

situé dans le prolongement des importantes luttes sociales des années '70 menées notamment par le mouvement écologiste antinucléaire, le mouvement des femmes, les groupes tiers-mondistes et religieux de gauche, ainsi que par divers groupes populaires. Aujourd'hui le mouvement antiguerre est plus international, plus intergénérationnel et surtout moins aligné. Des gens venant de tous les horizons sociaux, politiques et religieux, y participent, et ceci inclut même une participation importante de diverses communautés chrétiennes bien structurées comme les catholiques, les anglicans et l'Eglise-Unie du Canada.

EVALUATING PEACE PLANS: A POLICY-PLANNING ASSESSMENT

Paris Arnopoulos
Concordia University

INTRODUCTION

The problem of war has occupied some of the best minds of humanity throughout history. Having been described as one of the major scourges of the world, war has risen to the top of the global agenda of unresolved issues. This dramatic rise has accompanied the quantum leap of war's destructive potential in the latter half of the twentieth century, and there is still no end to its threat in sight.

Along with many other concerned people, social scientists have looked at this problem from different angles for some time now. It is only lately, however, that the new science of future studies has entered this field of research. Systematic work in social forecasting and policy planning has only begun to tackle the problem of war, so there remains a lot to do for joint work in peace and future studies.

It is to promote this interdisciplinary field that this article was prepared. The work presented here takes its content from peace research and its method from policy studies, thus combining the two in a systematic assessment of peace plans.

The choice of topic is well suited for a joint approach because peace proposals have been put forth by almost every thinking person, so that by now, there is no lack of suggestions of how to eliminate war and attain peace. What is lacking is a rational way to choose among them.

We are here going to outline such a way by building a formal model of plan assessment and then testing it by processing through it the most generic peace plans in existence today. This procedure should help us in deciding our order of priorities for action, by supporting certain plans and opposing others.

The article is therefore divided into two parts: one dealing with the theoretical relationships of the model and the other with its practical application in this particular case. For this reason, the first two sections concern-

trate on peace and futures studies respectively, while the last two sections implement the structure and process of the given model.

THEORY

EIRENOLOGY

We begin this work with a section on the study of war and peace. To do so, we will take a look at the fundamental concepts of Peace Research and then go on to consider relevant aspects of war and peace, concluding with some hypotheses and proposals.

Conceptual Definitions

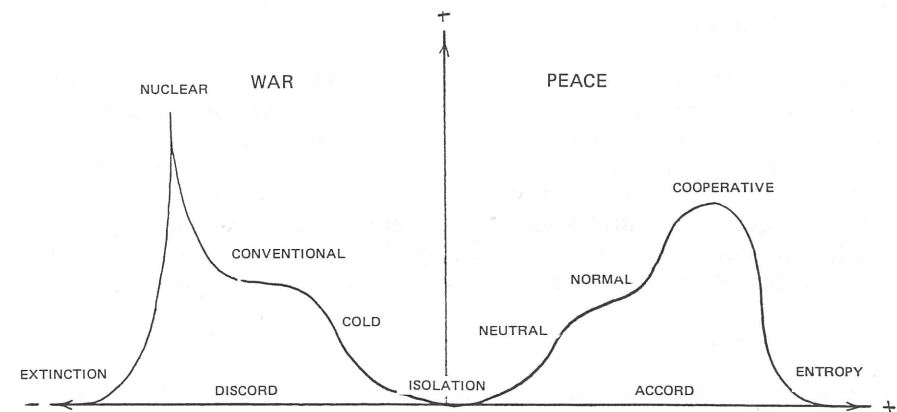
Polemology, the study of war, and **Eirenology**, the study of peace, are obviously related. We study the former in order to avoid it and the latter in order to attain it. Although one is not simply the negation of the other, they are "two sides of the same coin" or, more accurately, two directions in the same continuum.

Of course, all these distinctions depend on the way one defines "war" and "peace". As expected, such complex and value-laden concepts can be and have been defined in many ways. In our macro-societal context, we have chosen to define **war** as organized, large-scale, violent (value-destructive) activity. On that basis, **peace** may be negatively or minimally defined as the absence of war or defined as the absence of war, and positively or ideally defined as a social condition of harmonious interaction. These definitions share certain important elements. War and peace are, both, **social** (interpersonal) events of high **interaction** affecting human **values**. Their significant difference is the quality of the interaction: for peace it is constructive and for war destructive.

The use of the accompanying graph (Figure 1) may clarify these concepts by illustrating them in comparative perspective. Accordingly, war and peace are plotted along a continuum within a qualitative-quantitative interaction context. Along this continuum, war and peace are peaks of activity of different kinds: the first conflictual, the second cooperative. In between, there is a valley of low activity, which may be tension (cold war), isolation (no-contact) or neutrality (indifference). The two extremes (death and entropy) are included as the limits for theoretical consistency.

This is not the place to go into any detail about these concepts. The definition, however, could be operationalized by assigning units of measurement for each dimensional scale. Such operation, however, will have to wait for another study. For our purposes here, these conceptual definitions are adequate.

FIGURE 1: MACRO-SOCIAL INTERACTIONS



Horizontal Axis: Quality (Destructive - Constructive)
Vertical Axis: Quantity (Low - High)

Global Problematique

On the basis of the above definitions, we can now search for empirical evidence of the existence of war and peace in the international system. Evidently, real situations do not correspond to pure concepts, so the world society is a mixture of both states, varying in degree and extent, space and time. Given these variations, we shall look at the world situation as a complex of social problems on global problematique.

Whether a **problem** is considered as an unacceptable situation or a dysfunctional condition, war is a macro-social problem because most people find it abhorrent and destructive of their values. Of course, in its limited and most controlled manifestations, war could be used to solve other social problems; but technological developments have increased

its destructive powers to such an extent as to make total war far worse than any disease it is supposed to cure.

As a social **pathology** of varying severity, from the episodic to the catastrophic, war is related to other social problems, both as cause and effect. In this interdependent network of problems, war can hardly be considered in isolation. Even though, one has to focus on one thing at a time, we must keep the context in perspective. Thus, we should not forget the significant interactions among war, poverty, crime, alienation and a host of other social diseases.

On the global scale, the war system is manifested in the combination of various **symptoms**, such as the arms race, high defense budgets, international confrontations, diplomatic disputes, ideological polemics, local conflicts and military alliances. The depressing statistics of numbers of nuclear bombs, battle casualties, weapons trade, armed forces, deadlocked negotiations, and sabre-rattling are sufficient documentation of the seriousness of our present situation. Our **diagnosis** is therefore of a dangerous, if not critical, condition plaguing the international system.

Human Values

The reason that we can diagnose war as pathological is because we have a preference for peace. In order to consider something as a problem or a disease, one must have a concept of normality or health. Without such **standards** or **norms**, war and peace would only be two different natural phenomena, towards which we would be equally indifferent or impartial.

It is only by accepting certain values and rejecting certain others that one can **evaluate** war as problematic and peace as curative. A study of the social problematic, thus, must be based on some **axiological** propositions, which state explicitly one's value preferences.

In our scheme of things, some of the most important social values are tolerance, justice, security, morality, liberty, community and order. Naturally, the central goal of peace is related in one way or another to all these values. The specific relationships as well as the criteria of selection will become clearer later on when we explain the **paradigm** within which we operate.

One of the tragedies of the human condition is that values cannot all be maximized at the same time or place, because many are mutually exclusive. Thus liberty and security, power and equality are inversely proportional when distributed in society. Individual and collective values are often in conflict, so that pursuit of one can only be done at the expense of the others.

It is for this reason that peace as a value has to be weighed along with

others and in some situations may be sacrificed or compromised for the benefit of higher ones. Since for most people peace is an instrumental value, its worth can only be judged by the other values it promotes. As war becomes more and more costly in values, peace becomes the necessary, but not sufficient, condition for attaining most other values; thus it is indispensable to the social system. On that basis, we have chosen it for particular study at this time.

Peace Plans

Having explicated our value system and the role which war and peace play in it, we now end this chapter by outlining the main peace plans circulating in the contemporary world. We present these plans as the various means by which the problem of war can be solved and the values of peace can be attained.

Since world peace has always been a human ideal, a plethora of peace plans has been put forth throughout the millenia. All these proposals, however, can be distilled into a small group of generic approaches. We have tried to do that by combining various plans into a manageable number of general types. The results of this essay appear in Table 1.

The table summarizes what was said so far by listing nine distinct peace plans (B-J) between two extreme positions (A & K). Apart from either having no plan at all (A), or a plan for everything (K), there are a number of particular plans for peace by attacking a central problem and aiming at a basic value. We have named each of these plans according to the major ideology they reflect and the ultimate end they promote.

Thus, the World Federalists propose "world peace through world law"; the Scientists work for the "Brave New World" of high-tech; the Third World for a New International Economic Order; the military-industrial complex warns that "si vis pacem, para bellum"; all ideologies or religions believe that if only everyone was converted to their ideas peace would be at hand; the nationalists on the other hand want to build high walls to keep everyone from each other; most governments accept the state-system and simply wish to solve its problems step by step; more thoughtful people go further to prepare the new generation by humanist education; and finally the trans-national corporations try to create a global village of interdependence.

A notable absentee from this list is **pacifism**. The reason for this is that it is too broad and defuse an ideology to be identified separately. It can therefore be found within various ones listed here and certainly is included in the **holistic** category.

What are we to make of all these proposals? Which are the better ones? Of course, we all have our own ideas about the ones we like or do not like. But can we justify our preferences in comparative perspective?

That is what we shall try to do by finding some standards of comparison in the next section.

TABLE 1: THE UNIVERSE OF PEACE PLANS

CODE	DEFINITION	PROBLEM	VALUE	PLAN
A	Conservative	Change	Stability	Ad Hoc
B	Cosmopolitan	Anarchy	Order	World Federalism
C	Technocratic	Ignorance	Science	Post-Industrial
D	Socialist	Injustice	Welfare	Development
E	Militarist	Weakness	Power	Deterrence
F	Ideological	Differences	Uniformity	Integration
G	Nationalist	Dependence	Autarchy	Protectionism
H	International	Hostility	Security	Functionalism
I	Pluralist	Prejudice	Tolerance	Coexistence
J	Liberal	Oppression	Progress	Trans-nationalist
K	Holistic	Stagnation	Perfection	Utopia

MELONTOLOGY

Like peace research, future studies try to find a systematic way of solving certain problems. The main difference between them is that the former deals with a problem of substance, whereas the latter concentrates on procedural problems of social forecasting and policy planning. Here we shall utilize the policy studies methodology to carry out an assessment of peace proposals. In the following sections, we outline the model of this method.

Systems Theory

Since our aim is to perform a rational operation, we have to build a system that can fulfill this purpose. Assuming that a system is a set of inter-related units, the task at hand is to gather a selection of relevant **tools** and the appropriate **skills** to use them. The tools will provide the structure of our system; the skills, the method of its functioning.

Systems theory provides the general criteria for choosing the right tools and skills for problem-solving operations. By analyzing the necessary elements of any intelligent process, systems theory has identified two distinct types of **functions**, and hence of structures. The first involves the content, the second, the context of the system.

As to the content, an intelligent system must be able to handle **information**. This means that it has to receive **data** as an environmental input, use this data in some way and then transmit it to its environment as

an output. The way it handles the information will depend on a given **program** which specifies its rules of conduct. With this informational content, i.e. data and program, the system should be able to operate rationally.

As to the context, the system must be able to **store** and **process** information. We mentioned above that the flow of data through the system is processed in some way and thereby transformed according to its program. To do so, however, it must have a capacity for memory to recall stored programs and data for use at any time. Thus flow and storage capabilities form the necessary context of our system.

These dual functions can be combined to give the four central elements of any intelligent system. The matrix of Figure 2 gives these four elements as: data storage; program storage; data processing and program processing. In that figure, we have used two symbols to denote these structures: **rectangle** for storage and **rhomboid** for process. Furthermore, single borders denote data handling and double borders program handling. We shall see presently how these concepts and their symbols will help to illustrate our model.

TABLE 2: INTELLIGENT SYSTEM ELEMENTS

Function Information	Storage	Process
Data	<div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">D-S</div>	<div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto; transform: rotate(45deg);">D-P</div>
Program	<div style="border: 3px double black; padding: 5px; width: 60px; margin: 0 auto;">P-S</div>	<div style="border: 3px double black; width: 60px; height: 60px; margin: 0 auto; transform: rotate(45deg);">P-P</div>

Decision Making

The most important function of an intelligent or problem-solving system is its capacity to make decisions. Since decisions are choices among options, decision-making ability is the power to select one option from a set of given alternatives. In doing so, we exercise "free will" and thus act responsibly.

In this sense, decision-making requires certain **criteria** to determine choice. Obviously, random choice does not require much of a decision-making capacity; just as completely predetermined choice is no choice at all. Since most human decisions lie in between these two extremes, the quality of these decisions will depend on the criteria used. For an intelligent system, these criteria must be such as to attain the aims of the system most effectively.

According to the "rational-choice" model, a decision-maker is apt to select the option which he perceives as having the best chance of maximizing his most valuable reward. In other words, one's priorities are proportional to the value or desirability of the reward, multiplied by the probability or possibility of its occurrence: i.e. $c = v.p.$

We proceed on this basis, first by determining the kind of choices we have to make and then by considering the best criteria for the job. Since what we are trying to do here is evaluate the relative merits of certain plans of action, our decision-making process must point out how realistic and idealistic they happen to be.

It is evident that the degree of **possibility and desirability** of a proposed policy is the most significant reason for its adoption or rejection. The more probable, the more desirable a plan, the greater its chance of selection. The more unrealistic and undesirable, the lower its priority in one's scheme of things. Considering the possibility or desirability of a plan, therefore, presupposes the existence of a scheme of things. Such conceptual framework provides a **taxonomic** order within which we can see the plan in perspective. For this reason, a decision also has to be made as to what classification system will be used as a background.

Lastly, another decision is necessary to determine the **optimality** of the plan. This last decision is made on the basis of previous ones and measures the relative position of one plan among the others. The final choice must take into account the best combination of possibility and desirability.

These four salient points taken together complete our decision-making process. Having decided first on the taxonomy, second on the possibility and desirability and third on the optimality of a plan, should give us a good idea of whether to adopt or not.

Memory Bank

Now that we have shown the core elements of our model, we move to the peripherals. These auxiliary elements are equally necessary in order to support the core and make it possible to answer the four questions posed above.

As mentioned, the storage facilities of an intelligent system contains either data or programs. Here we will show how both are required in decision-making. Together, the two are information flowing through the system, thus animating it to perform its functions.

As both natural and artificial intelligence indicate, no decision can be taken without some data being provided for that purpose. This data either comes from the environment as input or from the system itself as memory. In our case, the data includes the list of plans to be assessed as inputs, as well as various facts and values stored in our memory.

These data have to be coupled with certain programs which will make it possible to sort out the data and thus give meaning to the whole operation. The programs provide the criteria for ordering the data and include paradigms, standards, norms and principles. In the case of plan-assessment, these criteria give the background required for the decision at each of the four action points of the model. Each of these decision centers needs to be fed with the two kinds of information (data and program) upon which to act as directed. In the section below, we shall summarize this operating sequence.

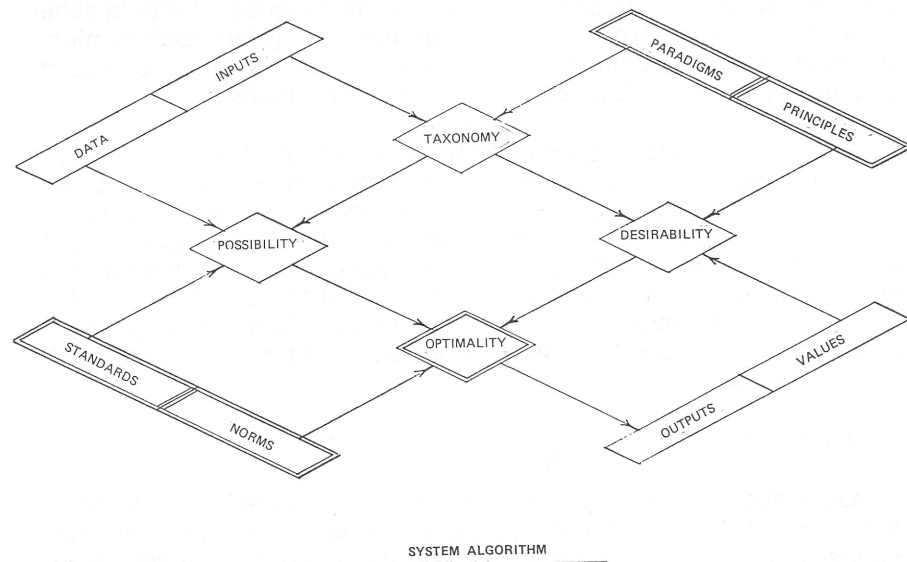
Model Algorithm

As the diagram in the next page shows (Figure 2), we have gathered all the items mentioned in this chapter together with their appropriate interconnections. The resulting flow chart indicates the step by step procedure to be followed in assessing any given plan. Let us make a preliminary exploration into this maze of pathways and decision nodes.

The process begins at the upper left corner with the plan inputs. It hits the first decision fork when we are asked to classify these plans according to some given paradigm. The results of this classification are then fed into the possibility and desirability nodes. Therein, we are asked to decide how realistic and idealistic these plans are. To do so, we are given the necessary information from our stored memory, in the form of factual data, range of values, environmental standards and ideal principles.

Once the degree of the possible and desirable have been established, the outcomes become the inputs to the next decision point which will determine the optimality of the plans. At this final stage, we utilize certain normative criteria according to which we can prepare an ordinal list of

priorities. In effect this becomes the output of the entire process, shown in the lower right corner of the diagram, thus completing the proposed algorithm. If successful, this process will have converted a random list of plans into an order of priorities for optimal selection.



APPLICATION

STRUCTURE

Having set out the theory of plan-assessment, we are now ready to put it to the test by assessing certain peace plans. We shall thus combine the information of the first section with the model of the second. Here we supplement that information with some more data and programs, so that the general structure of the model is filled in by the particular givens of this case study.

Data Storage

We begin filling in the content of the model with the raw input data mentioned before. First and foremost, we have the listed peace plans which are to be assessed. We take this data from Table 1, and add the social system sector in which each plan belongs for purposes of identification. Table 3 shows the results as inputs.

Next, the storage should contain the relevant data describing the global condition. In addition to the problematique described under Global Problematique, we include the principal institutional actors behind every plan and the sources of their power. Table 3, contains the main structures of the social system on the international scale and thus shows who is responsible for the actual situation.

TABLE 3: INFORMATION STORAGE

PLANS	INPUTS		DATA		VALUES	
	SECTORS	ACTORS	POWER	NEEDS	RISKS	
Status Quo	Ad Hoc	Realists	Inertia	Customs	Inaction	
Cosmopolitan	Legal	I.G.O.'s	Service	Regulation	Mediocrity	
Deterrent	Military	Armies	Force	Safety	Destruction	
International	Civil	Governments	Diplomacy	Loyalty	Mistrust	
Nationalist	Labour	Unions	Skills	Industry	Depression	
Socialist	Resources	N.G.O.'s	Volition	Justice	Dependence	
Liberal	Market	T.N.C.'s	Wealth	Freedom	Inequality	
Technical	Science	Elites	Information	Knowledge	Hierarchy	
Pluralist	Education	Schools	Culture	Community	Isolation	
Ideological	Religion	Churches	Morality	Humanity	Regimentation	
Ideal	System	Radicals	Imagination	Optimism	Unknown	

In juxtaposition, we present the values of the peace system which we consider necessary. This list of values or needs corresponds to those mentioned under the Human Values sub-section, and describes the desirable state of affairs we wish to attain. Along with these values are included the accompanying risks which limit the application of these values.

For now, the six columns of Table 3 contain all the data needed for this operation. What we have to do next is present the corresponding programs which will allow us to treat these data in an appropriate manner.

Program Storage

Since the model requires the performance of four operations, it needs four program instructions. Each of these programs directs the function of each step, until the entire process has been completed. An important part of the program stores the criteria of decision-making and it is to these that we now turn.

The first program directs the taxonomic operation by providing it with criteria for input classification. In this case we use as paradigm, the rather classical trichotomy of the social system into cultural, economic and political sectors, corresponding to social infrastructure, structure, and superstructure respectively. Figure 3A, shows our general classification scheme which is used to order the system's data.

The second program contains the principles of desirability which enable us to rank our values from the most to the least ideal. This range spans the continuum between negative or divisive to positive or uniting values.

This qualitative measure is calibrated in a decimal scale from 0 for minimal to 10 for maximal desirability. Figure 3B shows the entire spread of these positions.

The third program gives the possibility criteria which will be used to assess the realism of the peace plans on the basis of their relations to the present situation. This gives us a scale measuring the cost of a plan related to the resources an actor needs to implement it. Given the proper statistics, this range could be quantitative. For our purposes, however, Figure 3C is sufficient to show the principles involved.

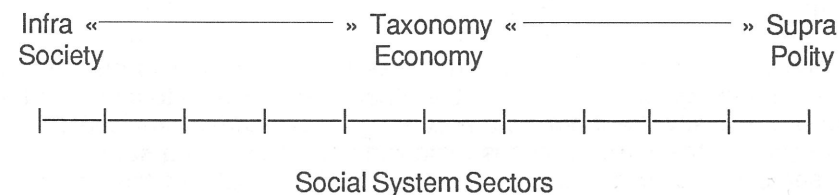
The fourth program has the optimality normals to be used in combining the results of the previous operations in their final synthesis. These norms define the optimal as the mean cross-cutting the possible and the desirable. Accordingly, the order of priority will follow the magnitude of the sums resulting from adding the two numbers corresponding to the position of each plan on the possibility-desirability scales, as shown in Figure 3D.

Information Process

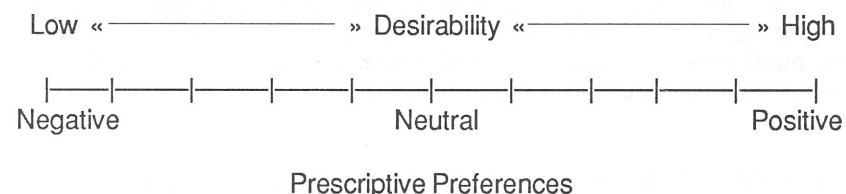
Moving from storage to process within the model, means shifting from the **static** to the **dynamic** elements of the system. Whereas, the storage centers contain information, the decision centers manipulate it. This move is thus crucial in learning how the model operates.

FIGURE 3: PROGRAM SCALES

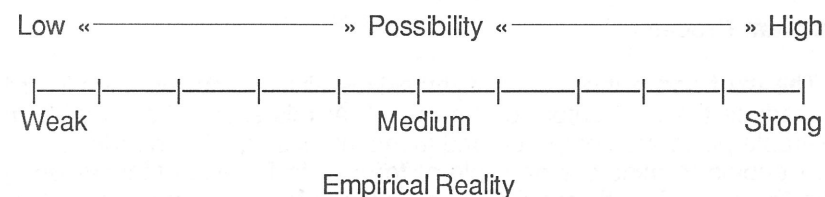
A. Paradigm: Trichotomy



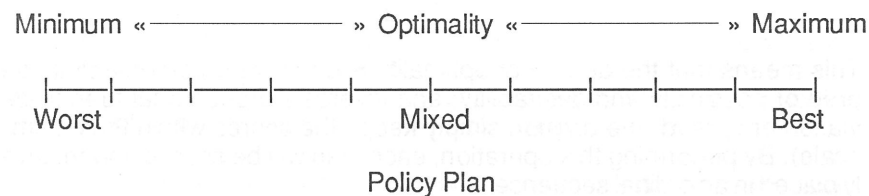
B. Principle: World Unity



C. Standard: Institution Power



D. Norm: Dual Combination



As previously mentioned, the processing of information in the model goes through two phases. The former refines the raw data inputs in such a way as to make them treatable by the second phase. The latter is the heart of the model because it does the two most significant functions of the entire process: i.e. decides the possibility and desirability of the plans.

The first or taxonomic phase receives the system inputs on the one hand and the given paradigm on the other. Its function is to compare the two and classify the input data according to categories provided by the paradigm. In this case, it means matching each plan with a **social sector** by searching for similarities between them. The results of this operation will be a reordering of the plans into a proper list of non-interrelated items.

The second phase is subdivided into two parallel steps. The one dealing with possibility, must determine the degree of likelihood that a certain plan has to become a reality. This operation requires a certain knowledge of the actual world in order to compare it with the given place. The greater the gap between the two, the more improbable the plan is to succeed. The qualitative measures we shall use here are the **time-energy** resources actually spent in each problem area by the relevant institutional actors.

Similarly, we can do the same thing for the other step involving the desirability of the plan. Since all proposed actions are not equally desirable, we can order them in a scale of priorities from the most to the least preferred, depending on a set of given values. In this case, these will be determined in a **risk-benefit** calculation based on the criterion of global unity; i.e. whether they help or hinder a more unified world.

Program Process

The third and last operation synthesizes all the previous ones in order to produce the final output of the model. At this stage, the possible and desirable plans are compared and fused into a single list in order of priority. Keeping in mind the principle of formula in Decision Making we first take the sum of each possibility and desirability score; then we subtract their difference, and finally divide the remainder by two. The mathematical formula for this operation is thus:

$$Op = \frac{|D+P| - |D-P|}{2}$$

This means that the degree of optimality is directly proportional to its degree of possibility and desirability, and inversely proportional to their deviation or spread (the division simply keeps the scores within the decimal scale). By performing this operation, each plan will be scored and relatively placed in an ordinal sequence.

Before concluding this section, it should be emphasized that the operationalization process presented here is not completely mechanical. It still assumes the intervention of the human mind to provide the calculations necessary to the four steps above. This means that certain second-order criteria and background information are implicitly considered. To have explicated a complete algorithm suitable for artificial intelligence would have required a much larger study which is not needed here.

What is important at this stage is to show the direction of moving towards greater systematization of the plan assessment process, without taking it to its logical extreme. With this in mind, we proceed to the last section which will implement the model procedure on the basis of all structures given in this section.

PROCESS

Having explained both static and dynamic elements of the model, we now put them together in actual operation. This is done by processing the list of peace plans through the conversion machinery of the system. We shall follow the content of this flow, step by step in chronological order (see Figure 2).

Taxonomy

The process begins by introducing the plans of Table 1, along with the input information of Table 3 to the criteria of our paradigm in Figure 3A. The comparison of these various lists should result in a trichotomous division of the plans in societal, economic and political sectors.

The first (A) and last (K) entries are intentionally placed at the two extremes of the scale in order to set the range of options: the former being the null option or no-plan (status quo) and the latter being an undefined or eclectic ideal (utopia). In between these two, we have the other nine plans which fall in the three sectors.

After some reflection, we see that plans C, F, I, aim at transforming the societal sector; plans D, G, J are mainly economic, whereas B, E, H, concentrate on political measures. Within these sectors, we label each of these plans by its principal characteristics, i.e. promote peace by emphasizing a particular policy through which a social problem will be solved. This assumes that war is caused mainly by such a problem, whose solution will be the determining factor for peace.

Table 4 shows the outputs of this classification. In the Taxonomy column, we see that the plans fall into nine categories representing the main institutions of the social system i.e. religious, educational, technological, commercial, industrial, labour, military, diplomatic, and legal.

This means that different people find the roots of war in different areas

and hence attack these roots at various fronts. Taken together, it is difficult to find any other major peace plans that do not fall into one of these areas and are not details of one of the plans presented here. By this classification scheme it seems that we have exhausted an all inclusive range of options. The next step would be to analyze the implications of these options.

TABLE 4: SUB-SYSTEM OUTPUTS

Social System Sectors	Taxonomy	Desirability	Possibility	Optimality
Null	A	1	10	1
Ideology	F	9	0	0
Education	I	3	4	3
Science	C	6	8	6
Market	J	8	9	8
Resources	D	5	1	1
Labour	G	2	5	2
Military	E	0	3	0
Civil	H	4	7	4
Legal	B	7	2	2
General	K	10	6	6

Desirability

Since the desirability criterion seeks to determine our order of preferences regarding the given plans, we shall consider them on the basis of the set of principles and values outlined in Figure 3 and Table 3. Combining these two inputs along with the output of the taxonomy, we can now range the plans according to our priorities.

Assuming that the better the plan, the more it seeks to attain the unity of mankind a lasting and global peace, our preferences begin to emerge. Apart from the ideal which is per definition the best plan (K) and is given a rating of 10, all other plans can be ordered from 0, the least, to 9, the most desirable.

Table 4, gives the results of this operation. Accordingly, the most stable and benevolent peace would come about by plan F, together with J and B; followed by C, D and H; ending with I, G and A. Plan E is the worst one, because of its great risk and negative effects.

This order points to three levels of desirable worlds by grouping social, economic and political peace plans in various combinations. The first priority groups positive or attractive plans, the middle is a mixed or neutral combination, and the last priority contains the negative or repulsive plans. It is evident that a different criterion of value priority would have given another ordering of plans; so the model makes these variations quite explicit.

Possibility

The third step is in parallel to the second, and complementary to it. One of its three inputs, i.e. the taxonomy output, is shared in common with the desirability operation. The other two inputs provide it with its own data and standards. In this case, they are to be found in Table 3 and Figure 3C. The proper manipulation of these inputs should result in the output, which is the list of plans ordered according to their degree of realism.

Taking the reality of something to be its proximity to the actual situation, we can see that all the plans are partly realistic because they are being implemented to a certain extent. Some, however, are much more extensive and intensive than others. The problems that each one is trying to attack are much different and require different quantity and quality of effort and actors to be resolved.

Perhaps the best single measure of realism is who is doing how much in that area. So a list of the main institutions and their budgets, should give a good idea of the present priorities of the world system. Comparing the resources and time available to a problem with the resources and time required to resolve it, shows how probable its solution will be. The greater the negative gap, the more unlikely is the plan to succeed.

On that basis, we have ranked the peace plans as they appear in the appropriate column of Table 4. By definition, we have given the highest rating to the status quo (A = 10), followed by the various other plans in descending order, according to the human and material resources expended for each activity. Accordingly, plans J, C and H, are the most probable to be realized, plans K, G, and I are of average probability; whereas plans E, B and D, are unlikely to succeed in the global scale. Finally, plan F was judged to be the most unrealistic, because it is too vague and does not have a powerful sponsor.

This order of possibility is also a forecast of the likelihood of various scenarios to come about, given recent historical trends. This recognizes the dominant position of sovereign states, trans-national corporations and technological factors in effecting change in the foreseeable future. At the other end, religion, voluntarism and legalism are unlikely to determine the flow of world events.

Optimality

Armed with two outputs, giving us the degrees of desirability and possibility of various peace plans, we now pass to the last step of the model. In this step, we combine the two inputs according to the set norms in order to come out with a single overall measure of optimality, thus ending up with a list of plans in order of their degree of adoptability.

Using the formula for optimality which was given under Program Process, we have calculated the final scores as given in the last column of Table 4. According to it, the Transnational (plan J) comes out first, followed by the Technological (C) and perhaps the ideal (K). This means that we would be well advised to support these plans alone or in combination; because, all things considered, they are both the most worthy and feasible.

Conversely, we should oppose the militaristic (E) and ideological (F), followed by the socialistic (D) and status quo (A), since they do not seem to be leading anywhere we would like to go. In between, we could consider selectively the international (H) and pluralist (I) plans, followed by the nationalist (G) and supra-nationalist (B) ones, as they may have something to offer.

A graphic way of showing all these scores is to plot them in two-dimensional (3 x 3) grids. Figures 4A and 4B show the relative positioning of the nine peace plans in terms of either their desirability or possibility and their social classification. These two figures show clearly which political, economic or social plans are most or least possible or desirable.

Finally, we have measured optimality by plotting the possibility and desirability scores along horizontal and vertical axes and then located them in the resulting plane as shown in figure 4C. In such graphs, the optimal line would run equidistant from the two axes or at a 45° angle.

This plotting confirms our findings by showing the highest cluster of three points to be plans J, C, and K, followed by a middle cluster of H, I, and G and perhaps B; leaving plans F, A, D and E scattered on the periphery. Thus, with that final output, we have completed what we set out to do - assess the relative merits of all existing peace plans.

CONCLUSION

This brief introductory work has attempted to show the potential of systematic assessments regarding intended actions. Such assessment helps decision-making by clarifying the criteria and procedures used in selecting the hierarchy of various options. It, therefore, makes explicit what is usually and implicitly taken for granted or hidden when policies are chosen for implementation.

The use of peace plans as a test case for this method, although incidental, indicates the point of contact between eirenology and melontology, thus promoting interdisciplinarity in the social sciences. Policy planning and peace research can both benefit from joint work in these future-oriented areas. This study was but a first step.

As such, there is much to be done in the next step. At that time, greater depth and detail will have to be achieved. We are convinced that this can be done both quantitatively and qualitatively. Statistical data can be used to strengthen the possibility criterion, and opinion surveys can be used for the desirability decisions. Similarly, meta-criteria can be specified and programmed into the model; so that decisions become more rational and automatic, without losing any of their humanity. It is, after all, towards this ideal of enlightened humanism that our efforts are meant to contribute.

FIGURE 4

FIGURE 4 A

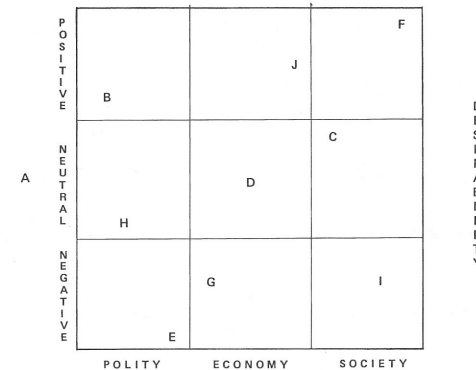


FIGURE 4 B

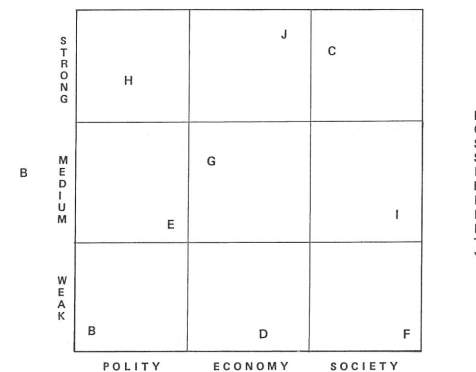
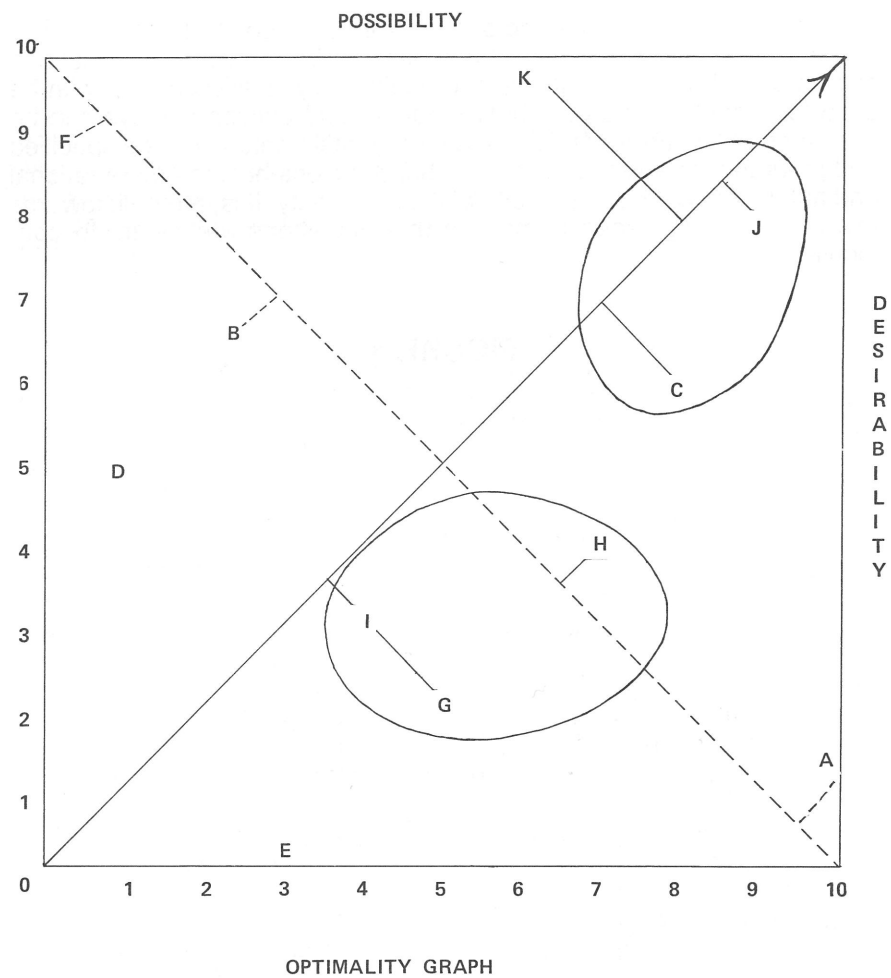


FIGURE 4C



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