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HUMAN NEEDS AS BASIS FOR INDICATOR FORMATION:
A Tentative Approach

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1. Introduction

The series of papers written within the World Indicators Program⁽¹⁾ at the Chair in Conflict and Peace Research, University of Oslo, covers a broad field of interests. There are many reasons why the themes have been so manifold, one can mention the fact that we often have been working "on virgin land". Another reason is perhaps that the project members as a group represent many different backgrounds as concerns education, nationality, ideological leanings e.t.c. The main reason however, is that we have been relatively free to develop our own thinking and ideas - with the primary aim to clarify the question: "what constitutes the good society?".

During this period of time in the project, characterized by a fruitful trial-and-error process, the work has proceeded along the following lines:

- because the aim of the project was to indicate (which is not necessarily the same as to measure) much work was needed to create the theoretical basis before any "indicating" could find place.

- we wanted to indicate positive values. To do this we had to clarify our own value criteria and to express them - for others better to be able to criticize them. This we found to be a necessary condition for doing honest work.

"The program is openly, admittedly, unashamedly value oriented."⁽²⁾

- because we in the project wanted to say something important, not only about conditions of life within a geographical unit, but also for international relations, we had to search for a kind of basic unit relevant and important for all societies. From our point of view human needs seem to constitute such a basic element.

In the first part of this paper efforts will be made to analyse some problems concerning the concept of needs in the perspective of indicator formation.⁽³⁾ The point of departure in part 2 is to come closer to the need concept in a broad sense: what kind of difficulties will one meet when trying to "find the needs"; which value criteria are most important in distinguishing between the different kinds of needs; and how to limit needs from other similar concepts? Part 3 consists of a summary of some elements in the theories of needs - as one can read it in the literature in the field. Part 4 is centered around the basic material needs, and the core thesis here is that it is far from enough to ask whether needs are satisfied or not - one must also analyse the different ways in which needs can be satisfied. In part 5 we develop a concrete example, before the concluding remarks.

2. The concept of need in a broad sense.

2.1 The ten dimensions.

In Measuring World Development⁽⁴⁾ a broad framework for indicator-formation is given. Table 4 (page 41) presents ten dimensions and two levels with the admonition "to fill every cell... with something meaningful."

first level:	second level:
intranational	international

- (1) Personal growth
- (2) Diversity
- (3) Socio-economic growth
- (4) Equality
- (5) Social Justice
- (6) Equity
- (7) Autonomy
- (8) Solidarity
- (9) Participation
- (10) Ecological Balance.

A need-based indicator will primarily belong to the personal growth dimension as far as the outcome of the need process is concerned with need fulfillment. But elements from most of the dimensions enter as necessary conditions in shaping any praxis and theory of the need-process. Diversity spells out the understanding of the enormous difference one can find in the need fulfillment-process in different areas of the world. Aspects of socio-economic growth, equality and social justice-dimensions gives important information when trying to see how the need-objects are processed and distributed. The participation-dimension makes clearer the important imperative that the persons that are most directly concerned: man himself, should be give the possibility to take part in decisions relating to the need fulfilment. And the whole setting where need-objects are produced, developed and consumed must be seen in the light of the conditions of ecological balance.

A need-based indicator of development will necessarily say something important about "man himself" - the closer one can come to this, the better. In a way one can say that it

is directly connected to the only important aim of development: growth of man. Others will perhaps argue that all known indicators of development one way or the other reflect the conditions of need fulfilment in society. What we have wanted to stress in this indicator program is, however, that the indicators will be too narrow if they are only indicative of quantities. The qualitative element would be more clear if the indicators also said something about a very central question: what is a human way to fulfill needs?

The answer to this question cannot possibly be given without a very clear relation between science and "ordinary man". The democratic element in a need-based indicator of development has to enter already at this point (as contrast - look at the measurement of development that most often is used today: GNP/cap; a measure developed for and by experts.)

2.2 What can be said to "have needs"?

The word need is used in common parlance, but also in the literature in many different ways.

(a) One often hears that groups of people, society, or even structures possess needs. Of course, a society as such can never feel a need or be motivated to act to have the need fulfilled - only individual human beings can feel needs⁽⁵⁾

(b) Material things are given need character: "the car has needs for better roads, more parkingplace", and so on. Complex material structures and systems have "needs" for energy, space and even for labour! ⁽⁶⁾

(c) Development and the future seem to have needs: "development needs 7 % increase in energy production"

is an example of this; closely related to "the needs of future society".

(d) As a rule, however, animals and human beings are said to have needs, and it is in these connections the need concept is given its best and deepest meaning, and hence in this sense "need" will be used in this paper.

(e) The last example of how needs are used is taken from the ecology movement. Here one often hears that nature as a whole also has needs. This view is often followed up by the opinion that there exists a kind of natural balance point.

Our scepticism towards even this way of using the word "need" is based on the doubt that there exists any way of defining a natural balance. What we called the democratic aspect of human needs - namely that people themselves are able to define them - is surely absent where nature-needs are concerned. Who shall tell what the needs of nature looks like. Ecologists? Other experts?

The view of man presented in this paper is a fundamentally positive one - which also implies that when man fulfils his needs in a human way, he will also be in partnership with nature.

2.3 Need - and other concepts used in this connection.

Need, as we will use the word, does not give the same connotations or have the same meaning as for example interest, value, wish, preference or demand. Interest, wish and preference stand for much broader concepts that also include needs. The demand on the market can to some degree indicate the structure of preferences, interests and wishes. But it is a very poor aid in helping us to find the "real needs of man", because

- the demand on the market is to a large extent a consequence of expectations and opinions of prices. Many products and services necessary for human needs will not be available for many people because of costs or expectations of costs:

- in many societies prices, even for the most fundamental need-objects, are so high that many can not afford them;

- many material and non-material need-objects are not available for sale on the market;

- market demand is to a large extent a function of social pressure, advertising, prestige, habits and so on; and not of needs;

- even if one can call many of the products and services that are sold on the market for need-objects, it will be difficult on basis of the demand for these to infer the needs. What people demand can very well be only a minor part of a total and complex process of need-fulfillment;

- besides, the demand of the market might very well be a function of irrational behaviour of different kinds (for example to buy "on impulse" or use the marketplace itself as an object for fulfilling social needs);

- and, at last - in most countries a large part of all need-objects are produced on a small scale: inside the houses or in the fields, and consequently they are not included in the analyses of market demand.

One important fact in this connection - with special relevance for the overdeveloped societies - is that "modern" technology and the so-called free market makes it more and more difficult for the consumers to decide which products best can fulfill the needs. The relationship between the deepest needs, the market demand and the product's ability to satisfy needs is so complicated, and conditioned by so many factors, that the consumer too often is left powerless and passive, or thrown into a

costly and frustrating trial-and error process.

2.4 Different methods used to "find" the needs.

In the literature one encounters different methods to "find" the human needs:

(a) From opinions or theories about human beings some authors have tried to locate needs and their hierarchical order. To some extent much work in social science has one source of thoughts located in the scientists own images and views of what human beings are, what they should or could have been. Under this, and the following subpoint, one could include the traditional philosophical theories of human needs.

(b) From superior principles. In some theory systems one has tried to build upon "deeper principles". In this category one could perhaps include W. REICH who finds that energetical tension prevents satisfaction and is the main reason for all neuroses.⁽⁷⁾ The different religions and the other ethical and moral idea systems have, as a rule, implications for human needs and the way they are satisfied. Norms and claims regulate directly (for example in the form of fasting or sexual prohibitions) or more indirectly by putting strength to some activities and thereby the satisfaction of needs. (Example of this: "Ora et labora")

(c) From what is called objective criteria.

Among these one can mention:

-those who think that needs can be inferred from activities on the market - for example the demand for products and services;

- analyses of human needs by participant observation in small groups;

- in some kinds of psychological experiments one can detect how much suffering a test-animal is willing to undergo to satisfy different needs. This kind of test is often described in introductions to psychology in the following characteristic way: "... if a rat has been deprived of food for several hours and is placed in a chequer-board maze... it will be active. We may keep track of its movements and find how many squares it covers..." (8)

For our purpose it is doubtful whether one can use the information from such experiments to trace the human needs and their relative strength

- In biological-physiological-medical experiments one might isolate the human body as one "system" and analyse for example input-output needs (how many calories and proteins does man need during a given period of time - what kinds of inputs are necessary to become vital and healthy etc.) Quantitative indications, such as maximal, minimal, and maybe optimal, limits could be found. However, when it comes to the relative weight between organic and social needs, or - say - the different qualitative aspects of need fulfilment there are doubts as to how much this kind of science can tell. To fulfill a need in an "organic sense" is far from the same as to feel satisfied in "a human sense".

(d) From what man himself defines as needs.

Methodologically there are many possibilities to find which needs "ordinary" people stress as important. One of the main problems in sociological methodology is the question whether one can use data on what people say to express what they really want, or how they really feel. In this connection we will briefly look at some of the weaknesses of the survey method:

-False consciousness. To what extent is the individual able to "see" his own needs? (9)
The total conscious human being; with a rational behaviour and a deep knowledge of himself and his social conditions, i.e. being able to explain one's needs, is an ideal type one hardly will find. What could be discussed then is the degree of consciousness: has an alienating society completely destroyed man's possibilities to judge, or can degree of consciousness be plotted on a continuum between very conscious and very unconscious human beings?

What kind of experts shall decide the criteria for consciousness? It is important to prevent the coming of a new expert class whose power base is to define the real needs of man.

-In addition to the problems of "false consciousness," one has to consider elements or overplay. It is reasonable to suppose that the respondent will stress factors that he/she thinks is important for the moment - even if the question is formulated with the purpose of reflecting "general traits".

These two objections, in addition to many others well known in debates on methodology, question to what extent one can use traditional survey-methods to find deeper needs - and the conclusion is scepticism.

The best way to identify human needs seems to be to combine several or all approaches mentioned, and eventually use the degree of "overlap" in the findings when setting up the lists of needs and/or evaluate the relative strength between the different needs. MASLOW, it seems, was using many

different criteria when making his list of needs, and postulate a hierarchical order between them⁽¹⁰⁾ - the most important criterion for him was his personal theory of man based on many years of clinical experience.

3. Some aspects of the general theory of needs.

The following summary reflects some of the most well-known elements in need-theory:

- 3.1 The subject vs. the object of the need.
- 3.2 Objects of the needs vs. resources
- 3.3 Material vs. nonmaterial needs
- 3.4 Real vs. false needs
- 3.5. Need-satisfaction: aim vs. process
- 3.6 Needs: natural phases vs. periodicity
- 3.7 Counscious vs. uncounscious need satisfaction
- 3.8 Input vs. output needs
- 3.9 Human needs vs. animal needs.

3.1 The subject vs. the object of the needs.

The "need-subject" refers to the individual who feels and eventually satisfies the need. The "need-object" is the - material or non-material - things, systems or relations that are the direct cause of the need satisfaction.⁽¹¹⁾

3.2 Object of the need vs. resources.

A need based way of defining resources would be: a resource is something that can be used - directly or indirectly - as object of a need.⁽¹²⁾

3.3 Material vs. non-material needs is a distinction between different classes of needs based on the form of the object of the need. This distinction is, however, never exact: for many needs the need-objects have both material and

non-material components. (13)

3.4 Real vs. false needs

Traditionally the false needs are defined as the unhealthy, inhuman needs, as a rule said to be forced upon the individ from "outside". Any clear criterion to distinguish between real and false needs is hard to find, and other concepts in this field does not make it any easier to make the difference more precise. (14)

Besides, it is interesting to note that it seems to be easier to formulate and define the negative needs than the positive ones (15) Interpretations of the false, unsound and inhuman needs are often seen in the literature - what characterises the positive needs, on the other hand, seems to much more problematic. This is found, not only in need-theory but also in the indicator-"movement" (16), welfare debate (17) etc. The last part of this paper will consist of an effort to identify what could be said to be elements of a real, human way to fulfill needs.

3.5 Need-satisfaction: aim vs. process.

Maslow seems to be of the opinion that need-satisfaction never can be a definite aim for humans. When one need is fulfilled, the individual will feel the "coming" of a new need, and therefore be motivated to fulfill needs of an always higher character. Maslow's "need for self-actualization" is, as he explains it, (18) on the other hand, characterised by the fact that it is almost impossible for ordinary people to have it fulfilled. From one point of view this kind of need-ladder - whereby whereby men and women are climbing and climbing all life long, most of them never to reach the aim; self-actualization - is a basically Western theory. Another way of looking at the structure of needs is to stress their repetitive character. As to the

most basic needs this should be quite clear: the need for nutrition and water is felt again and again in a relative stable rythm. The same is true for many non-material needs; the repetitious need for love, contact, togetherness etc.

3.6 Needs - natural phases vs. periodicity

Many criteria are relevant when trying to find the need-structure. One can for example analyse the ways in which the human needs follow natural phases, i.e. how they relate to processes in the nature such as day - night, months, seasons, good and bad weather and so on.

In modern industrialized society natural phases seem to play an ever decreasing role for vital functions, in contrast to societies with simple technology - where these phases play an important and direct role for many activities. In addition to this, one can use the term "periodical base" of needs for something which is more close related to the growth of man. By this is meant, for example, that needs of children to some extent is different from the needs of adults, and, of course - the need will be fulfilled in different ways. The periodical base of needs mainly consists of two parts: one is related to the growth and development of man as an organic being, the other is to be seen in relation to culture specific elements.

3.7 Conscious vs. unconscious need fulfillment

The division between conscious and unconscious needs is based on the view that some need fulfilment is dependent on active participation by the subject of the need, while other needs are fulfilled without the help of the human consciousness. Better than a clearcut distinction between

these groups of needs, would be to set up a continuum. One might say that the needs on the "most conscious part" of the continuum" are most relevant for social theory. However, this is not only right: especially in overdeveloped societies where all need fulfillment is dependant on factors outside the control of the individual, more or less. Just take the need to breathe and the way pollution, stress etc. conditions its fulfilment..

The division between conscious and unconscious needs is certainly not unproblematic. The active will of man can regulate processes that usually is referred to be unconscious needs.

3.8 Input - output needs.

For some of the material needs concerned, one can distinguish between needs characterized by the organisms "taking" "giving". As a rule, - for the kind of need-theory that is of interest in this connection, the input-needs are most important. But even for the output-needs, the industrial society has rendered even their satisfaction problematic; or, perhaps not the satisfaction in itself, but the processes of getting rid of the "outputs" (excrements for instance).

3.9 Human and animal needs.

Etzioni⁽¹⁹⁾ defines basic human needs as those that are specific to man: ".....human needs are not the "profane" needs common to man and animal..." Roos claims that it is correct to state that man and animal have different needs, but the main division does not necessarily refer to the needs themselves, but to the ways they are satisfied. In my opinion it is not fair to declare animals devoid of any other needs than the purely physiological ones, and it is doubtful whether the division between animal and human needs

is useful in making a distinction between basic and other (non-basic) needs. One thing, however, is to use the separation between man and animal to shed some light on need-theory: quite another is to use the term "animal" to connote something negative. In so doing one creates a distance to the animal and the bestial and makes efforts to improve man's basic needs situation something beneath human dignity. Man has to be conceived of as purified and raised above the dirt of "nature", where - among other things - the basic material needs are seen as located. (20)

This way of thinking is even materialized in the hierarchy of social construction, as when food-production and processing for this extremely important need-object in many societies are seen as something negative, dirty, and accorded a low position in social life (the Indian caste systems being one example).

As a conclusion to this part of the paper, one might perhaps state that the "needs" in a general sense hardly can be translated into indicators of well-being before much more work has been done in the field. The 8 aspects, or problems, mentioned in this section are intended as one possible key to get more into depth with the theory of needs. In the next section, the focus will be on the basic material needs.

4. Satisfaction of the basic material needs.

In this section we shall try to arrive at a framework of concepts relating to the fulfillment of basic material needs. The framework has four parts:

(1) An effort to make the distinction between basic and other needs more clear

(2) some ideas about what could be called a human way of fulfilling needs,

(3) a model of the process of need fulfillment, from the point of view of the individual, and

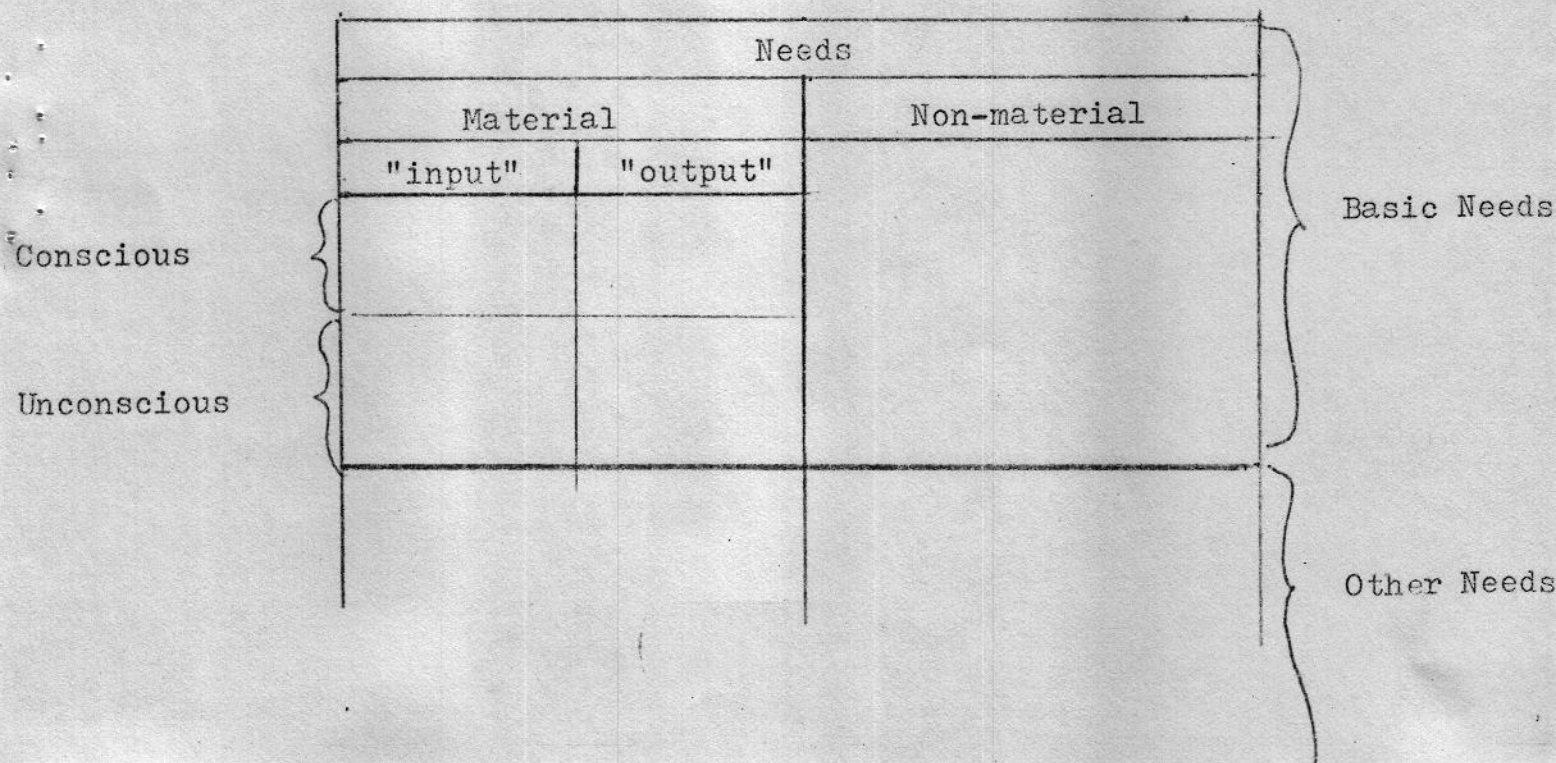
(4) a model of the need objects, from the source of resources to consumption.

The basic assumption is that man can fulfill many other needs than the ones that the process primarily is aiming at: viz the satisfaction of basic material needs.

4.1 Distinction between basic and less basic needs

By basic material needs we mean such needs for which the fulfillment is a necessary condition for somatic survival. The following illustration includes some of the concepts discussed in section 3, such as material vs. non-material needs, conscious vs. unconscious need fulfillment, input vs. output needs:

Figure 1: Human needs - a preliminary categorization.



In the following we shall concentrate on some of the needs in the upper left-hand corner of this figure. By doing this we are not implying that other categories of needs are unimportant, it is just a matter of necessity to focus the thinking on some of the most basic needs.

In the material/conscious/input needs we shall concentrate on:

need for nutrition

need for health

need for shelter

4.2 What can be said to characterize a human way to satisfy needs?

Before trying to answer this question, we shall make some concepts more precise:

"The fundamental process" refers to the whole set of actions in the production of need objects. These processes can be divided into two: (1) processes that take place without human interference, and (2) processes where human work is a necessary condition for the production. The dividing line between the two is not clear-cut a rule elements from both are important for the processing of material need objects. In the history of mankind there seems to be a clear tendency that need objects first were based mainly on processes that went on without the work of man - for then slowly, and during centuries, more and more to be controlled by the hands of man. Take for example a look at some of the need objects relating to the need for health; viz wild-grown herbs, and compare to the most used kinds of medicine today - factory made pills of all kinds. Similar examples can be given for the other needs; food-production, for example, seems more and

more to be taken away from the "lap of nature". Fertilizers, hot-houses warmed by artificial lights etc. are used to protect vegetables from the "tyranny of nature": sun, wind, rain and so on.

Fundamental resources are the material that can be used as need-objects for the basic material needs. (Can is underlined to point out that the material not necessarily is used, in a given period.)

In social science it has not always been "chic" to work out theories of the good society. Today it seems, however, to be accepted that this kind of work not only is important, but necessary. If one does not try to clarify the aim of development (the good society), social science will continue only to be a set of tools used by those who set goals; unable to answer the question of why to use the tools and unable to formulate the goals for the change. Within critical peace research,⁽²¹⁾ positive future studies,⁽²²⁾ and in some branches of applied social science⁽²³⁾ one has taken the consequence of this and started to try, as clearly as possible, to formulate the values inherent in all research activities - for others to be able to question and criticize exactly this. Thus one exposes one's own values - which can be seen as much more honest than to pretend that values are unimportant or not at all present.⁽²⁴⁾

However, what kind of values are most important to consider? Social science has not yet developed any pattern, scheme or theory to answer or at least clarify this question. What is missing is a social value theory, or a socio-sophy.

Roughly seen value systems can be mapped out for all levels in society, from the individual being and up to large and complex structures. Manifest and outspoken values, as well

as the latent ones can be the same for all levels, different - or even incompatible. Many social scientists have beautiful and well worked out theories and value-systems for large structures - including structural relations. When going down to simple questions like "what characterises a good way to satisfy needs?", however, one does not find much of interest.

The task now is to characterize "a human way of fulfilling needs", sometimes this may stand in a clear contrast to many of the values for "society" seen as a whole; when such discrepancies occur, however, we shall take a stand for the most basic value-unit: the human being.

As an example consider the view that man is a social species and the value that man should be able to act and live in conditions that not only allows for, but also inspires a practice of this social dimension. The contradiction between this value at the human level and values that one can "read out" at the system level is becoming more acute together with development in technology. The paradox here is that everybody, the power elites both in traditional conservative ideology and in liberalism, as well as in different branches of marxism, in theory try to build a society where man can be more social. In practice however, in the different societies today, conditions are far from making this possible.

Three conditions seem to stand out as being of importance for man to be social in the process of satisfying fundamental human needs:

- necessity; i.e. that all links in the total flow of activity actually are of importance, and that

the participants feel their role to be important

- nearness; that conditions set by the fundamental process allow for nearness between those who take part in it,

- integration; i.e. (1) that the single individual can be able to realize himself as a whole - "play on all registers", and (2) that everyone conceives of the entire process as a whole.

Today, in the overdeveloped countries, man usually is forced into a pattern where he is not allowed to be social in this sense, because patterns are characterized by:

- "un-nessesity" - the social element, togetherness, is eliminated from activities that are of importance. Instead, to be social, as an act, takes place only at certain times and usually in conditions primarily made for social activities.

- distance - i.e. one is able to feel solidarity only with people, or groups of people far away, (the "Third World", for instance) while at the same time having oneself and people near by.

- segmentation - there are clear ideas as to which part of oneself one wants to use towards others - and this "part" is made use of from time to time dependent on what one can earn and attain in the act.

The result of this development is possibly that man loses the ability to be positively social. Or, to put it another way: suppose that positive social interaction

implies knowledge of certain kinds of social interaction techniques - we will claim that man today more or less has lost this important "know-how", and that children to a large extent have lost the possibility of learning it, simply because there are no teachers for this kind of wisdom around.

In addition to this social aspect of the fundamental process, to be active, and to search for meaning are also characteristics of being human. By active is simply meant physical activity, - movement, use of the body. It is not necessary here to say much more about this, nevertheless one is today in a situation where nearly all vital functions, and all working operations in the fundamental process can be done by simple hand movements, or by pushing buttons. The machine replaces more and more human activity. Of course this is for many reasons also a positive development - but only to the extent that the mechanization and automation really help the people concerned, and that they wanted to be "helped". In many societies today one finds that this kind of "help" is more or less forced up on the people concerned. The result is far from always development of human beings, . . . seems rather to be a more general trend to go from a relative stable primary sector on the countryside to the desperate poverty in urban slums.

In industrialized societies one has come so far today that "development of the body" is seen as something separated from other activities. The body shall be developed at certain times and at certain places - and health centres, sports equipment development etc. have been powerful branches in the tree of production. At the same time as the machine has made many work operations less burdensome, harmful and monotonous, this separation between development of body

and ordinary work has become the consequence. Those who possess money, motivation for it and time is able to "process" the body, while the rest continue pushing buttons.

By searching for meaning is meant that man should have the possibility of seeing his own activity in the fundamental process as part of a greater whole, and that both the activity, and the insights, are felt to be meaningful.

We have mentioned that

to be social

to be active and

to search for meaning

are important aspects of the human way of fulfilling basic needs. In discussions where the theory of basic need satisfaction is in focus, there is often confusion about these concepts, because one does not see the difference between these characteristics and some non-material needs. We therefore shall try to explain it better in the following. One ascribes to things certain properties in order to characterize them better. A stone is heavy, the grass is green etc., are examples of such characteristics defined from a more or less commonly accepted valuesystem.

When one says that human beings are social, it is a statement of the same category. Man is not his needs, he has them. The human being is social, and has social needs, he is active, and therefore has needs for activity.

There are at least three different lines of thoughts to clarify the question of what man "is":

- views of man based on what he "really is", for example built into opinions about "the human nature"

- views of man based on how he in a given situation behaves

- views of man as he could or should be (for example built on moral, ethical or political consideration).

Related to each of these different views of man, and to combinations between them, many questions could be raised. Marx's point of departure in his analysis of society was built on the idea of a fundamental contradiction between man as he really is - and as he behaves under the rule of capitalism. He distinguishes between the existence and the being of man. But Marx says very little about how man should be, and one easily gets the impression that marxists are not very interested in discussing visions of how man could or should have been in a different social and cultural setting.

In this paper we will assert that opinions of human nature, should be more geared in the direction of the imperative: how man should be. From this statement at least one thing is clear - our view of man, and of the nature of man, is positive. Man is good if he is given the possibilities to be good. The same view is found within marxist theory, but not in many of the other ideologies and cosmologies that seem to be strongest in the Western part of the world today. Here the negative view of man is most usual: man is evil, filled with sin, unable to make a living without guidance from above, does not know what is the best for him, etc.

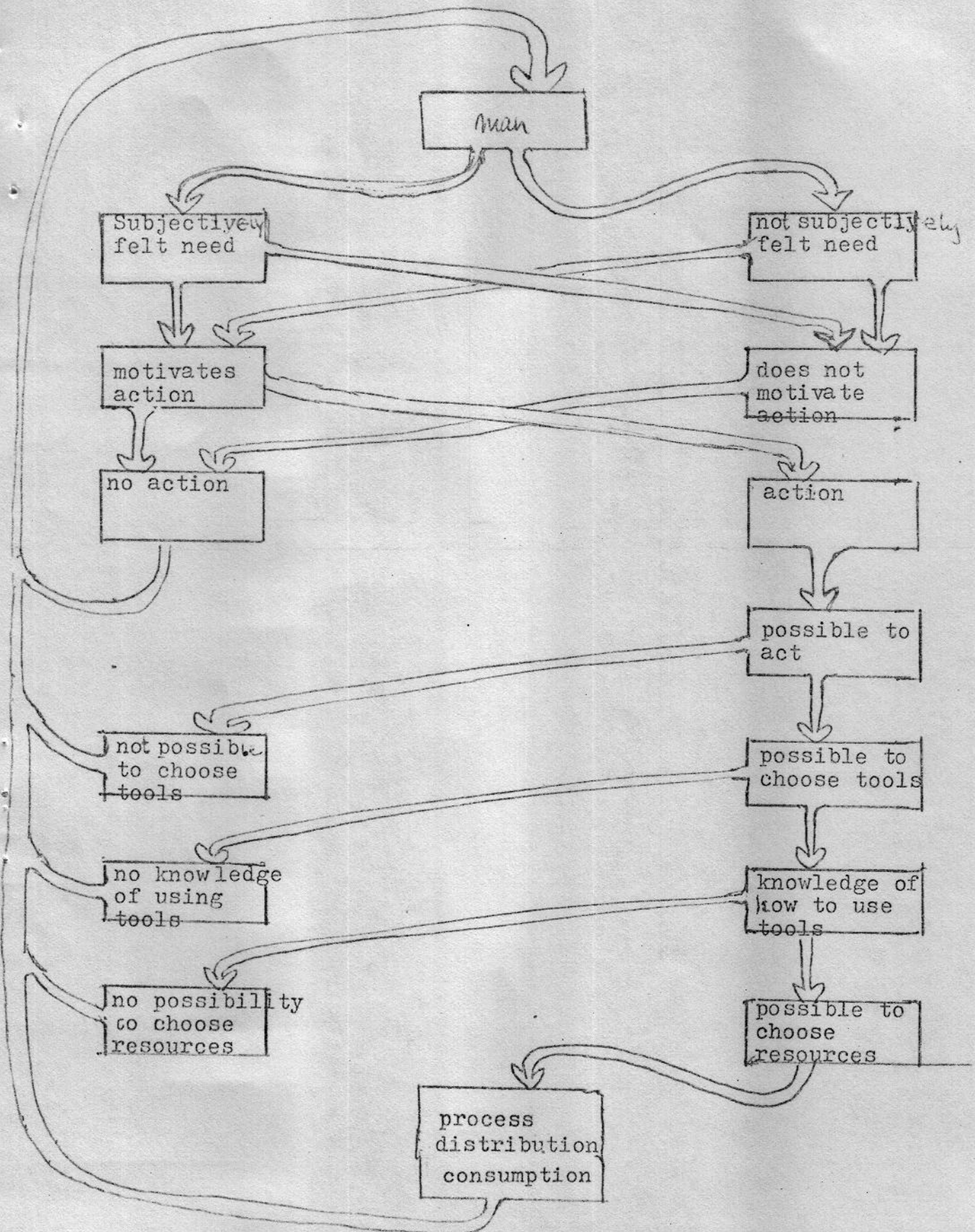
The three characteristics of man: as social, active and

searching for meaning refer to three different levels. To be active refers to man's actions as a single being, to be social to the setting where his actions take place. The searching for meaning, however, relates to the whole process: the flow of materials, actions, decisions etc., that are necessary conditions for the satisfaction to take place - i.e. searching for meaning covers many elements from the active and the social characteristics.

4.3 The fundamental process - man in the center.

In Figure 2 the concept resource is understood as material that can be used to make an object of the need. A tool is a "transformer" of the resource (It is important to repeat here that the concentration now is focussed on basic material needs - for non-material needs the tool in itself might be seen as the object of the need - for example to fulfill needs for creativity.)

Figure 2. The process of satisfaction of basic material needs, man in the center.



This sketch is elementary and simple, and explanations are hardly necessary. Many processes of need-satisfaction will not follow these lines. As a rule, however, the Figure might point to some general trends.

To give an example: in the overindustrialized society one finds systematical lack of subjectively felt needs, and yet one performs actions meant to satisfy them. The reason for this might be habits (one eats according to time and not according to the stomach), but this is of course only a partial explanation. The main reason is found in one of the definitions of overdevelopment: namely the overabundance of material goods - (in the need-objects sense.)(25)

4.4 Processing of fundamental resources.

The fundamental resources (as defined in section 3) are processed in many different ways within different culture areas. It seems, however, to be possible to make a (very crude) classification scheme of some common elements in the processes. The term "source of the resources" is here interpreted as the form resources have as it is found in nature. Between this stage and the need-objects, the transformation consists of (depending of the type of resource):

- resource gathering - i.e. the operations by which the resource is "taken out of" the source
- resource freight means the different ways resources are transported - for example from the source to the storing,

- storing of resources takes place for many reasons: unfavorable market prices or ripening of fruits would be examples in this connection

- resource distribution covers many aspects, not only the distribution in itself, but also locally defined mechanisms for distribution.

- resource adaptation stands for all kinds of changes of the resource - and this adaptation can take place also in the other phases of the total sequence.

Other classification schemes can of course be developed, for example including more categories and taking into account other aspects. The problem, however, is that the categories should be relevant for all kinds of fundamental resources.

5. Conclusion

The four spheres discussed in part 4 constitute an attempt to shed light on some aspects of need theory. The aim - to work out indicators based on human needs, is far from reached - the problems in this connection are immense. First of all, we do not know what the needs of man are. If one concentrates on some needs - as we have done in the last section of this paper, the question of how to fulfill needs in a human way, must be answered. And if this answer is not given in the action to fulfill needs, it is important at least to try to grasp the whole process whereby the need-objects are developed, at least if one wants to conceive of man as a whole.

Traditional indicators of needs fulfillment are mostly

concerned with the amount of, and to some degree, the distribution of need-objects. Even if some improvement of the indicators has taken place recently, they are still mainly based on counting things; calories, proteins, hospital beds, etc. For some people such indicators seem themselves to give some kind of satisfaction, if they only are based on a sufficient amount of numbers and measurements. Seriously; such indicators can no doubt be of good help in social and economic development in many parts of the world. But do they give a satisfactory picture of the "need-situation?" As previously mentioned, to fulfil a need "organically" is not necessarily the same as the good feeling obtained when quite satisfied.

Personally, I think and hope that there never will be any possibility of arriving at "the total measurement" of need satisfaction, either on the individual, or at higher levels in society. Only to think that this is possible has an element of horror, as a crime against the nature of man. Compared to that I would prefer the stupidity of GNP/cap, or similar measurements.

On the other hand, some indication, some method of saying that this way of fulfilling needs is better than the other, is needed because, roughly speaking, man in the developed world is becoming more and more alienated from his own needs, while at the same time the rich world tries to force upon societies with much simpler technology their worst methods of fulfilling needs. In neither case can the main problems be made visible by simply giving numbers or the distribution of need-objects.

I therefore propose that one concentrates on what can

be called indicative needs - i.e. needs or groups of needs that can be seen to be of key importance, and that there would be reason to believe, express or indicate something about the total situation. Take for example the hunger need - if there is systematic, and even increasing dissatisfaction of the need for nutrition in one age group, say, among babies, this is a matter that certainly concerns the whole population.

Other age groups and other needs can be used in the same way: as indicators of the way needs in general are satisfied. The choice of the first example mentioned, the need for nutrition for babies, is stimulated by the Nestlé process.⁽²⁶⁾ Here, the problem was neither quantitative nor easier to understand given the distribution of need-satisfaction. It was simply based on the fact that one culturally defined way of fulfilling a need was forced upon quite different cultural systems: mechanized bottle-feeding as against a direct mother-child relation. Ultimately, the human way of fulfilling needs can only be decided and defined by "ordinary men and women" - not only because they are the ones who know it best, but also because they are the ones who do the work in the fundamental processes.

Notes

Many of the approaches to the problems discussed in this paper are developed more in detail and in depth in the authors thesis in sociology: "Om menneskelige behov, og om aspekter ved tilfredsstillelse av de fundamentale menneskelige behov" ("On human needs and on aspects of satisfaction of the basic human needs") Oslo 1976.

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(1) The complete list of papers is as follows:

Johan Galtung: <u>World Indicators</u>	(47 pp)	WIP No. 1
J.Galtung, A.Guha, A.Wirak, M.Cifuentes, A.Løvbræk, S.Sjølie: <u>Measuring World Development</u>	(74 pp)	WIP No. 2
Johan Galtung, Veslemøy Wiese: <u>Measuring Non-Formal Education</u>	(37 pp)	WIP No. 3
Malva Cifuentes: <u>Acercá de Educacion Formal/Informal: Una Experiencia en Chile 1972-73</u>	(25 pp)	WIP No. 4
Veslemøy Wiese: <u>Adult Education in Norway and Sweden</u>	(27 pp)	WIP No. 5
Johan Galtung: <u>Human Settlements: A Theory, Some Strategies and Some Proposals</u>	(30 pp)	WIP No. 6
Johan Galtung: <u>Social Imperialism and Sub-Imperialism: Continuities in the Structural Theory of Imperialism</u>	(24 pp)	WIP No. 7
Dag Poleszynski: <u>Ecology, Energy and Resources: Some Problems of Indicator Formations</u>	(28 pp)	WIP No. 8
Dag Poleszynski: <u>Waste Production and Overdevelopment: An Approach to Ecological Indicators</u>	(57 pp)	WIP No. 9

Johan Galtung and Anders Wirak: <u>Human Needs, Human Rights and the Theory of Development</u>	(75 pp)	WIP No.10
Malva Cifuentes: <u>Testing WIP Development Concepts: Chile Before and After the Coup</u>	(57 pp)	WIP No.11
Johan Galtung: <u>Structural Analysis: Vocabulary, Graphs and Structures as Indicators</u>		WIP No.12
Anders Wirak: <u>Human Needs as Basis for Indicator Formations</u>	(32 pp)	WIP.No.13
Anders Wirak: <u>Om Indikasjon av Menneskerettighetene</u>	(81 pp.)	WIP No 14
Malva Cifuentes: <u>Self-Reliance and Dependence: A Latinamerican Perspective</u>	(45 pp.)	WIP No 15
Dag Poleszynski: <u>The Concept of Overdevelopment: Theories, Causality and Indicators</u>		WIP NO. 16
Einar Flydal: <u>Concepts and Indicators of Internal Colonization</u>		WIP NO. 17
Jan Øberg: <u>Concepts and Indicators of Militarization</u>		WIP NO. 18
Johan Galtung and Anders Wirak: <u>On the Relationship between Human Rights and Human Needs</u>		WIP NO. 19

- (2) WIP paper no 2 p. 6: Measuring World Development.
- (3) In WIP paper no 10, Human Needs, Human Rights and the Theory of Development the concept of need is studied in a broader perspective than will be the case here.
- (4) WIP paper no 2, p. 41.

- x
- (5) That human conditions and relations are conceived of in a "thingly way", might be an example of the marxist concept Verdinglichung. We see the degree to which one stresses and focusses o. economic - material values (for example in development theory) as a symptom of such an Verdinglichung. That structures and systems are given human properties (for example "to have a need for") could be referred to as be-souling of structures.
- (6) That the material and non-material structures have human properties could in the same way be called besouling of things.
- (7) Wilhelm REICH: The Sexual Revolution
- (8) See for example HILDEGARD-ATKINSON: Introduction to Psychology", 4.ed. New York 1967.
- (9) Among others one could mention Erich FROMM, The Revolution of Hope, in the Norwegian edition, (1971) page 32. or MARCUSE in Onedimensional Man, in the Norwegian edition page 30, see also J.P. ROOS Welfare Theory and Social Policy, Societas Scientiarum Fennica, Helsingfors 1973. page 35.
- (10) MASLOW, A.H. Toward a Psychology of Being Nostrand Company 1968.
- (11) See for example ROOS, (op cit) page 65
- (12) Bo OHLSTRØM presents a definition of resources closely related to need-problematique. We agree, and defines fundamental resources as the resources that can be used for fulfillment of the basic material needs. OHLSTRØM: Om mänskliga behov och sociala organisationer, IO's Utredningsavdelning, Stockholm 1974.
- (13) To some extent the distinction between material and non-material needs has a parallell in the distinction between having and being. For a discussion of this, see: J. GALTUNG, World Indicators, WIP paper no 1, Chair in Conflict and Peace Research, University of Oslo.
- (14) Se for example MARCUSE, (op.cit.) Norwegian ed. page 25.
- (16) It seems to be easier to make theory for bad conditions, - the bad society - than for good conditions and the good society. As mentioned earlier, World Indicators Program is aiming at theories for the good conditions.

- (17) E.ALLARDT's internordic survey: "Having, Being, Loving", is also mainly examining the good conditions, formulated as satisfaction of human needs. See for example: "Dimension of Welfare in a Comparative Scandinavian Study." paper presented at the Second Nordic Seminar on World Indicators, arranged by th Chair in Conflict and Peace Research, Oslo, Nov. 1975. The Projectreport is as far as we know, not yet translated into English: Att Ha, Att Alka, Att Vara, Argos Förlag, Lund 1975. "Levnadsnivåundersökningen" ("The level of living survey"), however, focuses on the bad conditions, after having discussed the possibilities to use "the good conditions" as a model. (Om levnadsnivåundersökningen - S.JOHANSSON, Almannas Forlaget, Stockholm 1970) (Does also exist in English translation). See also: "The level of living survey: A presentation review symposium of the 1968 level of living survey in Sweden," Acta Sociologica, vol 16 no 3 1973.
- (18) MASLOW, Motivation and Personality, 2.ed page 46 or Towards a Psychology of Being (op.cit.) in the Danish edition (På vej mot en eksistenspsykologi, Nyt Nordisk Forlag, 1968) page 46.
- (19) ETZIONI, A. The Active Society, Free Press New York 1968
- (20) ROOS, (op. cit.) page 67.
- (21) In J. GALTUNG's authorship this is a central theme Peace Research as a science is under an obligation to maximize values: peace, broadly conceived of.
- (22) Positive future studies stand in contrast to the "passive" future research which concentrates mainly on development models based on trendmaking, extrapolation.
- (23) See for example Siri NESS' work Psykologiske aspekter ved livskvalitet (no English translation), INAS report no 11, Oslo 1973.
- (24) At this point we find E.FROMM rather diffuse. If one tries to study his books with the aim of detecting his values - for example values used to describe the good vs. the bad society, one will have difficulties. Not because values as such are lacking - on the contrary - there are too many of them! Of course multiplicity of values is valuable in itself, but there has at least to ^{be} some kind of underlying paradigm behind them.
- (25) For an in-depth discussion of the concept of overdevelopment, see Dag POLESZYNSKI: The Concept of Overdevelopment: Theories, Causality and Indicators. WIP No. 16,
- × (26) The well-known process had its origin in the publication The Baby Killer from the organization "War on want" in 1974. (M. MULLER)