order to analyze the relationship of welfare and control. It is evident that the ultimate objective of control must certainly be found in welfare. Thus, in order for control to be possible, a common conception of welfare in the society must be determined, and a control form which is compatible with welfare.

One of the most profound questions with respect to control is that of social welfare. Not all of the problems I have presented above concerning different forms of control are connected with welfare. Conscious social control by the people requires a conception of social welfare decidedly different from that which advocates bureaucratic control. And to achieve true welfare, only some forms of control can be acceptable.

In the final analysis, we are left with this nuclear problem: how can the divergent interests of men in any society be reconciled; how can we 'find' social welfare? This is not, of course, the only question to be resolved for control to become possible, but it is by far the most important. Yet, it cannot be separated from the solutions of the other problems. Should we, for instance, decide that bureaucratic control is the ideal means of control, we must ask: how will the bureaucrats solve the problem of re-

¹ In this connection, I should mention the subject of *planning*. Problems of policy, control and planning are closely intertwined. Yet as planning is, in a sense, the most 'practical' of this threesome, I have decided to ignore it for the present. Yet, much that I have said about control and policy applies to planning as well.

The development of planning is essentially the development of the control, or guidance capabilities of societies. Through an analysis of the development of planning, we can also see, in the best possible way, the impact of the development of society upon control, and also upon its analysis. But this will not be endeavored here. See for instance, Gross (1971) for a brief but expedient presentation; for developments in western planning see Braybrooke — Lindblom (1963), Friedmann (1967), Kahn (1969), Mannheim (1940), Ozbekhan (1969), Roos (1972b), Tinbergen (1956), Toffler (1971), Ward (1965), and many others.

conciling all interests in the society? If, on the other hand, we are concerned with some forms of conscious control not involving bureaucratic control (such as self-management), we must ask another set of questions; how are the people supposed to reach decisions which are in their own best interests? In what ways can this happen?

These questions can be answered in many different ways. For both bureaucratic and non-bureaucratic control, there have been many solutions suggested; for example, the constitutionalist solution and the welfare function are perhaps polar points on a continuum of such proposals. The Arrow result, for instance, can be seen primarily as a result denying the possibility of pure bureaucratic control, i.e., control through a machinery which automatically fulfills the wishes of the people (but this depends of course, on whether we accept the conditions of the theorem).

One is also confronted with the very general question: shall we attempt to control the social and technological processes affecting men's destinies? Secondary and related to this is the problem: are we concerned with only that in which men are interested, or are we concerned with that which is in men's own interests (Mills 1959: 194). In the first case the society will be the executor of habitual trivialities (as is the capitalist society of today) and in the latter case, the risk is great that policy-makers and social control would become instruments of coercion and manipulation.¹

These questions are related to the problem of social information, and determine much of the line of inquiry including questions such as: what forms of information shall we use, how do we collect information, who will receive the information, and to what type of analysis will the information be subjected?

9.2. *Science, Politics, and Policy*²

To analyze the relationship between social welfare and societal control, we must consider the relationship between science and politics, and of scientific control to political control. Both control and welfare are political questions: they cannot be solved by 'science' (in the traditional sense)

¹ Another phenomenon which is not unknown in the capitalist system: in fact we might say that capitalist society is an unfortunate combination of both.

² There is one intricate question to which I have not, as yet, given an answer. This is the question of the distinction between *politics* and *policy*. Earlier I «defined» policy as the conscious control of social processes, and here I have referred to politics as conscious self-control by the people. Thus, in accordance with this terminology, politics is a form of policy. Alternative forms of policy could be, for instance, bureaucratic control, or more generally, technocratic control. Of course, both these forms of control can exist simultaneously. My proposal would certainly attach to politics denotations quite removed from the common usage; it is,

alone. But the role of science in this respect has been given many different interpretations.

Habermas (1971: 57) has presented this problem in the following succinct way. He divides societal processes into essentially two parts: technology and democracy. The former constitutes »scientifically rationalized control of objectified process», and the latter, »institutionally secured forms of general and public communication that deal with the practical question of how men can and want to live under the objective conditions of their ever-expanding power of control». In these terms the problem has been formulated by Habermas as follows: »How can the power of technical control be brought within the range of the consensus of acting and trans-acting citizens?»

Thus, for Habermas technology is roughly the same as a scientized mode of social management, whereas one could very obviously term his »democracy» as politics, although it excludes some political forms. It may, however, be permissible to prescribe some initial requirements to distinguish between »true» politics, and mere manipulation, or totalitarianism, etc. Thus we might rephrase the Habermas inquiry as one of how to procure scientific technology under political control. But this is not quite in accord with the more traditional conception of the problem, which I shall examine first.

One of the classical issues of policy-oriented science is that of the substitutability of politics and science. Lindblom (1968: 5—6), for instance, asks »can policy-making be analytic and scientific, or does »politics» always dominate? How far can analysis go in policy-making?» More often this question has been framed very implicitly, for the dangers of scientocracy have been evident to many. But it seems, nonetheless, to be a rather widely-held opinion among policy scientists and theorists that such a question is justified, and that almost everything can be adapted from the realm of politics to that of science in the traditional sense.¹

in fact, a reference to a very idealized sense of politics. Everyday, pragmatic politics in particular, are often somewhat less than an instrument of conscious (although it may certainly be one of self-) control. Thus my interpretation of policy, as I have noted, is of a general strain, and is applicable when analyzing the general problems of welfare policies.

¹ Mannheim, in his *Ideology and Utopia* (1936: 112) speaks about the impossibility of a science of politics, on the basis that even a hypothetical composite of all the possible sciences that might constitute the elements of a science of politics would still be lacking something. Later, however, he proved to be an eminent defender of the scientization of politics (see Mannheim 1940: 360—363), arguing that all political questions will be, in due time, eliminated from planning, as the result of its democratization. Mannheim's position seems to be that of a very optimistic technocrat — an understandable position in a historical situation where the term »politics» had a rather tarnished reputation (see also Lindblom (1968), Lasswell (1951), Schoettle (1968: 154), Simon (1966: 18—19), and Dror (1970: 103), among others).

According to Habermas (*op.cit.*: 62—63), there are essentially two traditions of social thought. The first of these originates with Hobbes, Hume and Weber, and defines a strict separation between the experts and the politicians, entrusting the politicians with the task of determining ends, and the experts with that of finding the means. Such a distinction implies a very simple division of labor between politics and science, and assumes that scientists will refrain from becoming involved in politics. This tradition essentially denies the concept of policy science (as I have noted with respect to Weber; see chapter 2). Habermas designates Saint-Simon and Bacon as the founding fathers of the second tradition (that which he calls the »technocratic«), which assumed that science could also be delegated with the role of determining ends, thus effecting the complete scientization of politics. In this way the above-mentioned policy theorists can essentially be said to continue this tradition (see also Gustavsson 1972).

Within this second tradition, there are essentially two main approaches which should not be confused. The first is that which we could actually call »Platonian«, referring to Plato's famous conception about the relationship of science to politics (see Plato 1971: 464, 1972). According to this line of thought, which is implicitly accepted by most policy scientists in the Drorian vein, politics is always the poorer alternative when compared to science, and should be replaced by the rule of science and scientist as soon as possible. The second line of thought is more fully explained below. It essentially maintains that science and politics should be fused together, in dialectical unity.

On the other hand, much that I have discussed in the previous chapters, especially in those concerning welfare economics, has been covered by the former tradition, that endorsing the strict separation of science from politics, and of scientists from politicians (see Bergson 1966 for a confirmation of this). We have seen the fruitlessness of this tradition very clearly, through the impotency of its solutions. But I have also discussed some theories of the other tradition. Now, I shall examine the fundamental question of the principles underlying the complete scientization of politics and other possible solutions, and will turn later to the application of these solutions to problems of welfare.

Habermas proposes a so-called »pragmatistic model« as his own solution to the science-politics controversy (see figure 9.2.a; Habermas 1971: 66—67), in which the separation between the scientist and the politician is replaced by *critical interaction*. That is, although we assume that there will be specialized social scientists and specialized politicians, their relationship is that of critical interaction, in which the scientist reveals to the politician the faults in his actions, and the politicians similarly criticize science for its weak response to practical needs. Thus experts are not

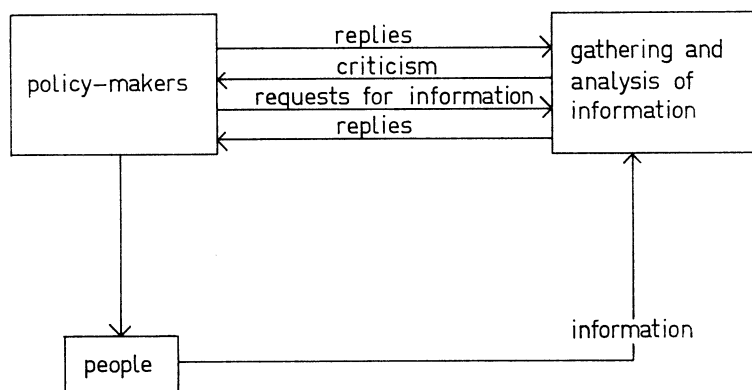


Fig. 9.2.a

sovereign over politicians, nor do politicians dominate over scientists. This model has been adopted by many thinkers, and I shall scrutinize one of its versions in relation with the analysis of welfare «policy».¹

In my opinion the question itself has been misleadingly framed. One cannot make a clean separation between science and politics. Some of the above-mentioned authors did not explicitly distinguish between science and politics. It is my contention, however, that they examined politics through the eyes of science; i.e., submitted politics to analysis only on the conditions of science, without considering the political aspects — self-control by the people — at all. When Dror (1971a: 37—39), for instance, considers the barriers to policy science,² he is essentially analyzing the problem with a very clearcut distinction between «politics» and «science», and especially between «politicians» and «scientists». Thus a politician is a man who makes decisions for others, and the aim of policy science is to help him to make those decisions, starting from the choice of goals and proceeding to less encompassing decisions. This view is definitely in error.

¹ Habermas (1971: 67): «Critical» interaction not only strips the ideologically supported exercise of power of an unreliable basis of legitimation, but makes it accessible as a whole to scientifically informed discussion, thereby substantially changing it. Despite the technocratic view, experts have not become sovereign over politicians subjected to the demands of the facts and left with a purely fictitious power of decision. Nor, despite the implications of the decisionistic model, does the politician retain a preserve outside of the necessarily rationalized areas of practice in which practical problems are decided upon as ever by acts of the will. Rather, reciprocal communication seems possible and necessary, through which scientific experts advise the decision-makers and politicians consult scientists in accordance with practical needs.» See also Therborn (1971), Gustavsson (1971).

² Meaning the «lack of belief in the ability of science to be of help in the policymaking process», which is regarded quasi-mystically as an art monopolized by the «experienced politician and decision-maker», in which he discerns the threat of scientocracy.

Dror does not acknowledge the central problem mentioned above, namely that of how people can manage to control themselves and the development of their societies in an increasingly complicated world. For Dror it is a question of how policy makers can control people in a world of increasing complexity.

Here I have been operating within the context of an extremely generalized concept of politics, speaking of it as a form of control, as the self-control of people over the society. In Marxist usage, there are clearly two different conceptions of politics: first, politics as a general process, largely in the sense that I have used it; and secondly, politics as the expression of class interests, i.e., as class struggle on the level of the superstructural sector which I have referred to as public policy-making.¹

Politics as a form of class struggle is of course, in existing societies, an extremely relevant definition, but here I shall concentrate on a more abstract consideration. The Marxist view holds that politics is equivalent to science; it is the embodiment of the Marxist conception of science (social science), as a combination of practical activity and theoretical analysis. Every political action should be scientific; and every scientific action should be, and is, political.

Thus, in principle we shall not need any distinction between »scientists» and »politicians» — nor is it correct to speak of a politician-scientist or scientist-politician — but simply of a citizen exerting his civil rights and duties.

Thus the Marxist solution implies that politics (in the sense of self-control) will increase simultaneously with the development of the role of science (see Klaus 1971: 30). *Only through science is true self-control by the people possible.* That is, through science alone can true politics be realized. The implications of this view to the analysis of welfare politics and policy are of primary importance.²

Thus the relationship between politics and science could be formulated as the following question: How can we *scientify politics* in such a way that it is simultaneously the *politization of science*? The emphasis is, of course, on the scientific nature of politics, but the practical aspects of science must not be ignored.

Thus a truly democratic model would deny the need for specialized »scientists» and »policy-makers», but would substitute for them a collec-

¹ Spirkin cites Lenin's definition of politics: »Politics is participation in the affairs of the state, direction of the state, the definition of the forms, functions and activities of the state». This is thus a very general definition (see also Gramsci (1967: 201, 281); for the general aspect, see Klaus (1971: 30), Cornforth (1962), and Spirkin (no year: 172–173).

² Gramsci (1967: 282) expounds a view which is closely related to this; see also Bukharin (1969 (1921): 161–163).

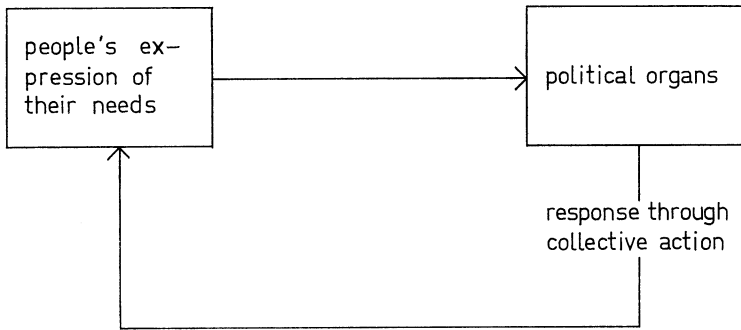


Fig. 9.2.b.

tivity of people gathering and analyzing information by scientific methods and making rational collective decisions on the basis of this analysis, thus being, in reality, a *people for itself* and not merely a *people in itself* (paraphrasing Marx 1963: 172—173, Bukharin 1969: 292 *et seq.*).

Of course, this model (see fig. 9.2.b) is highly unrealistic. As Gramsci (1967: 208) remarks, one of the prevalent elements of modern politics is the existence of the leader and the led, the ruled and the rulers. He contends that this is not an unavoidable necessity, and emphasizes that we must strive to realize the reverse situation, but that in any case, we must start from the reality of this distinction.

My task, it would seem, would be to analyze under what conditions the problems of social welfare would become problems conducive to solution *by* the people, and not *for* them by the policy-makers and the scientists. This is not only a question of which forms of decision-making systems are the best, but also one of the scientific analysis of social welfare.

9.3. *Social Information and Control*

One of the most important components of control is information. It has been claimed that information is the main source of power in society.¹ Even if one were not to admit this, it is undeniably true that if people are to control themselves — or if someone intends to control something — they must have information. Biderman presents a hierarchy of information sources for the purpose of control in society, in which the highest level information is simply a well-developed social indicator system, whose

¹ Of course there are many alternatives, see Boguslaw (1965: 113—114).

information has been collected for this specific purpose. More realistic would be, of course, that all possible levels are in simultaneous use.¹ Essentially speaking, the level of living and social indicator approaches assumes that they are the main forms of information for social control in the form of planning and policy-making. Information about the condition of man — the welfare of man — is something which is necessary for comprehensive social control (see Afanasyev 1971: 182, Drewnowski 1971: 83).

The central position allotted to knowledge about the condition of man can be inferred from the conceptions of what can be done with it. Such conceptions range from the modest goal of determining social problems, to the much more ambitious aim of revealing the true nature of the state and activity of society, and of defining the methods of control, and what data should be collected.²

But again, it is not sufficient to simply assert that measurements of the level of welfare are requirements for control: we must determine also for what kinds of control level of welfare analysis (as a part of which we may here understand social indicators as well) is applicable.

According to Bauman (1971: 22), most information gathering models rely on the following assumption:

- every system is interested in its own survival;
- survival implies retaining its present structure unchanged;
- constancy of the structure, which should be defended for the sake of survival, foreordains a limited sum of constant »consummative» goals;
- constancy of the final goals provides the needed frame of reference for determining the most beneficial shape of system-environment equilibrium;
- all that is needed to achieve this equilibrium is an increase in the information supply, and thus control over the environment by the system.

These assumptions seem to implicitly govern much of social indicator

¹ Biderman (1966a: 135–136). The hierarchy is as follows:

- a. impressionistic observations which are based on common-sense concepts;
- b. impressionistic observations based on theoretical concepts;
- c. the application of theoretical concepts in such systematic information-gathering procedures as an impressionistic survey;
- d. unique, rigorous quantitative survey;
- e. repeated, well-done survey;
- f. statistical time-series collected administratively;
- g. regular time-series collected specifically for the purpose.

² See Springer (1970: 5–6), Partanen (1971: 58), Baudot (1969: 64), *Toward a Social Report* (1969: xii) and Wilcox (1968: 58–59). In other words, that all the necessities of control are fulfilled by a social indicators system is explicitly acknowledged (see Baudot (1969: 41–43), Bauer (1966: 8–11, 19)).

analysis: what one is primarily interested in is not the welfare of the people and their possibility to affect their destinies, but the stabilizing control function of the decision-makers. Because for these purposes knowledge of the condition of men is important, a need is discerned for such indicators.¹

In figure 9.3.a, I have represented this model. The idea of such a model is that the decision-makers, through the information they gather concerning the conditions of the people, are

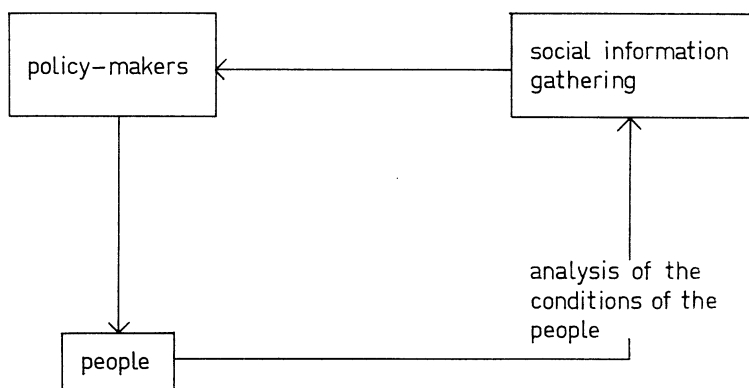


Fig. 9.3.a

better equipped to guide the society, thus improving the people's welfare. This is clearly a typical bureaucratic control model. Combined with the actual conditions of society, the distribution of resources and power and class divisions, we are confronted with an information system which best serves those best able to influence society.²

The nature of the social indicator systems and their relationship to the bureaucratic-control ideology is unwittingly exposed in the specifications social indicator theorists have given for the functioning and characteristics of a system of social indicators. Bauer, for instance, prescribes that social-indicator systems must fulfill the following requirements:

¹ See *Toward a Social Report* (1969) for a good example, as Springer (1970: 12) has pointed out.

² See for instance Biderman (1966a: 131), who predicts that the utilization of social indicators will result in the retention of power and influence in the hands of those who have previously had the most. For an actual suggestion in this direction, see Smith (1971: 7–14), in which he develops indicators to assess the political atmosphere of business, with the intention of promoting international business. These indicators happen to be startlingly similar to those suggested by many a well-intending indicator theorist.

Smith (1971): »For the business planner, the problem is one of finding indices with which to compare polities in which the firm operates or proposes to enter . . . Quite as important to the business planner, the systematic consideration of these parameters leads to a more rigorous assessment of the political and social climate in which multi-national firms must operate.»

1. They would constitute regular time-series data for comparisons in time and place.
2. They would include special mechanisms for the collection of information about new developments not yet reflected in the regular time-series data.
3. They would be equipped with the means to convey the data quickly and in an appropriate form to the organ whose responsibility the problem is (see Bauer 1966: 21). This has been given a finishing touch through suggestions of a »watchdog mechanism», which would quickly reveal the shortcomings of the system (see Biderman 1966b). This is obviously intended to maximize the use of social indicators for the decision-makers.¹

A very good example of this attitude is to be found in the problem of transparency mentioned by Baudot (1969: 63). This problem concerns the opinion that decision-makers must keep certain information secret in order to be able to act freely. Therefore, we must take care that social indicators do not designate too easily or rapidly the directions of change in society, nor the basic processes of change. This is a rather interesting piece of analysis which revealingly denotes the bureaucratic control basis of social indicators. In any democratic system, it is the basic requirement of the social indicators that they clearly and sensitively indicate the changes in society, i.e., work as a feedback system for the people, and not merely as a tool for their manipulation by the decision-makers (see also Roos 1972b). It is also rather naive (not to say irresponsible) to assume that the career politician, or professional decision-maker — particularly in competitive western capitalist society — would be endowed with such an inherent sense of moral righteousness as to remain steadfastly dedicated to promoting the welfare of the people while being more immediately dependent upon interests directly conflicting with the goal of social welfare.² The central problems relating to social indicators are seen to be the

¹ Requirements on a slightly more general level have been presented by many researchers, including Hjerpe—Niitamo (1971: 5—8), Baudot (1969: 62), Etzioni—Lehman (1967: 2), and Kamrany—Christakis (1970: 208—209).

² An interesting proof of how incredibly divorced from reality a decision-maker can be is provided by Richard Nixon's television speech in Moscow on May 28, 1972. Simultaneously, while this man is the Commander-in-Chief of a war machine that is responsible for the intensive bombing of the whole Vietnam and the annihilation of hospitals, schools, bridges and dams, allowing the use of inhuman 'anti-personnel' weaponry, and condones the My Lai massacre and similar genocidal acts, he apparently expects people to be convinced of his sincerity when he expresses a hope that there would come an end to such suffering as was experienced by the legendary little Tanya during the Siege of Leningrad. Coming from the mouth of a statesman to whom can more than likely be attributed more pain and anguish than to any of his contemporaries, this speech borders on the realm of the absurd. One cannot rationally expect that such a person could make a realistic assessment of any aspect of social and political reality.

following: It is not presently possible to quantify everything relevant to welfare and possibly never will be, and the part currently quantifiable may be very biased and impossible to compare. It is essentially a problem of developing adequate, formalistic models of society. Thus one can immediately conclude that it is closely related to the bureaucratic control idea. Quantification is essential so that the decision-makers could make optimal decisions for the people themselves; for their self-guidance it is often not so necessary.¹

But some social indicator theorists do to some degree acknowledge the danger of constructing social indicator systems solely in the service of decision-makers.

Hjerppe—Niitamo (1971) call it a value danger, meaning by this the fact that in social indicator systems, one starts from the values relating to the existing system; i.e., the values of the men in power (also Baudot 1969 has a similar idea). Yet generally, this is not the case. This is also related to the problem of flexibility in the social indicators systems. They should react to changes in society, not only in the sense that they inform decision-makers about sore spots, but in a broader sense, as in that of being able to function *against* the decision-makers. This, however, is only implicitly recognized by Hjerppe and Niitamo.

It is clear that it should be possible to construct social indicator systems which are relevant to (and which are connected to the idea of self-control by) the members of the society. I shall subsequently make some suggestions to this effect, but for the moment may it suffice to point out that practically all social indicators theorists have implicitly or explicitly been interested in social indicator systems which serve solely bureaucratic control, in my use of the term. At best there have been attempts to build guarantees into the systems ensuring that it could be used otherwise, but little or no analysis has been endeavored concerning what basic underlying changes in the social indicator system should be effected in order to achieve goals beyond mere service to decision-makers.

Social indicators — as well as social control as an entirety — can be much more efficiently used as a tool in the employ of the people themselves. It is not their heuristics, nor simply more flexible solutions, rather it is the conscious reformulation of the whole role of social information which will change the nature of social indicators.

This is the question to which I shall now turn. There are some requisite preliminary considerations: we are speaking of *social information systems in general*, not solely of indicators of the level of living. This is justified

¹ See also Etzioni—Lehman (1967) who distinguish between partial quantification, indirect quantification and formalistic-aggregative quantification. All these are related however to the same problem, namely that of how to quantify as much and as well as possible.

both by the analysis of the level of living and its nature, and also by the analysis of the concept of welfare, which was seen to encompass the entirety of the net of social activities. But at this point I will be emphasizing the problems seen from the point of view of welfare analysis; i.e., problems referring to the welfare-relevant conditions of men.

Above I have described the technocratic-bureaucratic model for using social information (and science in general). Depending upon how we conceive of the relationships between scientists, giving and analyzing social information, and decision-makers, we are faced, on the one hand, with the technocratic model or, on the other, with the strict separation of science and politics. Most of the social indicator researchers have implicitly endorsed the technocratic-type model, in which the analysis and dissemination of social information is decisive for the control functions of the decision-maker. As antithetical to this model might be regarded the «real» simple democracy solution. In this model, social information gathering is completely eliminated and we have a system of direct democracy in which the people themselves, through their political activity, express their needs and the decision-makers exist for the simple and express purpose of fulfilling their wishes (see fig. 9.2.b above). It is obvious that this model presents the ideal political system for society. The democratic system should work just in such a way that via its institutions people could express all their needs and grievances, and all social information systems concentrating on the citizenry would be superfluous. The existing systems of social information seem, in some sense, to be based upon this assumption. Thus, in fact, we might consider the attempts at social indicator development as an indirect admission of the failure of the democratic system to respond sensitively to people's needs.¹

Etzioni (1968: 626) has said that: «ultimately, there is no way for a societal structure to discover the members' needs and adapt to them without the participation of the members in shaping and reshaping the structure.» In this I agree with Etzioni. But I am doubtful as to whether the best solution is of the type envisaged by the 'social indicatorists'. There are, however, some who think it realistic to attempt to «return» to the real democracy model (see for instance, Toffler 1971: 428–432, and Karapuu 1970).

In addition, it is of note, although obvious, that the model of soviet democracy developed in the Soviet Union is clearly constructed with the idea of real, responsive democracy in mind. Thus it was assumed that the soviets at every level would actively supervise and express the need of the proletariat and control the upper organs. (See Bukharin—Preobraz-

¹ For an explicit recognition of this see Partanen (1971).

hensky 1969). Thus the state planning function would be expressly that of planning »over things» and not over men. This is the probable explanation of the very technical and economical character of the Soviet planning system, in which questions of social welfare have obviously been relegated to a less central position,¹ as they are assumed to be attended to by the people themselves, once the material requirements exist (this is of course not strictly true, but it seems to be the general idea).

The real democracy model is, however, obviously inadequate. The relationship between social control and welfare is infinitely more complicated than a simple cause and effect process in which people express what they need and which the system then supplies. There is no guarantee that the best interests of the people would be secured, nor is there any assurance that the development of the society would be in the correct direction. The social consciousness does not develop spontaneously, it needs organization — »guidance». This is the area in which the social information systems, and science in general, have their main function — in the extension of the consciousness of the people, in the successive development of social consciousness (Bukharin 1969: 163).

One solution to the technocratic dilemma is the application of the pragmatistic model suggested by Habermas (see above p. 214).

This model dictates that the gatherers and analysts of social information not only supply the information desired by decision-makers, but also information which is not necessarily required. But in this model, once again, the *object* of the information is still ostracized from the decision process: the welfare of the people is determined for them on a higher level, in discussions by scientists and policy-makers, who are both supposedly interested in the welfare of the object of control. This is, nonetheless, a step forward from the technocratic model, in which information is given uncritically in the interests of the decision-makers, and in their own language, so to speak (see Etzioni 1971).

But a truly significant degree of progress would be represented by a situation in which the gatherers and analysts of social information (i.e., usually social scientists) would also be involved in critical interaction with the object of control, thus allowing it to be simultaneously the subject of control, in other words, a subject using social information to control the decision-makers (see Berndtson 1970: 27, Habermas 1971). This is

¹ Another, parallel explanation has been provided by Academician Fedorenko (1972), which refers to the fact that the building of adequate productive forces, i.e., the economic basis of socialism which is the first task of socialism, is in itself relatively straightforward, and only under highly developed socialism do the problems of the quality of welfare come to the foreground.

the 'hermeneutic' or '*emancipatory*' solution, (see figure 9.3.b). The critical interaction between policy-makers and scientists should be replaced largely by critical interaction between scientists and the people, against the schemes of high-level policy-makers, both private and public.

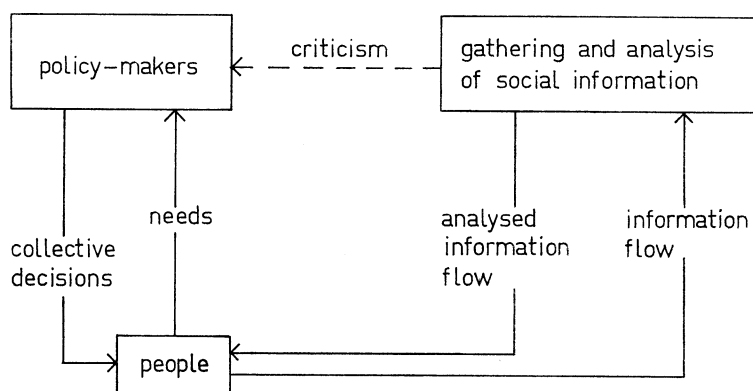


Fig. 9.3.b

But even the emancipatory model is subject to further development, into a model which we might call the *augmented real-democracy model*. In this model the fundamental assumption is that political practice should, in the final analysis, be that which decides the questions of welfare. But this political practice should be scientific, in the sense distinguished above when discussing the unity of science and politics. Thus we would have a political system in which the people are aided by the scientific analysis and practice of those processes prevalent in society (see figure 9.3.c).

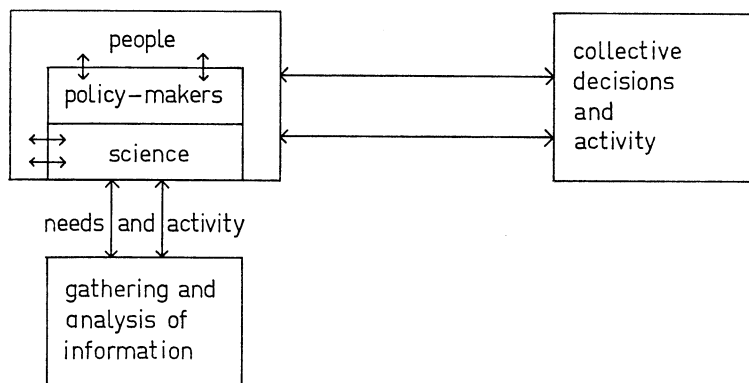


Fig. 9.3.c

The principal idea is that so well expressed by Bukharin (1969: 163): »As the natural human organs, in the direct process of material production in society, are 'extended', and by this extension, 'contrary to the Bible', are enabled to embrace and manipulate a much greater material, so the '*extended*' consciousness of human society is science, increasing its mental compass and enabling it to grasp and consequently to better control, a greater mass of phenomena.»

What would be the consequences of the introduction of the augmented democracy model for the relationships of social welfare and social policy? It is obvious that systems of social indicators and information concerning social welfare are needed, but these must be construed in conjunction with social activity — *through social praxis*. Thus, instead of developing large, centralized systems of information, we should perhaps attempt to begin by developing small-scale, specialized information systems which directly serve the people in their political activities.

In addition it should by now be apparent that information systems in themselves are not a solution to our problem. One must assume a social system quite different from the present, in order to imagine that the above suggestion could be realized or be really fruitful.

The central questions of human welfare are not solved by models, by bureaucrats, technocrats and scientists, they are solved by men themselves — perhaps with the aid of social science — not through social indicators or welfare measurements, but through changes in the social consciousness, in the conscious activities of men to improve their lot.

Appendix 1. The Maximization of the Welfare Function

It is possible to undertake the maximization of the welfare function utilizing two principal tools. The first is the classical method using calculus¹, and the second is via the methods of linear algebra and its derivatives, programming, activity analysis, etc.² Here I shall employ the calculus method, as the formalism in itself is not central to the main theme. It is true that the Debreu-type analysis is much more efficient and avoids some of the more unrealistic assumptions of the classical method, but the gains accrued in this respect are not so marked as to necessitate such a method in this context (see also Arrow—Scitovsky 1969: 5).

There are a few technical restrictions in the use of the calculus method,

¹ Presented very elaborately by Lange (1969 (1952)), and instructively by Nath (1969), which is used in the following.

² The 'classical' presentation here is Debreu (1959), but see also Quirk—Saposnik (1968), Lancaster (1968), and Baumol (1965: 4—11).

such as the problems of the corner equilibria and the global maximum (which can be found only by trial and error). There is no direct solution. We can only define the conditions that the optimal points should fulfill; the points themselves cannot be determined in general (Lancaster 1968: 20). Specifically, these problems are best solved by nonlinear programming and related methods (Arrow—Scitovsky 1969: 5, Baumol 1965: 4—11).

Normally the classical solution is presented in three stages. First, we consider the conditions required in production, then in exchange for goods and lastly the general conditions for the whole economy.¹

The so — called production optimum is as follows (Nath 1969: 14): the production function be

$$(A.1.1) \quad X_i = X_i(v_{ji}) \quad j = 1, \dots, m$$

We maximize it with respect to a good i with the other production goods being constant: i.e., we have a situation that is exactly of the Paretian type: it is not possible to increase any one good's production without decreasing that of another good; this is the same principle applied in other optima, as well.

$$(A.1.2) \quad X_h = X_h(v_{jh}) = X_h^0 \quad h = 1, \dots, i-1, i+1, \dots, n$$

From the above equations we have

$$(A.1.3) \quad X_i = x_i^1 + \dots + x_i^s \quad s \text{ consumers, } n \text{ goods} \\ i = 1, \dots, n$$

$$(A.1.4) \quad V_j = v_j^1 + \dots + v_j^s \quad s \text{ producers, } m \text{ kinds of labor,} \\ j = 1, \dots, m$$

i.e., X_i is the total consumption of the i th good and V_j is the total amount of the j th kind of labor.

Also we require that

$$(A.1.5) \quad v_{j1} + \dots + v_{jn} = V_j^0$$

We maximize

$$(A.1.6.) \quad G = X_i(v_{ji}) + \lambda_h(X_h(v_{jh}) - X_h^0) + \mu_j((v_{j1} + \dots + v_{jn}) - V_j^0) \\ i, h = 1, \dots, n; \quad i \neq h, \quad j = 1, \dots, m$$

where λ_h and μ_j are Lagrange coefficients. We have a constrained optimum problem where maximization is realized keeping X_h^0 and V_j^0 constant.

¹ These in effect include the first two groups of conditions, but it is more elucidating to separate them.

We differentiate G (take the partial derivatives with respect to the production inputs) and set the partial derivatives equal to zero, and then solve the system of equations with respect to λ_h and μ_j , and get

$$(A.1.7) \quad \frac{\partial X_i / \partial v_{ji}}{\partial X_i / \partial v_{ki}} = \frac{\partial X_h / \partial v_{jh}}{\partial X_h / \partial v_{kh}} \quad \begin{array}{l} i, h = 1, \dots, n; \quad i \neq h \\ j, k = 1, \dots, m; \quad j \neq k \end{array}$$

This is the *production optimum*.

The next stage is the *exchange optimum* (Nath 1969: 16–18) in which the consumer's utility functions are maximized (in a Paretian sense).

Let the utility function of the g th individual be

$$(A.1.8) \quad U^g = U^g(x_i^g, v_j^g) \quad \begin{array}{l} i = 1, \dots, n \\ j = 1, \dots, m \end{array}$$

which is maximized while keeping other utility functions constant at an arbitrary level, repeating this for all individuals.

$$(A.1.9) \quad \begin{array}{l} U^r = U^r(x_i^r, v_j^r) \\ = U^{r^0} \end{array} \quad r = 1, \dots, g-1, g+1, \dots, s$$

and

$$(A.1.10) \quad x_i^1 + \dots + x_i^s = X_i^0$$

$$(A.1.11) \quad v_j^1 + \dots + v_j^s = V_j^0$$

Next is formed the function

$$(A.1.12) \quad \begin{aligned} H = & U^g(x_i^g, v_j^g) + \lambda_r(U^r(x_i^r, v_j^r) - U^{r^0}) \\ & + \mu_i((x_i^1 + \dots + x_i^s) - X_i^0) + \pi_j((v_j^1 + \dots + v_j^s) - V_j^0) \\ & g, r = 1, \dots, s; \quad g \neq r \end{aligned}$$

which is maximized in a manner identical to the G of (A.1.6) to get

$$(A.1.13) \quad \frac{\partial U^g / \partial x_i^g}{\partial U^g / \partial x_h^g} = \frac{\partial U^r / \partial x_i^r}{\partial U^r / \partial x_h^r} \quad \begin{array}{l} g, r = 1, \dots, s: \quad g \neq r \\ i, h = 1, \dots, n; \quad i \neq h \end{array}$$

as well as

$$(A.1.14) \quad \frac{\partial U^g / \partial v_j^g}{\partial U^g / \partial v_k^g} = \frac{\partial U^r / \partial v_j^r}{\partial U^r / \partial v_k^r} \quad j, k = 1, \dots, m; \quad j \neq k$$

In the above equations, (A.1.7), (A.1.13) and (A.1.14) have been given the conditions for optimal production and consumption. Next it must be assured that this is true simultaneously. In this we shall utilize the transformation¹ curve, which is the path of those points where the production is Pareto-optimal (Mishan 1964: 19). In its general form it is

$$(A.1.15) \quad T(x_1, \dots, x_n; v_1, \dots, v_m) = 0$$

The *total optimum* (or top-level optimum, among other labels, Nath 1969: 18–20) is reached when the individual utility functions are maximized under the given efficient transformation curve. Because the optimum under question is a Pareto optimum, it is again sufficient to maximize one utility function at a time while keeping others constant. In addition the two familiar conditions are given

$$(A.1.16) \quad x_i^1 + \dots + x_i^s = X_i^0$$

$$(A.1.17) \quad v_j^1 + \dots + v_j^s = V_j^0$$

Next is developed the formulation

$$(A.1.18) \quad L = U^g(x_i^g, v_j^g) + \lambda_r(U^r(x_i^r, v_j^r) - U^{r0}) \\ + \mu_i((x_i^1 + \dots + x_i^s) - X_i^0) + \nu_j((v_j^1 + \dots + v_j^s) - V_j^0) \\ + \pi(T(x_1, \dots, x_n; v_1, \dots, v_m)) \\ g, r = 1, \dots, s; g \neq r$$

to get the conditions for total optimum:

$$(A.1.19) \quad \frac{\partial U^g / \partial x_i^g}{\partial U^g / \partial x_h^g} = \frac{\partial U^r / \partial x_i^r}{\partial U^r / \partial x_h^r} = \frac{\partial T / \partial x_i}{\partial T / \partial x_h} \\ i, h = 1, \dots, n; i \neq h$$

and

$$(A.1.20) \quad \frac{\partial U^g / \partial x_i^g}{\partial U^g / \partial v_j^g} = \frac{\partial U^r / \partial x_i^r}{\partial U^r / \partial v_j^r} = \frac{\partial T / \partial x_i}{\partial T / \partial v_j} \quad j = 1, \dots, m$$

All of the above conditions may be presented as one equation system without separating the three groups of conditions but as a separation it is clearly more illustrative (cf Lange 1969).

Appendix 2. The Proof of the Arrow Impossibility Theorem

In the following I will present a proof of the original Arrow theorem (corrected) utilizing the Arrow (1963) proof, the Luce—Raiffa (1957) version and the Quirk—Saposnik (1968) proof.¹

¹ Some other proofs are also available, such as the Vickrey version (1960), and Fishburn's proof based on the finity of the members of society (1970e). I shall not follow this line of reasoning, although it may interest some. Recently, Sen (1970) has presented a very simple and efficient proof.

The proof is based on the concept of a decisive set with respect to a pair of alternatives (x, y) . By a decisive set, V , is meant a subset of the members of society such that for all $i \in V$, when $xP_i y$, then for the society: xPy .

The proof is in four stages.

1. First we see that the members of society form a decisive set with respect to all pairs of alternatives (this is the weak Pareto-optimality).
2. Because there exists a decisive set for all pairs of alternatives, then there is a smallest decisive set with respect to all pairs of alternatives, i.e., a set with at least as many members as in any other decisive set.
3. If the decisive set only contains one individual, this individual is a dictator, i.e., decisive for all pairs of alternatives, in violation of condition five.
4. Lastly we find that any decisive set with two or more members contains a smaller decisive set, which concludes the proof, as there is no social ordering which simultaneously satisfies conditions one through five.

The ensuing proof, then, is rather simple in principle. The only alternative that would prevent the decisive set from containing only one individual is to impose social ordering, which is in violation of the fourth condition.

1. First we must prove that

$$(x)(y) \{[(j) xP_j y] \rightarrow xPy\}$$

From condition 4, it follows that not all preference profiles lead to yRx , so for some profiles, xPy . Assume that xPy . The preference profile is changed in such a way that for all individuals j , $xP_j y$. From condition two, it follows that this cannot change the social ordering xPy , so the society is a decisive set for all pairs of alternatives.

2. Because there exists a decisive set, there exists a smallest decisive set.
3. If the smallest decisive set contains only one individual k , then we can show that this individual is decisive for all pairs of alternatives, i.e., a dictator.

Assume that $S = \{x, y, z\}$, and that every other individual in the society except k has identical preferences. Assume that k is decisive for alternatives x and y ; i.e., $xP_k y \rightarrow xPy$. The next step is to show that k is decisive also with respect to alternative z . Let us assume that $xP_k yP_k z$ and determine the possible resultant orderings.

	k	<i>others</i>	<i>proof that $xPyPz$</i>
1.	xyz	xyz	by unanimity
2.	xyz	yzx	xPy by assumption (k decisive)

- yPz by unanimity
 xPz by transitivity
 xPy by assumption
 xPz by unanimity.
3. xyz xzy yPz ? Assume that the ordering of k were changed to yxz . From condition three this does not change the ordering between y and z . But then yPx & $xPz \rightarrow yPz$ (k decisive). Because yPz when k 's ordering is yxz , then from condition three it follows that yPz when k 's ordering is xyz .
4. xyz zyx xPy by assumption
 xPz by condition three and case two: if others' preferences are $yzx \rightarrow xPz$. When zyx , this cannot change the order; i.e., xPz .
 yPz follows from condition three and case three in the same manner.
5. The next case is when the others' preferences are zxy . Then xPy by assumption. xPz by condition three and case two, yPz by condition three and case two.
6. When the others' preference ordering is yxz , then xPy by assumption, xPz and yPz by unanimity.

We have now covered all alternatives. And the result is that k is decisive over all alternatives if he is decisive over one pair of alternatives; in other words, he is a dictator. This result can easily be extended over n alternatives and for R . We can also show that the result follows even if others' preferences are not identical. For one example, assume that for k , xyz and for other members of the society all other possibilities prevail: xyz , yzx , xzy , zyx , zxy and yxz . Then by assumption xPy . Assume that zPy (against k 's preferences). We raise z in relation to y (condition two). By condition three the social ordering depends only on the orderings of z and y . If we change the others' orderings to zyx , then zPy must obtain. This is in contradiction with case four above. Therefore k is decisive even if preferences differ.

Because the smallest decisive set cannot contain one member (which would be against condition five), we must assume that it contains two or more individuals. Let V_1 be any member of this set and V_2 contain the rest of the members, i.e.,

$$V_1 \cup V_2 = V$$

Assume that the ordering of V_1 is xyz and V_2 , yzx . Because V is decisive, the unanimous preferences of V_1 and V_2 are always equivalent to the preference of the society. Assume that other members of the society have an unanimous ordering of zxy . The social ordering is yPz because V_1 and V_2 are unanimous. If xPz , V_1 would be decisive between these

two states because for V_2 , yzx is true as well as for the others. Therefore we must have at least zRx as V_1 cannot be decisive. But then V_2 is decisive between x and y because both V_1 and the others prefer x to y , whereas V_2 prefers y to x , and by transitivity yPx . Therefore V_2 is a smaller decisive set than V , which is contrary to the assumption that V is the smallest decisive set. Thus we have established the Arrow theorem.

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¹ The organization of this bibliography is in accordance with the Finnish alphabetic system in which ü and y, as well as v and w are considered perfect equivalents. The Swedish å and the letters ä and ö are located, in this order, following z at the end of the alphabet.

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