D R A F T

PLANNING AND FEELING:
ADVICE-GIVING IN A SEXUALIZED WORLD

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PREFACE

". . . how to plan simultaneously for efficiency and, say, affection, taxes not merely the practical but also the theoretic immagination."

John R. Seeley, What is Planning?*

"It would not be more difficult and not even more expensive to collect happiness ratings than to collect data on income, savings, and prices."

Paul Lazarsfeld, What is Sociology?**

This is an essay about the beyond post-industrial society that we must begin to think about and plan for. Discussions of post-industrial society have pointed out the importance of knowledge, especially of the structured kind, to the development of our society. Yet this knowledge remains very poorly specified, and questions about "knowledge for what" remain unanswered. I propose to deal with some of these questions here and thereby set a theme for responses to crucial problems which will appear when we approach a beyond post-industrial America.

A central faith that informs my discussion is the importance of self in action. I want to understand how our selves can be better integrated with the actions that we choose. One's self is the "integrated unity of subjective experience specifically including those characteristics and attributes of the experiencing organism of which it is reflexively aware."*** My fundamental postulate is that the use of the self will make it possible for us to act better.

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* Seeley, 1960 .

** Quoted in Swados, 1959 . Peter Rossi led me to this reference.

*** Gove, 1966, p. 2059.

This discussion was written at a college for environmental design. It is a discussion of the problem of design, and not of the problems of the development of new knowledge, or the verification of what we know. I shall be concerned with the most central problems of design, those of problem solving, of poorly posed problems, of very poorly posed solutions, and of inexplicit criteria for knowing when the solution is good.

Our problem orientation will lead us to be concerned about responsible knowledge. People who "know" may have a commitment to increasing the base of consensually known things, or they may be committed to fulfilling ends specified (perhaps imprecisely) by others. Those whose commitment is best characterized by the first description are searching for the "truth," while those with the second commitment are trying to make things "work." Our social responsibility is more apparent when we assume the second role. This is the role that will concern us here. As a result, we will want the "acceptance of tacit knowledge and experiences as important sources of knowledge, in addition to more conventional methods of research and study. [We want to make] efforts to distill the tacit knowledge of policy practitioners . . ." (Dror, 1970, p. 138). Rather than be knowers who are led around by what they know, we shall want to be teleological and be led around by what we want (which is, albeit, a function of what we know).*

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*Considering the poverty of the rest of the world it would seem fatuous to devote an essay to the emerging rich life style in the United States. Yet, it also seems likely that the forces that are causing this emerging richness are not likely to dampen in the near future. Many, who note the relative disparity between the richness of the western world and that of the east, have suggested that we shall have to adopt a style of life that is less rich. Considering the poor's self defined aims, it seems to me that it is more likely that they will try to emulate that of the rich, at least in some respects. So it makes some sense to try to see how the forces that are determining the new style of life dependent on living in a rich society can be planned for and dealt with.

The major question that I shall be concerned with in this volume is, "What does knowing more have to do with acting better?" I shall suggest that a useful context for answering this question is in terms of planning ideas. I then want to ask what is knowable?; how do you apply what you know?; in what context is this applied?; and what kind of person is needed to do this application? Finally, I examine the structure of a society in which such knowledge is applied, some of its most central problems, some of the important policy questions that face us now and in the future, and likely responses to these problems.

ACKNOWLEDGMENTS

The staff of the Institute has kindly and interestedly transcribed and typed this manuscript enough times, so perhaps they know it better than I do. I want to thank them for making this part of my work easier.

Melvin Webber, as director of the Institute, has supported my research and writing even when he was not sure what I was doing. His faith in me was crucial to my being able to go through with this exploration as well as my "change" from physicist to what I do now.

I started thinking about some of these problems, especially those in chapters 9 and 10, when I was a visiting researcher at the Seattle Research Center of the Battelle Memorial Institute. Bob Fuller and Ron Paul made the difference there. More recently, a grant from the Farrand Fund supported the early formulation of this essay.

The atmosphere of the University, and especially Wurster Hall and the Department of City and Regional Planning, turns out to be a comfortable home despite the constant concern about purity and the disciplines. Planners welcome, for reasons even they are unsure of, the ambiguous and unclassifiable problems.

Not too many people had to go through the early drafts of this discussion with me. My wife Susan had to live with it.

I want to mention the other people who form my personal milieu and thereby have helped to form some these ideas: Melvin Webber, Leonard Duhl, William Alonso, Clare Cooper, Pat Bourne, Howell Baum, Peter Marris, Peter Marcuse, Steve Cohen, Beryl Radin, Richard Meier, Stephen Blum, . . .

In no way is it to be understood by this listing, that they agree with what I say here. In the case of a few of the above, I am writing to fight them and to exorcise some of the problems in our relationship. In the end, the fights with my self have been the most vigorous. I am always with me.

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INTRODUCTION

No one told me what to write this essay about. I didn't even tell myself. Yet it is written, and it deals with questions that I feel are quite important. How does this come about?

It comes about because some problems have bothered me and I am writing in order to work out one possible solution, a way of acting that is consistent and responsive to these problems. I believe that such syntheses of intellectual problems are representations of intra-psychic syntheses in individuals. If two ideas are bothering one person, and the ideas are somehow related, and that person wishes to avoid a sort of schizophrenic feeling, then a synthesis of these ideas must be formed in his mind. He may be capable of combining the ideas by suspending attention to the contradictions among them. But if the ideas sit around, the contradictions will still pop-up and will not go away. A synthesis develops out of the tension among the ideas within the person, on a psychic level, and verbalizing that synthesis is the process I am going through at the moment. What are the ideas that have resulted in the work that follows?

(1) I have been centrally concerned about my own role, as an adviser or consultant, in the world of public policy. At the same time I have been interested in the profession of advice-giving in that world, its faults, and how it might be bettered. (Krieger, 1970) My primary question is, how is knowledge useful for public policy making?

(2) We are always rediscovering our selves. Some times, this discovery may take place internally, at others, interactively with other

persons. I have come to believe (in a way consistent with what I have said) that our selves are the primary sources for what we know, and especially for the claim that experts make to knowledge.

(3) For a man who is presenting an argument, as I am, it is strange to admit the last of the concerns that are source for this essay. Having been trained in the sciences, which have been most successful in understanding the consequences of action, in a limited sphere, I still have come to believe in the failure of argument as a way of coming to act. In the end, I do not believe that people act because you have convinced them to do so by your argument. In the end, I do not believe you convince the unconvinced; yet paradoxically, I do believe that people's plans for action can be changed. What is going on?

None of these ideas or concerns explicitly contradict each other. Yet in trying to work out my life, it is important that I develop a synthesis of them and have the work I do be responsive to the questions implicitly and explicitly posed here.

This includes the writing of this essay. Praxis and theorizing, style and meaning, must be related. For if I am to win you over to my position, if I am to get you to understand why I plan the way I do, and perhaps why you should plan in the same way, then what I tell you must not sound false. In this sense I am trying to give an argument that is not air tight, but is convincing.

What should be my style? In discussing the style I shall use I am being quite self-conscious. And, that, I feel is faithful to my intent. But self-consciousness of itself is not my end. For I wish to make external action better, informed by self, and not only improve one's internal well being.

Perhaps I should write poetry. Millenial writing is best done in this form. But for me, at this time, writing poetry would be too difficult. What I have tried to do is to make my argument clear when I could, write figuratively and give examples when I thought it would help, and tried to make sense to you by appealing to your internal self as much as I appeal to my own.

So this is a book about the ad hominem. As such I will encounter a variety of resistances from the reader, which I want to deal with now. We shall be concerned with politics and society, and it is to the reader who has thought most about these questions that I am talking at this moment. It is my guess that if you are concerned about political and social issues in a central way, you are likely to externalize your feelings and internal problems onto the external world and see in the play of power and people and history, the working out of your internal self.* For you, the tables are turned in this discussion. This is a book about the polity and the society, yet it talks mostly about the self. The discomfort will result in an attack which will be phrased in a (familiar) political rhetoric. I believe that it is just as important for you, as for me, to get down to understanding our selves. We must make this a primary concern. For you, it is sufficient to talk in political and societal categories, since that is where your self is. All I ask is that you go along with me. If socio-political and psychological change are related, we may fruitfully explore change from both angles. I believe that they are related both personally and archetypally.

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*A Freudian might have called it sublimation, but I think the pejorative value implications of such a designation out-weigh the theoretical conceptual gain.

I want to make it clear that I am not advocating moral re-armament, nor do I believe that if we are all "good," the world will be wonderful. What I am arguing is that in a world where individuals have influence on what happens (as advice-givers and as advice-takers), they should have a good sense of their selves -- their being-in-the-world.*

This is not a book about realpolitik. It is more a discussion of the possibilities for our society, rather than what is. The importance of such a discussion is that it makes what once may have seemed like a dream now seem possible and perhaps a nightmare at that. I shall discuss only manageable sub-problems of the synthesis that I present in this introduction. I am only comfortable with the grand view for short periods of time, while the working out of the consequences of a less significant problem gives me a good deal of pleasure. This will be apparent all the time.

In the end this is a book about sex, repression, and politics. For if I am talking about planning and I am talking about feeling, then I must be talking about politics and sex. If we are to become more responsive to ourselves in public action, I would think that some of the associated repression into our private lives would need to decrease. And since this repression is reflected in our private lives, as well as in our public lives, in terms of our sexual behaviors and feelings, I would expect some deep consequences, on the sexual level of the discussion. I do not know what these consequences will be. Maybe, we shall all become polymorphous perverse. More likely, we shall want to develop a more highly articulated

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*It is nice to believe that power and organizational design could be improved as a result of these sensitivities. And I believe, as I discuss in chapters 9 and 10,that there is some reason to have hope for changes. But in the end I would not be too sure. There is no "good" society.

way of feeling and being in our sexuality.* And we will want to do this in the usually desexualized world of advice-giving.

*See the next chapter and chapter 9.

THE PROBLEM OF ADVICE

Advice-giving is the paradigm of the knowledge utilization process both in private and public life. We want to explore the nature of advice-giving. Advice-giving will be taken as a transactive process involving two actors, some action that concerns them, and a world.

Advice is "an opinion recommended, or offered, as worthy to be followed,"* or a "recommendation regarding a decision or course of conduct."**

People who know something are constantly engaged in the activity of giving advice. Since most people know a great deal, advice-giving concerns most of us. One gives advice when one answers questions such as, what should I do?, what should I believe?, what should I feel? Advice-giving often takes the form of helping, information transmission, hand holding, as well as the more conventional forms of telling people you think so-and-so.

Advice-giving can be private. It can be one part of you self telling another part what it should do. Or it may be public. Even public advice-giving is frequently one person giving advice to another in a conversation. We also have cases of advice-giving where one person advises many, many advise one person, or many people advise each other.

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*(Barnhart, 1960, p. 19).

**(Gove, 1966, p. 32).

Advice is tailored by the adviser to suit the needs of the advisee. If the advisee is one person, the advice can be specific to him. In a large fraction of cases, however, advice is anonymous in character. This means that either the adviser and/or the advisee is anonymous. This is similar to the "anonymous client" problem of professional practice. At these times, little is known about one of the actors in the advice-giving process. Public policy advice often has this character. We shall see that the anonymity of at least one of the participants in the advice-giving process makes it quite difficult for all the participants, specific and anonymous.

Advice-giving, as mentioned previously, is a central activity in governmental life. Yet it is not well understood, and as we spend more and more money on advice-giving, it would seem to be worthwhile to understand it somewhat better. Finally, advice-giving is an activity which combines processes of understanding situations better and acting in them. Thus, the often made dichotomy between thinking and acting, between planning and implementation, between the mind and the environment, is bridged.

I am concerned about advice-giving because it is an activity that I do and I enjoy doing. I give advice to my friends, and I give advice to the public. I receive advice in a similar fashion.

How do I give advice? When I am most desirous of being helpful in my advice-giving, I am also most likely not to be making a straightforward argument. I try to present a picture of my advice which appeals to those to whom I am giving advice, to their imagerial worlds, and not only to their intellectual or cognitive faculties. One can paint advice. To give advice is to give love. The other becomes part of you. To be a successful adviser is to be a good lover or artist.

Advice given in such a fashion is not easily received. It is not linear, nor is it necessarily responsive to the cognitive style of those

to whom you are giving advice. They may accuse you of "painting" rather than being explicitly clear, and someone has said to me, "How can you talk to someone who is painting?" This is the problem that concerns me in this book. How is it possible for us to increase the number of levels on which discourse takes place so that those who are used to arguing in explicit, overt, ways may be able to learn to paint, without footnotes or page numbers; and those who are painting may learn to write well enough so that the recipients of their advice will understan

I have been worried by the problems of manipulation when painting. If you are giving advice as a painter, then you may be unduly manipulating someone's psyche without his being able to fight back. (Note that manipulation verbally by a sophistic method is not considered so worrisome today. Socrates' incantations fall on an uninterested crowd. Is that because people do not believe in the possibility of convincing someone by argument any more?) A broader question that may be asked in the context of a concern about manipulation is, whom are you affecting when you give advice? My guess is that the adviser and the advisee are about equally involved. Insofar as the adviser is deeply involved, then the question of his manipulating the advisee can be turned around with equal force. For if the adviser is to make a commitment to those whom he gives advice, then he may be involving them in risk, but he is also involving himself at a similar level of risk.

On a societal level, we encounter similar problems in advice-giving.

(1) Advisers frequently rely on their experience and their judgment, supplemented (but not determined) by explicit techniques of analysis, in giving advice. Those whom they advise may rely on the advice-giver's own experience or they may be entranced by more systematic ways of thinking. How are they to combine the judgment of their advisers with their own?

(2) How are we to convert our own knowledge into that which is useful for the rest of society? How can we convince other people that what we

know is the case, and how can they use what we know for social betterment. This problem appears in many forms. Organizational analysts have tried to describe how information flows within organizations and how the kinds of information involved in the organization determines organizational structure. Much of their concern has been with the reduction of intelligence failures--cases in which knowledge somehow does not get to the person who needs it to act better. Another way this has been formulated is in terms of what kinds of organizations can we develop that will make it possible for us to use the knowledge we have, to take the advice we wish to give, yet insulate the society and the advice-giver from the cases when he is very wrong. We want to pool our individual knowledge in such a way that the uncertainties and dangers in using it become social risk.

(3) How can we make what some people know be responsive to the doubts of others who may not have the same experience or similar intellectual apparatus. Science has provided one model for making knowledge public and available to doubt. But scientific practitioners require the doubters go through a substantial training period before they are listened to. Can we do better than this in our advice-giving procedures?

I hope I have made it clear by now that the question "How can we talk to someone who is painting?" is a good one and is important on a social level. We can rephrase this question in the form, "How can we make more democratic use of what is knowable?" Before we can talk about a scheme for doing so, we need to develop some ideas about knowing.

ABOUT KNOWING THINGS

I believe there is an experiential, wisdom-like, synthetic knowledge which is differentiable from other kinds of senses about the world.* This

*Synthetic knowledge is related to Polanyi's personal knowledge. The differences lie in: (1) I reject Polanyi's psychological reductionism -- tacit

kind of knowledge is more than the sum of a person's experiences and study that make it up. It is more because (at some level) our thinking mechanisms are given to us when we are born. Observably, what is more important about our (synthetic) knowledge is that we are willing to apply this knowledge to situations which are new and to which we have not applied it before.

Synthetic knowledge is a knowledge we claim to have when we are capable of judging situations. It is the knowledge acquired from experience and observation and involvement. It is the knowledge that resides in a self rather than in a thing. Synthetic knowledge can be successfully applied to new situations. That a person believes he is capable of using what he knows in a new situation, and not so much whether he is always successful, characterizes a synthetic knower. The legitimacy of holding this belief will be determined in a social way. Others believe that you can successfully use what you know in new situations. Still we have not defined what a new situation is, nor have we defined what are the criteria for success. For the moment, we shall leave them undefined.

I shall want to call those who use their synthetic knowledge to give advice and who are considered successful, competent advisers. The model for such a designation is that of linguistic competence. One problem that linguistics worries about is how do we understand sentences we have never seen before. One answer to this is that, within our minds there exists a grammar which interprets such sentences based on fairly general rules plus some of the more particular rules that we learn in everyday life.* It is suggested, in its most radical form, that we do not learn a language in the

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knowing and focal and subsidiary awareness are interesting but seem unnecessary and doubtful additions to his theory. (2) I am not concerned about the status of scientific knowledge useful in understanding a well defined phenomenon. I am concerned with advice-giving knowledge, which has both public accountability and verifiability.

*We "perform" in everyday life. "Competence" lies at the base of successful "performance."

sense of accumulating bits and pieces of the language, but rather that in some physiological way a grammar is actually stored in our brains. In the process of language acquisition, we stimulate this grammer to come forth.

For the moment, we do not need to accept this set of ideas about language. What I think is important, is that the questions that are stimulated by this approach are central to the understanding of how knowledge and experience can be used in the public realm. The analogy may be not exact, but I think it is suggestive when we say that we want to know why some people are better advice-givers than others, and what is the nature or logic of advice-giving. It is attractive to think that judgmental processes have a logic that is internalized in the physiology of our brain and that similar processes work for all advisers. But we do not need to admit these hypotheses. We just want to keep in mind the question, how is it possible for some people to give advice about situations they have not seen before?

Continuing the analogy, some questions arise naturally. The first is, What is the nature of the grammar of advice-giving? What is the structure of advice-giving? What is the structure of the knowledge we have that goes into it. A second question is, What is the nature of the interaction with the environment that makes advice-givers competent? What sets the cognitive mechanisms into action that makes ordinary people into judges. How do you teach people to be better users of their own synthetic knowledge. A last question is, In what sense is experiential data said to be a confirmation of our ideas about synthetic knowledge? What are the criteria which would confirm the existence of synthetic knowledge? How do I convince you of what I know?

I will explore these questions more fully in a later chapter. Now, I want to return to the problems of democratic knowledge and society.

THE LEVEL OF SOCIAL AND POLITICAL ANALYSIS

Advice is given in a social and political context. Our knowledge is of that context, and it develops within it. Need we restrict the analysis to the socio-political?

I have a choice between situating my discussion in the context of self and family or in a larger context of society, polity, or culture. Because the larger context influences the self, it may seem most natural to center one's discussion on that larger context. The difficulty with such a discussion is that the modes of conceptualization useful for discussing larger contexts may be unduly restrictive when we come to the self. Therefore, I will first deal with the self and then explore how this self plays itself out in a larger society. This approach will lead to different organizing ideas than those which started off with the society as a given.

The problems of politics are a thing unto themselves. Politics is depressing, hopeless, inevitable, and insufficiently utopian these days. Most conceptions of politics, whether on the right or on the left, are so compulsive, they do not allow a self to emerge. Historicism, as used by most political observers, whether it concentrates on the past or the future, seems to determine the self so strongly that to start out with a political vision is to give up too soon. If any political synthesis may give us hope, then it lies in the left, but for the moment the left has not developed a synthesis that works.

Not many, whatever their political style, are willing to face their selves, if their style is political at all. Marcuse is most inventive so far in this effort, but even he has stepped back from his originally deep commitment to the sexual and personal, to a sense of futility and a rejection

of sexuality.* (Freud so disturbs his dialectic that Marcuse, in the end, rejects Freud.) Yet Marcuse is one of the most hopeful of them all. His faith in reason as a creative and innovative force for a new society is genuine.

The so-called utopian left, which sees salvation in decentralization or greater complexity, abandons big politics altogether. The politics that is left is that of the small community and might be called human relations. That it is a utopian vision makes it possible to do so. But it seems too far away from the present to be helpful for those who need some programs for change now.

If we cannot now be adequately prescriptive about some ideal political picture involving persons, can we at least specify some minimal requirements for a society where advice-giving is seen in a non-technocratic way?

I discern two presuppositions about the social system that we will need to make. The first concerns the relationship of a group to the individuals who constitute it. Typically, this dichotomy dominates much of the discussion of the nature of the good society.** On the one hand, those who are most communitarian in interest are concerned with how we may eradicate the influence of individualism in American life. On the other hand, those who are concerned with individual freedom and who usually speak under the name of anarchism, are concerned with how we may simplify the world so that individuals may act responsively to themselves.

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*Marcuse's sexual nirvana is very different from Brown's. Brown never gets to deal with societal action or social history. He does escape some of the problems of historicism, but unfortunately does not deal with political problems. Also, he is stuck with a psychological determinism.

**What is the schizophrenia in our selves that makes a self-society polarity seem meaningful? Lichtman (p. 81), for example, insists on the dialectic aspects of self and society.

I think this dichotomy should be considered a false one; it is sourced in two different observations. Men who are concerned about community, concentrate their attention on the people who are not free to exercise their feelings or selves due to the necessities of making do. Men who are concerned about individual freedom are thinking almost exclusively in terms of the few extraordinary men who may well be held down in complex communities. I would argue that what is needed is the commitment to the communitarian values and at the same time a sense of how can we increase people's abilities to fulfill themselves. It is not apparent to me that they are exclusive.

My second minimal requirement on the society is that meaningful planning be possible. If the society comes to believe that some state of affairs other than what is should be, then it should be possible, at least some of the time, to achieve these alternate states. We shall return to this point shortly.

THE KNOWING ADVICE-GIVER

We have tried to explore the role of those who know in a society. I have pointed out how closely knowing is related to one's personal being. If knowledge is to be useful to the society, and is used in an advice-giving context, the personal source of this knowledge is both crucial and problematic. It is crucial since many public policy problems are not well formulated and require that people make informed guesses. It is problematic since we exist in a democracy of sorts, and we would hope that others should be able to criticize and argue with the expert's knowledge. Yet it resides in their selves.

I have suggested that a resolution of this problem comes when we consider our selves, all of our selves, as sources of knowledge. Then we may inquire of each other's selves. The expert, rather than being shielded

by his credentials, is provided with communication links with others through his self. This is a substantially different approach to public knowledge than that offered by conventional science. What is the guarantee that it will work? What are the mechanisms that we may use to realize its potential? I would argue that planning provides an appropriate vehicle.

PLANNING: A MODE OF ACTION FOR THE KNOWING ADVICE-GIVER

Planning interposes action and thought. It interposes action by the self and thought by the self. When we plan, we are modifying our actions by what we know of the world. Planning is an activity itself. When we decide to plan, then we may alter the kinds of action that planning involves.

Planning is more conventionally defined in terms of knowing about the world in which you are acting, and having a sense that is future-oriented. Some suggest that planning must have a normative element, a prescription of what should be; others emphasize the strategic, systematic programmatic ways of going from here to there. These represent specific cases of planful activity, and are consistent with the first definition.

Planning is not viewed favorably by most people and they are upset by the prospect of planning. Why is this so?

They are upset because they equate planning with the oppression of the individual by society. We may over-plan, but it seems to me that in general the freedom provided to people by planning can be much greater than the freedom left to people by not planning at all. They are also upset by the seemingly cold (highly distantiated from man) techniques that are called systematic planning methods. I would rather not junk planning, but modify or discard some of these methods and inform planning practice by the self and the heart.

I believe the alternatives to planning to be infinitely less desirable than not planning. If we allow only some people to plan, and especially those who have substantial coercive power, then what about those who do not have such power. We might allow tradition to operate, and just continue acting in the way that we did in the past. Presumably, planning would not be necessary in that case. We can no longer afford such a luxury, since tradition does not operate very well in our society. No longer do we learn from our elders, but we learn from our children. Lastly, we might just act on impulse. In a rich society we might be able to afford to do exactly that. Unfortunately, most rich societies have developed techniques by which impulsive action could result in the total destruction of the society. More importantly, my guess is that the expressive self, the highly articulated individuality that we possess, is not brought out best when we act only on impulse, but is often better articulated when we combine our impulses with experience in a systematic way.

Planning can be a process by which we make room for the self to operate, rather than a way of holding back our selves. Planning will not permit unrestrained action but presumably that is not the desired end of most social activities. The dangerous consequences of "planning for non-planning" (or planning for freedom) are real. If we say that there are some times when everybody can "run free," then their self-consciousness at these times may leave them more inhibited than free. Still, if we do not try to plan for ourselves, even at the most rudimentary level, our uncoordinated actions may hurt us even more.

Planful action, even with its disadvantages of slowing down what we do, provides a way in which we may use our selves in a public arena with some positive effect. This is sufficient recommendation for trying it out.

ADVICE IN THE PUBLIC ARENA

We return to our original question, "How can we make more democratic use of what is knowable for public policy purposes?" My guess is that as we learn to use our selves more in the public arena we shall come closer to understanding and acting out the answer to such a question. At the same time, our selves should lead us to a larger sense of what science and systematic knowledge is all about. I would hope that, as a result, some of our most central questions concerning expertise in society would be resolved in a new way: credentialism would be reformed, our senses of others and our selves would replace more "objective" criteria for the success of social programs, our studies of society would represent themselves more fairly and more usefully to the public, and that expertise would come to mean something that is more practical and honest to the public.

Credentials, especially in the form of university degrees, are not suitable ways of choosing one advisor from among the advice-giving population. The post-industrial model of society, which insists on the significance of theoretical knowledge for understanding the world, overestimates our understanding of the social realm in a theoretical, well-verified, way. Those who understand the "scene" may be people who are well credentialed, but there is no guarantee that credentials provide understanding. Conversely, those who do not possess credentials may have a very good understanding of the scene. Today, this point is readily conceded when we talk about understanding the ghetto. But I wonder if this is not also true in many other situations. The intuitive grasp of many social collectivities possessed by the members of those collectivities is rarely tapped when public policy for these groups is to be made.

Most of the credentialed operators argue that those who are involved in the situation will only view things in terms of their self-interest and therefore they are not reliable observers of their own worlds. But credentialed operators are not more reliable than locals. For credentialed observers, as a social group, have their own interests which frequently are incongruent with the interests of any other group in the society. The credentialed observers come to power largely on the basis of presumed technical capability and not because their political values are considered desirable. We must be careful not to let their technical capability hide the fact that we may disagree with them in terms of aims and values.

Note that I am not against systematic understanding of our problems and concerns. Rather I am for a strategic sense about what is knowable and an economic sense about how this information ought to be gathered. In terms of the logic of most credentialed observers, who might be called systematic analysts of situation, objections to using the intuition and self-knowledge of people about their own situations is not only natural but necessary. Systematic analysts have made us aware of how important criteria of success are in evaluating what we are going to do. They have called for statements of objectives of programs and policies so that we may better evaluate those programs and policies and change them accordingly. Yet they have chosen as a source of such criteria a rather limited set of standards. They never deal with our selves except in crisis situations and then with simplified selves at best. I would think that it would be very important that the criteria for performance of programs and policies be phrased, in part, in terms of how people feel about the consequences of such policies, and how their internal imaginal worlds are influenced by such actions. It is probably just as important to plan for meaning and self, as it is to plan for more solid nutrients.

This attitude is likely to lead to a substantial change in the general tone of most studies of society that are meant to guide us toward

public action. If these studies were to emphasize the personal interest of the studiers, and admit their teleological orientation (they are trying to make a point), then this overt behavior might make studies more usable and more acceptable than conventional ones. Conventional reports are personal and teleological in orientation, but claim not to be. Most sophisticated users of such studies know what goes on and it seems to me that it is not worthwhile to maintain the duplicity involved in such attitudes.

The people who shall be writing these reports will have to be very different than those who are being trained today. They will have to realize that their expertise comes from both their technical knowledge and from their selves. They will no longer view themselves as repositories of knowledge, as walking computers or libraries, but men who are constantly exercizing their judgment. They are political men. In a context of public action, and knowledge that should influence public action, I think this is the most appropriate stance.

I am talking about a science, a systematic understanding of the world, that is beyond conventional science, and consequently I am talking about a society that is beyond the post-industrial one. In a beyond post-industrial society, knowledge of self will be as significant as theoretical knowledge of the outside world. As a result people will want to learn as much about themselves as they do about their environments.

This attitude is likely to lead to another kind of change which may be the most profound of all. The kinds of questions we choose to ask at any time are intimately related to questions we must have internally about ourselves. It will be very interesting to see what kinds of questions people will want to ask when they are centrally concerned with their selves. We shall look at some examples of this in chapter 3.

BIBLIOGRAPHIC NOTES

Marcuse, and Robinson (as a secondary source), provide a discussion of both politics and sex that I find useable and important. Whether Marcuse is "right" is not so significant as the questions he forces one to think about. Sennett and Goodman offer some visions of a new society.

Judgmental operations have received substantial thought in recent years. Vickers has written of judgment in organizations, Wilensky on intelligence in organizations, and Goffman, in his unique way, has explored the process by which personal judgment becomes socialized risk. Sharon Kaufman and John Friedmann gave me the idea of calling what I am writing about "advice-giving." Wilensky's work on organizational intelligence has influenced much of my analysis.

As to the personal status of the knower, Polanyi and Maslow have thought most deeply of these questions in recent years. Chomsky has inventively converted a linguistic theory to a model for knowing and provides another useful set of questions to think about.

In an appendix, I have put in a brief note on planning by Susan Krieger. Jack Seeley has thought most perceptively about the people problems of planning. John Friedmann has concerned himself about planning in strange places. And Margaret Mead worries us all about whether we learn from the past or the future.

Daniel Cahn started me thinking about painting.

THE PROBLEM OF ADVICE-GIVERS

The first chapter concentrated on knowing and science; this one is about being and science. I want to explore some important characteristics of man's existence in his environment and their implications for how he may act. First, let me sketch a picture of our world.

Man exists in his environment and interacts with it. It is difficult to draw good boundaries between man and his environment, especially if we are concerned about the nature of that interaction. Man is alive and not particularly mechanical. (By mechanical, I mean an object with a fairly narrow and well-prescribed range of actions and alternatives, and with a high degree of predictability about its behavior.) Persons are responsible for their actions and responsive to the world around them. What is most remarkable is that it is likely that the world also interacts with its environment, the people in it, is alive and not too mechanical, and is actually responsible and responsive. The world is the other people with whom a person interacts, and their images of what is not human.

Given this picture, I want to ask: How should a man act socially to improve the sense which is used to build and control his actions, and how should society, a very organized part of the environment, act toward such men?

WHAT IS, AND PROBLEMS WITH IT

The picture I have painted is not universally accepted, by far. Most of our controlling images of responsible public action, informed by some sense about the world,try to minimize the interaction of a man with his world, while giving him control of it. A brief examination of the professions of knowing and policymaking will illustrate what I mean and also point up the difficulties with this position.

Science, as conventionally and not so conventionally conceived, minimizes interaction best of all ways of knowing. Our sensuous involvement with subjective facts and a valuational attitude towards those facts is highly controlled and, asymptotically, is to be expunged, when we do science. Our selves become aliented from praxis either by excision of self or by over-specification of the kind of involvement. Most importantly, the concept of good action, a patently political and value oriented term, is not considered. I am not saying that science ought, necessarily, to be involved with questions that it chooses not to approach, but I am saying that science may have to claim for itself a rather narrow area of concern, and leave other questions to other approaches.

A similar alienation of self from praxis is found in the social role that is prescribed for professional knowers. Theirs is a problem of facade. Their status comes from a seeming omniscience and self-control; they may seem knowing and competent about the general area of which they have some specialized technical knowledge. For example, doctors who know something about disease are said to be

specialists in health, and lawyers who know something about manipulating a legal apparatus are specialists in justice. This disparity leads to a number of crucial difficulties. A commitment to professional ideals, which includes the maintenance of a role model, makes it very difficult for inventions that are a product of the personality of the professional to become part of his practice. If his commitment is to the maintenance of societal expectations of a professional, this should not bother him. But if he is also committed to societal change, then he must step out of his professionally prescribed role in order to effect change even within his field of professional expertise.* As for his relationship with his client, his maintenance of an air of all-knowing and large scale competence contrasts starkly with the client's position of total ignorance. The falsity of both images forces unnatural behavior and an unresponsiveness to one's own person by both client and professional. A similar unresponsiveness is found in most social policymaking.

Social policymaking involves collective statements about action and statements about social or collective action. In order to make social policy we have to have some sense about the society of individuals. What is the nature of their collectivity? Social studies over the years have provided some conceptions of these. Most of them seem too unrealistic, in one way or another, to be useful for understanding social action by changing individuals.

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*This is a problem for all theories that try to understand change and disruption as contrasted to stasis and order. A theory that can explain order will not necessarily explain, by negation or residual categories, situations of disorder. Such powerful, complete theories are rare in the social studies. They fail a test of negation and it seems to me that to hope for the ideal may be unrealistic considering the complexity of social situations.

If I understand correctly, the problem with these conceptions lies in their attempt to make for consistency of style of knower and society, not a fault of itself, while assuming some overly narrow pictures of man.

By inquiring of the social meaning of micro-studies which emphasize individual autonomy, we may get hold of the problem. We may have a picture of man which is highly mechanistic, derived from a scientific sociology and a deep concern with the regularities of society, associated with a larger conception, of a complex post-industrial, knowledge-based social system. An alternative view may be in terms of a "sexualized" man who has very complex sets of action bases and a great deal of invention in his behavior. This man exists in a rather different kind of world which can be described as a new tribal environment.

It may be comfortable to have these neat views of man matched with their corresponding societies, but I do not think this approach works. Technē is with us and so is sex. We have a post-industrial and tribal society, and scientific and sexualized actors in it. Little is known about what good public action means in this situation. Good action is not scientific action, for science has little to do with much of people's lives, and good action is not pure expression, since so much of the world is too coordinate to work that way.

The problem is something like the following. Our selves are alienated from praxis, our ostensible perfection does not allow us to be fallible, and our private knowledge does not easily inform social learning. Given this problem, we would expect a number of answers to be offered which minimally disturb the social system. I want to look at some of these.

SOME ANSWERS WHICH DON'T WORK

Each of the popular prescriptions for resolving the dilemmas presented in the last section seems to have a substantial flaw. More significantly, none deals with the central problem as I have presented it.

Tribalism, and the formation of groups which can achieve the intents of individuals, is one way to avoid and ameliorate the alienation of self from praxis. A tribe forms a sufficiently powerful collectivity to do things that individuals cannot do themselves. Unfortunately, there is little useful social conception in this image. Tribes are not primitive, but they are certainly not complex. It is true that the relationships among the members of a tribe can be complicated, but their complexity is not of the character of current technical activities.*

Another alternative is government, in which a society simulates individual behavior and has a will and a self-consciousness of its own. One describes government as being involved in societal guidance and self-examination. This analog may be useful for synoptic description, but it rarely prescribes how man exists within a government. That a society "responds" is a reification of a set of individual actions, and little is said about the transformation of individuals or how these transformed individuals make for social response.

An alternative view of government, in terms of competing interest groups and power conflicts, is really no more adequate than the cybernetic model. It may provide a stage on which the new man

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*Making the distinctions between the various kinds of complexity is a research problem itself. See, for example, the collection edited by Todd LaPorte, to be published.

can perform, but there is no reason to believe that the setting is especially appropriate for him.

A more sophisticated version of government is synoptic planning.* Planning requires that specific models be developed for freedom and choice. This conception of planning is quite conventional and difficult to apply. There is no accepted model for how individual choice is to be weighed systematically against social choice.

Rather than reorganize the structure of the larger social process, we might try to reorganize the process itself.

We can all become policy-makers and somehow use ourselves in figuring out how the society should act. Everybody wants to use his own feelings and ideas in reforming the world. There is very little sense of technique in these ideas and there is no reason to believe that anyone but a genius is going to be able to be effective in this activity. More significantly, there is little consideration of the meaning of these ideas and answers in the political and social realm.

A final answer that is sometimes offered is some form of existential public action. A public interest exists and can be formulated to incorporate all of our wishes and solve all of our problems. The difficulty in defining such a public interest is the paramount problem of this conception, however, and, I believe, its fatal flaw.

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*Models of planning concerned with reform or incremental change are excluded since they, respectively, do not prescribe for individual action specifically or are subsumed under the model of government just proposed.

All of these ideas, which are represented in much of the current writing about failures in American society, seem in error on several grounds. They imply that changed individuals will result in a changed larger society, yet no mechanism for doing so is offered. At the same time, their images of men are not very rich and they leave out their selves and their bodies. A richer social conception is not provided either. By treating men in fairly narrow ways, as all science or all beautiful, the variety and ambiguity of man never makes it through to the picture of society. The man-society interface is so sharp that it never gets defined or explored. We might be able to make a different approach to the problem by returning to our original question about how man exists in the world around him.

FOUR CHARACTERISTICS THAT MATTER

The way we describe our existence in the world determines how we come to social conceptions about it. I want to outline here a description of our existence in the world which will provide for a fruitful attack on the problem of our selves and good action. I shall pose the discussion in terms of the roles and possibilities of the man who is giving advice to improve action -- an advice giver.

The advice-giver exists in the world and is a part of it. His own realization of his role depends on that existence. Though he is an expert, he is still a quite ordinary person. Like everyone else, his interactions with others determine to a large extent his own nature, and his body and physical self determine how he learns and knows things.

The advice-giver is a feeling, sensuous, and susceptible creature. His world is peopled by similar persons, and his historical

BIBLIOGRAPHIC NOTES

Wilbert Moore provides a recent review and discussion of the sociology of the professions. The literature on post-industrialism (see chapters 9 and 10) is also helpful.

For conventional solutions to our dilemmas see: Sartre on tribes, Etzioni on societal guidance, Duhl on planning, and Sennett on planners and policymakers.

Natanson's discussion of Schütz's work is the basis (in detail) for my discussion of social man. Warnock on Heidegger is useful. Discussions of symbolic interactionism are found in Blumer and Denzin. My discussions of these points with Patricia Bourne were quite helpful in formulating what I wanted to say. Merleau-Ponty on the body is especially good. Dreyfus's discussion of him in the context of artificial intelligence is illuminating for me.

Robinson did a good job in getting me into Marcuse and Reich. Brown speaks for himself. And Freud is part of general culture. Nagel's discussion of sexual perversion is a nice combination of phenomenology and sex. Rieff's discussion of the therapeutic has also been helpful to me.

Chomsky gives a good introduction to his ideas in Language and Mind. Useful criticisms are to be found in the book edited by Hook.

Polanyi is one of the least mined authors, and has been useful to me.

Some of Marcuse's followers(in the book edited by) provide the inspiration, though not the ideas, for my discussion of radical change.

STORIES

WHY STORIES?

I want to give you a feeling for how I have come to consider the problems I am writing about. The best way of doing so is to tell you some stories. Some of the stories are personal, but all of them are personalized in that I have tailored them to meet my current needs. They are not meant to be journalistic accounts. Nor are they case studies, for they are not meant to be complete, or as exercises for the reader. No, they are just stories about me and the world.

Your reaction to these stories may be on several levels. Some of them may irritate you, since they may get at your more cherished beliefs. Others will suggest aspirations, hopes, or questions that need to be answered. For me, the stories approach some important questions about the self in the public policy-making world. What is the nature of what people know? How do they come to know it? How do others know what you know? Where does such a conception impinge on public action?

Stories do not answer questions, and stories,alone,do not pose questions. But, if after reading the stories,some of them make my questions seem more real,then that will be sufficient.

The kinds of stories that inspire this essay are particular. They are not about intelligence failures in large organizations or cases where people did not know enough. Rather, all the stories are about people who admit that their selves are involved with what they know.

IDAHO

The story that follows represents my first attempt at getting at the problems I want to consider. Like most events in life that leave a residue, what took place was not so important as the significance that one gives to them. The question that was most on my mind is, where in our culture can people work out the interface between feeling knowledge and other kinds of knowledge of the world?

Early in the events at Columbia University in April of 1968, a group of students were ready to attack some of the "occupants" of one building and evict them. A confrontation was avoided and eventually I spoke to one of the student attackers. He was a junior and a member of some of the athletic teams; he was a "jock". I sensed that he felt out of place in the university environment. He was bright and interested in his studies. But the whole scene was not his.

We talked some more and I learned that he was from Idaho, and that he had a great deal of sensitivity about nature and the big outdoors. He had a feeling for what was going on out there in Idaho. He was a "genius" about it. He was anxious to get a good education and he was especially disturbed, considering how much tuition he was paying, that people were preventing him from getting one. Somehow, the political situation at Columbia did not seem related to his education. You went to a university for an education, right? And education came in books, from professors, no? Essentially.

When I asked him what he wanted to do, he didn't know. He didn't know what he was going to do when he got out of college. He'd like to bum around and travel, but I suspected that the draft would get in the way of that plan. Somehow, the college that provided him with an "education" had not provided him with good models for a future life style.

What can we learn about our situation from the story of an Idahoan in New York? I think we can learn a lot if we compare the scene projected by this story and the scene projected by the post-industrial model for society. It has been pointed out that among today's youth there is a conflict between those who are asking the question, "How can we do things?" and those who are asking the question, "Why do we do them?" The first group is frequently called the technologically oriented group, the group that says if we work hard enough we can find techniques for doing what we wish to do. We can do almost anything, in fact. The second group, which is often called the humanistic one, is asking why should we do this, what are the possible alternatives, what might we do instead? The post-industrial image, in ignoring the humanistic aspects of life, cannot be a complete picture of the future.

However, there is a better distinction among the youth, one that tends to make technological and humanistic points of view seem almost identical. Both views are intellectual in essence, in that they deal with ideas. What they ignore is a non-intellectual, feeling, mode of perception, including faculties related to the interpersonal level of communication. I include our feelings about nature and our position

in the eco-system. The logic of feelings may be very different than the logic of ideas. The real aim should be an integration of feelings with what is usually considered the non-feeling aspects of life.

I suspect that the lacks in the post-industrial model for the future will not only be felt by Idahoans.* Similar problems are faced by women, families, older people, and those who are not in the business of information-processing for the society.

Urban society, as it is today, values ideas and their interactions much more highly than senses and feelings and their relation to our lives. It has not been very easy to include feeling in the "design" of our cities. Sennett has described this situation in terms of an adolescent picture of city design which calls for purity, versus an adult image using complexity and ambiguity.

Idaho can tell us something about possible alternative futures for our society. A future with everybody knowledgeable about intellectual things, and power related to knowledge, as power was supposedly related to money and to corporations, may not be a useful one for a large number of people. They may well want to face other problems, equally challenging, on a more personal level. For example, we may all become women and not men in the sense that women tend to deal with integrative functions and men with analytic ones. A point of view

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*Jill Conway, 1970, sensitively explores this when she says, "... the expressive, intuitive, and emotional sides of the human personality were seen as "soft" aspects of feminine irrationality rather than as masculine intellectual qualities... Part of the rebellion of youth today consists of affirming that intellectual excellence can be demonstrated by intuitive and expressive achievement in a way that has equal validity with the rational problem-solving of the older curriculum." (p. 48)

which does not emphasize power, and knowledge for power, but does emphasize personal understanding, may be more in consonance with the survival of the world.

PERSONAL INVESTIGATORS

If we believe that it is worth knowing something about our environment before we act, then we may ask, what are the most useful things to know about the effects of public policy if we want better action. Some public policy areas have received substantial systematic attention. These include defense, foreign affairs, agriculture, economic policy, and housing (a social policy). I want to discuss housing policy a bit more so that we may understand Clare Cooper's reaction to some research she has been doing.

Housing research has covered a number of problems related to providing shelter for people. Work has been done on the economics of financing the housing market and on how national policy could be formulated to increase the housing stock. Efficient and expeditious techniques for building have recently been emphasized. Substantial work has gone into the legal problems of maintaining a housing stock and the relationships of tenants and owners. And some work has been done on how people feel about the housing they live in. I will be most concerned about the last kind of research.

If we know something about how people interact with their houses, then, presumably, we can design better houses, that is, ones that are more appropriate to people's needs. This kind of research uses survey techniques, often with open-ended interviews, to find out how people use

their houses, and how satisfied they are with them. Frequently, the theoretical basis for the investigation is in terms of needs for housing. Rarely is a question asked about how housing meets people's needs (for security, for play, for expression, etc.). These concerns about how people's needs are being met by houses have been fragmentary and have not affected the way systematic research on housing has been done.

Clare Cooper has done some of this research. Her concern has been about user needs in housing, and how architects' conceptions of what is needed differ from those of users. Her work is good and is exemplary in the field. But she is changing the emphasis of her research. If persons are not unchanging and investigate themselves, they are also investigating their work. As Clare has come to greater knowledge of and sensitivity to her self, she has come to realize that, besides defining user needs in terms of housing, it is important to define these needs in terms of the needs of the users.

This may mean that we have to get at some of the psychic needs of users. A house is no longer shelter in some simple way, but becomes part of the self. One then begins to ask questions, not about construction or economics, and not even about whether the bathroom is of the right size, but about whether the house is an appropriate symbol for what people want it to be. This can turn into a cartoon, and houses can become as much symbols as automobiles were supposedly in the 50's. But this need not be so. Public policy for housing can become more responsive to the symbolic needs of people without becoming a sham for foisting poor housing on them.

It is not likely that one would come to such a conception of how housing quality should be investigated purely from doing conventional investigations. The investigators' self is a source, or a model, for the self she is studying, and the way in which she may get closer to some aspects of the interaction of people with their world.

John Seeley has discussed the nature of personal involvements and sources for research interest with honesty and intelligence. He says, "... every sociologist I have met before or since is recognizably playing out in his science a very complex play, intimately related to, if not ultimately governed by, the original drama experienced and played out by him in his 'family of orientation.'" Seeley suggests that his interest in social science comes from a desire to make sense out of his parents' behavior toward him by showing that they lacked adequate information (rather than their being wicked or mad).

PROFESSIONAL GUESSERS

Stockbrokers and horse-touters are professional guessers. They give advice in situations which are fairly risky, and for which limited explicit information exists. They know something about the history of the situation they must predict about.

This knowledge is experiential and interactive. You cannot use the performance of one horse, on one track, at one time, to tell you much about how the horse will run in another race. You must know how the horse responds in a complex environment. The same is true of a stock. The guessers also know something about how people bet. They have some sense about what the public may do in various situations

considering betting odds and past history. They know something about the system of guessing in a complex situation. They might know very little about horses or stocks, although, usually, substantive knowledge about these is important.

How do we evaluate their performance? Some people may evaluate performance in terms of their probability of predicting correctly. Those who are a bit more sensible, will want to look at how much money has been won or lost if their predictions were followed, for they may be wrong on small bets and right on large ones. Others may suggest that it is important to make a big single win, and less significant to lose small amounts of money over a long period of time. Some sort of discounting over time will be needed to evaluate performance. And some evaluate the performance of the advisor purely on the basis of how they feel, which may be a representation of some of these criteria.

Thus we see that professional advisers in chancy situations will be acceptable to some people and not to others. Advice-giving depends as much on who receives the advice as on who gives it.

ORGANIZATIONAL ENVIRONMENTS

If we need to know about our selves, we also need to know about other selves. Public action demands that we understand other people. Yet much of the concern about understanding our selves has been much more narrow in its emphasis. Psychoanalysis and psychotherapy are concerned mostly with the self of the patient. A notable exception is family therapy. When understanding of self and the needs of a person are extended to larger realms, there are still unnecessary and frustrating limitations as to whom we should understand.

The field of organizational development illustrates this point. It is concerned with making organizations function better. Currently, it is believed that a better understanding of how one interacts with other members of an organization will result in better organizational functioning. What is surprising about this belief is that it ignores the influence of the environment of the organization. Perhaps for lack of energy, little emphasis is put on understanding how persons interact with those who are external yet relevant to the organization.

If the organization has a psyche which is related to the selves of the organization's members, then it may be possible to talk about the psyche of the environment. Rather than deal with the environment as a set of behaviors to which we respond, we must deal with the environment as a world composed of individuals with selves. This is a natural extension of Clare Cooper's concern about planning for housing.

Sometimes an effort is made to understand the environment on the psychic or self level. The State Department has commissioned studies by psychiatrists of Khrushchev and other "adversaries" of the U. S. government. One would hope that these studies would increase our empathy for our so-called opponents, and at the same time make it possible for us to act better in our self-interest.

If we understand why the behavior of other individuals and other sqcieties is sensible in terms of their internal organization and imperatives, then we may act toward them in a way that is more in accord with their selves.

PLANNERS

Compared to the individuals I have discussed so far, planners do not come out well. They are constantly manipulating the desirable images of society and suggesting possible means for achieving them. Yet they do not talk in terms of their selves, but in terms of technique and efficiency, imperatives that have an un-personal justification. However, planners must have feelings like this fellow from Idaho, and they all must have psychic needs, and they all must be guessing, and they are all dealing within a world of people. Yet their response is inadequate.

Planners have been working quite hard to seem scientific, objective, and systematic. But in doing so, and thereby ridding themselves of certain unexamined and undesirable postures, such as a beaux-arts tradition, they have not opened their arms to themselves again. Their desire for purity has made them excessively anal. If we are to use planning as a model for a way of going from where we are to where we might be, then we shall need a different planning model than the conventional one. This is what I propose to consider in the next chapter.

BIBLIOGRAPHIC NOTES

Clare Cooper has written of her attitudes toward the house and a Jungian approach to it. Jack Seeley's writing on himself is rare in the world of sociology. Most of the time, in writing about their work, social scientists talk at the bare surface of their selves (see Hammond).

Horse-touters are discussed in Cohen on behavior under uncertainty.

Bennis and Schein discuss their views of organizational development.

Hall's work on the silent language in communication was originally done for the State Department. Margaret Mead has studied Russian character at a distance, and the State Department has commissioned studies of Khrushchev's character at a distance.

EXPERTS

If we want to develop a critical stance with respect to the status and roles of experts in society, we need to know something about their current status and roles. I want to make some distinctions about knowers and society and the types of roles that are possible in social situations.

I will not give an exhaustive review of the literature on expertise at this time. The references at the end of the chapter provide these.

WHO ARE THE EXPERTS?

There are many people in a society who know a lot about some specific problem. A few will know so much more than others (who know about the subject at all) that they will be given special titles. One that is most often given to them is that of "expert". The designation of expertise is a social act and depends on the consensual agreement of others that the expert really does know a lot about which he claims to be an expert. Not only is the expert socially acknowledged, but this acknowledgment is based on performance. The substantial probability of superior performance in the future is causally related to performance in the past.

Although experts must be socially designated and personally competent, they may not necessarily support current societal policies. They may take a critical stance toward problems, rather than directly

addressing themselves to solutions. Critics may or may not be part of the social establishment. If they are, they may be considered wise men. If they are not, they take the roles of intellectuals or artists. In these roles, they are explicitly distancing themselves from others in the society, most strongely from experts who are pursuing the currently acceptable societal goals.

The antithesis of the intellectual is the technocrat. He rarely questions goals and problem statements, but is expert on figuring out what to do within a constrained area. We can be surer of the competence of a technocrat than that of an intellectual, artist, or even an ordinary expert. Technocrats have prescribed areas of knowledge. Usually there are prescribed good behaviors and good performances that are explicitly known.*

I shall be concerned with a very special kind of expert in this discussion -- policy experts. They stand somewhere between intellectuals and technocrats. Policy experts try to figure out statements of general action. They deal with problems that are poorly defined. They are concerned with contingencies and unpredictable consequences as well as with a policy-maker's action.

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*If there were no technocrats, ordinary societal life could not take place. A commitment to technocratic expertise is almost fundamental to a commitment to complex social life. Those who complain of technocrats usually are complaining that they dislike the extension of technocratic expertise outside of the ordinary behaviors of life. That "ordinary behaviors" is a difficult term to define is certainly one source of the argument between those who see technocrats everywhere as a danger, and those who see them as the necessary basis for modern life.

It is often said that the time horizon of these experts is rather long since they are committed to large statements of policy. I have a feeling that the definition of an expert in terms of his time horizon will not work however. Politicians,who are claimed to have short time horizons, can have them only because they can redefine problems to suit the moment, while ignoring the consequences beyond their term of office. Experts, if they are committed to the politician for whom they are working, can have the same horizon as their boss. On the other hand, the ethos of academic and scholarly work implies a time horizon which is quite long and so experts may have that time horizon, implicitly or by professional commitment, also.

Another characteristic of policy experts is that they are committed to public action. That their expert opinions, judgments, and actions will have to face those of a much larger group which is not under their control, is significant. They cannot indulge themselves much more than the public will allow.

Finally, these experts are political. They are concerned about power in public action. In that sense, they cannot be fully committed to "right" solutions outside of the frame of power and politics.

Where do these experts come from? A very large number of them have academic training. They are trained as "educated men," as scholars, and as other professionals. Some of the most important experts today are lawyers and economists. Lawyers are chosen for their familiarity with

political and administrative processes and their capability for working on publicly known problems which have time constraints. Economists have been chosen for their special technical expertise. In the future, the nature of the experts of a society will depend on what are considered the significant and relevant knowledges for good action. One of the functions of my discussion is to suggest that new kinds of experts will be needed if current trends have anything to do with the future.

People become experts because they are smart, intelligent,or especially sensitive. If they have good contacts in the world of expertise and in the world of conventional power, they may also become experts. Another possibility is that they are good intermediaries and can develop links between disparate interests and groups. In all cases, experts can answer questions as they are posed or, if necessary, repose questions in a satisfactory form, and then provide answers to them.

THE MILIEU OF EXPERTISE

Though experts are obviously people who are knowledgeable, they often do not play roles which primarily emphasize their expertise. They may act as professionals, whether doctors, lawyers, or academics, where their commitment to service is a primary component of their self-definition. That they know a good deal about a situation is only important insofar as they serve their clients' needs.

An alternative definition is in terms of politics. The expert may see himself as dealing mainly with power, with deciding who gets what, at what time, and in what degree. The expert may be a leader or a follower, but the substance with which he deals relates to power.

Finally, the expert may actually say that he knows something, and that is really his business. He just is very knowledgeable about a certain field and he is quite willing to help someone with it. This may be a mystification of his real role but it is important to note that he thinks of himself in that way.

The significance of the choice of public stance, whether professional, political or expert, is that it determines some of the environmental influences on the expert. Does he respond to his colleagues and to his client, to the exigencies of power, or to the needs of truth? Plato and Machiavelli present opposite views of the public style and private commitments of experts. The following two quotations illustrate the difference. Plato is committed to ideas, to the adviser and, finally and most importantly, to the truth. Machiavelli is concerned about power and even when he is prescribing actions for the advisor, his commitment is to the advised.

> One who advises a sick man, living in a way to injure his health, must first effect a reform in his way of living, must he not? And if the patient consents to such a reform, then he may admonish him on other points? If, however, the patient refuses, in my opinion it would be the act of a real man and a good physician to keep clear of advising such a man -- the act of a poltroon and a quack on the other hand to advise him further on those terms. The same thing holds in the case of a city, whether it have one master or many. If a government that proceeds in orderly fashion along the right course, seeks advice about its advantage in some matter, it would be the act of an intelligent man to give advice to such a community. In the case, however, of those who

> are altogether astray from the path of right government, and will by no means consent to go on the track of it, who on the other hand give notice to their adviser to keep his hands off the constitution under penalty of death if he disobeys, and order him to cater to their wishes and desires by pointing out the easiest and quickest method of attaining them permanently, in that case I should think the adviser who consented to such conditions a poltroon -- the one who refused, a real man.*

> The advisors of a republic . . . are undoubtedly in a difficult position; for, unless they recommend the course which in their honest opinion will prove advantageous to that republic . . . regardless of consequences, they fail to fulfill the duties of their office, while, if they recommend it, they are risking their lives and endangering their position, since all men in such matters are blind and judge advice to be good or bad according to its result. Nor do I see any way of avoiding either the infamy or the danger other than by putting the case with moderation instead of trying to force its adoption, and by stating one's views dispassionately and defending them alike dispassionately and modestly; so that, if the republic accepts your advice, it does so of its own accord, and will not seem to have been driven to it by your importunity. When you act thus, it is unreasonable for a people to wish you ill on account of your advice, since it has not been adopted against the will of the majority. Danger is incurred only when many have opposed you, and, the result being unfortunate, they combine to bring about your downfall. And, though, in the case we have taken, there is lacking the glory which comes to the man who in opposition to the many, alone advocates a certain course which turns out well, it has two advantages. First, it does not entail danger. Secondly, if you tender your advice with modesty, and the opposition prevents its adoption, and owing to someone else's advice being adopted, disaster follows, you will acquire very great glory. And, though you cannot rejoice in the glory that comes from disasters which befall your country, it at any rate counts for something.**

A significant characteristic of all experts, whatever their commitment, is that they know much more about a subject than they can convey to someone else. "Expert" is derived from the Latin for "having

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*Plato, Seventh Letter, in Hamilton, 1961, pp. 1579-80.

**Machiavelli, Discourses, Book 3, Chapter 35, as quoted in Gorham, 1970, p. 176.

tried." The experience of "having tried" is rarely explicitly reducible to a finite list of statements. Also, the expert cannot assume that he will be listened to, or that vital roles will exist for him unless he makes himself needed. Rarely are people so confused that they will be willing to call on an expert, without his having convinced them that the expertise would be useful. This is why professional organizations aim for public licensing and legitimation of the expert role of their members.

In that experts are concerned about control, truth, and the mediation of differences, there are others for them in their environment who have coordinate roles with respect to these aims.

The control that experts exercise over some other is a continuum from that of the client relationship in medicine and law to a highly political position where the expert is in the hands of whom he is helping. With respect to other experts who are concerned about the truth, the expert has to contend both with his colleagues and his debunkers. His colleagues may be his supporters, but they are always sensitively attuned to the truthfulness of all of his statements, those of little consequences as well as big. His debunkers are not similarly committed to the same truths as he is. The best the expert can do is effectively answer their replies, but it is unlikely that he will ever be able to satisfy them. As a mediator he must deal both with ideologs and rule followers. Ideologs know what they believe and are not likely to be influenced by his expertise, while rule followers know what they are doing (bureaucrats) and see little reason to believe that expertise is useful or relevant to their own tasks.

The expert is constantly between the client and the powers that be, his colleagues and debunkers, and those who believe and those who know exactly how. These tensions determine the social manifestations of experts in their formation of professional societies, in their extreme commitment to certain forms of truth finding, and their explicitly anti-ideological commitment.

It is clear that the environment has a determining influence on the kinds of experts that are used in social situations. Yet, at the same time, the experts help transform the environment and, insofar as their own models of it are effective, they confirm the public image of the social situation in terms of these models. The power of experts lies in this image-making capability. At the same time, often because no one knows what to do with them (for "production"), they serve important intelligence, as contrasted to intellectual, functions in a social system. They are the communicators and travellers, par excellence. In inheriting this role, they also inherit a deep responsibility. Not only are they communicators, but they become responsible for accurate communication. Their interstitial role does not free them from organizational responsibility but, rather than having responsibilities within the system, they have total systemic responsibility. Not surprisingly, because of their image-making and communications functions, they are subject to a great deal of pressure and must be circumspect about what they try to do.

One finds that most experts, if they survive at all, claim that they have very little influence. Economic advice-givers constantly talk about political imperatives and private influence that ignores their advice.

Psychotherapists always maintain that they are only one small influence on total social functioning and that the larger social system is much more significant than they are. Counselors to political personalities often describe themselves publicly in terms of a single input of no great importance -- just that they are trying to make things a bit better.

There is a genuine conflict between the role of an expert who knows something and can do something, and his overt maintenance that he is a small and perhaps insignificant influence in the action process. The conflict occurs in the realm of responsibility. The problem with the designation "expert" is that this responsibility is not explicitly accounted for.

ADVICE-GIVING AS A MODEL

Rather than continue talking in terms of experts, I shall phrase the discussion from now on in terms of advice-giving. People who give advice are usually experts. But not only are they experts in a social situation, they are also dealing with a specific problem for which they claim to be able to say things that are helpful. Experts of the establishment sort and intellectuals of the anti-sort are included under the advice-giving rubric.

Advice-giving has a set of pathologies associated with it. Persons can give or receive too much advice. In the first case, giving advice becomes a substitute for other modes of communication. In private life, this may permit a hiding of the self of the advice giver -- he has no problems and needs no advice himself. In public life, advice giving can become a process divorced from action.

Another pathology is the abandonment of common sense and a complete reliance on experts who give advice. Common sense is one way people summarize their past experience and their expectations about life. No matter how "true" the advice given could be, the receiver of advice cannot abandon his own judgment. Someone else may challenge the advice or, more likely, sometimes the advice will just be wrong.

That proposed actions may be wrong is one reason for using the advice-giving paradigm. How people evaluate what they are told is intrinsic to advice giving, while the expert model does not have this judgment necessarily implicit.

With the designation of advice-giver, institutions can still question an expert's knowledge and its utility and, also, whether the advice given is relevant, of consequence, and helpful. Evaluation of advice-givers is different than evaluation of experts. For advice-givers know about problems and their advice must suit those to whom they are giving advice. Experts, on the other hand, have no clientele implied by their expertise.

Advice-giving is the nexus of education, public action, and scientific knowledge. How advice functions in the social system is the subject of the next chapter.

BIBLIOGRAPHIC NOTES

Wilensky covers the problems of organized intelligence and offers a typology of knowledge men. Archibald offers another typology based on her interviews with experts in international relations.

Znaniecki offers a standard (and most referred to) discussion of the sociology of knowledge and knowers. Benveniste tries to place the expert in a more worldly world.

A history of technocratic expertise is offered by Kelly. Gorham talks knowingly about how experts must act to be effective in a government bureaucracy. Benveniste and Ilchman's collection explores expert roles in international advising. Cairncross writes tellingly about the roles of being an economic advisor.

PLANNING

In this chapter I will describe a role for private knowledge in public policy. Private knowledge is sense or information about the environment which is possessed by one person in himself, by virtue of his experience and what I have called synthetic knowledge. What is distinctive about synthetic knowledge is that it is intimately tied to its knower.

How are those who are concerned about improving public policy-making to use such synthetic knowledge and such knowers? One may ignore the highly personal nature of the source of the knowledge, publicly designate a person an expert, assume that that designation of expertise is publicly givable, and then proceed to ask the expert for advice. The catch, of course, is that the designation of expertise is not being done publicly at all. A small cadre of men have decided that another man is an expert.

Say, however, that some people wish to challenge the status designation of this expert. If they are not the ones who originally granted him this designation, then, in this scheme, there is little reason to suspect that they may claim the right to take away the status. They may claim the right in that the expert was undemocratically "elected" to a status, but they do not seem to be able to make any claim in the sense that they are experts on experts. If they were, they could invalidate the original group's designation of expertise for a person. And priority of claim, a way of adjudicating among the groups, is not very faithful to what we usually mean by "experts." What can we do in this situation?

We may decide that anybody can adequately challenge another's expertise, and at the same time say that anybody can designate anybody else as an expert. This solution still seems suspect. Expertise does have some meaning, when we use it, related to the superior performance of certain tasks. An expert is supposed to be able to do something, more or less well specified. The arbitrary designation of someone as an expert seems to vitiate the meaning of the term.

We know that the problems that people do consider important, relevant, worthy of attention, depends on who they are. Someone may challenge another's expertise and, implicitly, the group that gave that person the designation, by denying the worthiness of the problems on which he is expert. We are likely to end up with each group having its set of experts and correlative problems, while groups and experts will rarely confront and deal with each other. But this kind of multi-oligarchic system of knowers does not seem very real when we look at politics in a public society.

How are we to democratize the idea and status of expert while retaining the significance of its meaning in terms of performance? This question will concern us for the next few chapters.

A first approach to answering this question can be made in terms of the context in which experts operate. People call on experts when they want to know about something or when they want an opinion concerning a problem about which they are insufficiently confident. If we are concerned with problems of policy and public action, then the activity of calling on experts is similar to one that is called "planning."

The usual definitions of planning in public life seem very far from what I have been talking about. However, if we abstract from these definitions, we would find a common core that is quite close to a problem concerning the designation of experts. Once we have done this, we end up with models of planning activity and planners amenable to responding to their personal perceptions in a responsible way. This will lead us to a whole new set of problems for planful action.

PLANNING

Planning is a process of using what you know about the past, the present, and the consequences of action to influence present actions. If you plan you may act in ways that you would not have if you did not plan. Planning incorporates mental and non-mental processes. If it is possible for one to make a distinction between an idea and an action related to it, then planning may be seen as that which intervenes between impulse and action. This suggests that we need only plan when our impulsive actions are not desirable. (I note how difficult it may to distinguish an idea from an action.)

Still, planning may seem like a trivial activity as I have defined it so far. Of course, we all think about what we do, so why should we designate such thought to be planning? The term is a highly image-laden one, both politically and socially, and we may imagine that there are cultures for which the idea of planning does not exist. Certainly there exist cultures for which "futurity" is meaningless. My definition may seem trivial so far in that I have elided over one crucial point. I have not

specified how to use what you know to decide what you should do. Herein lies the normative aspect of planful activity. Planning, of necessity, demands that there be a more desirable direction or end state of action than some other paths or states. Your knowledge of the world tells you something about the difference between where you are now and where you might want to be. Planning is an intervention between possible worlds and the one that we experience every day.

For those acquainted with the literatures on planning, my definitions will seem quite meager, and perhaps unnecessarily so. However, such fundamental definitions of planning can accomodate synthetic knowledge, while a more complicated definition, and the associated apparat, might preclude it. Analogously, if I define science as organized activity to learn about the world, then there are many ways I may be able to do science. If, however, I define it in terms of a proverbial, though probably false, "scientific method," then I may be describing present day science quite well, but I may not allow for expansion of its methodology and style in the future.

Societal planning involves people, called planners, who are using their synthetic knowledge in a social activity. It is not the only activity wherein synthetic knowers perform, but for the moment it is our model. Planning* is a social activity. People who plan are concerned with influencing their society. Frequently they are commissioned to plan for the society, and in their self definition as professionals they are trying to influence the direction of social change. Also, planning is done in groups. It is rare that one man does the planning job exclusively; usually it is a team. These

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*For "planning," read "societal planning " from now on, except when otherwise designated.

considerations suggest that what planners know must be part of the larger society, and others must be able to share in their sense about the world.

But when we examine what planners know, when we ask how do they produce plans, then we find that planning involves highly personal, synthetic knowledge. People who plan are considered creative, for they must invent solutions to problems, or design possible normative pictures of the world. They exercise judgment since they have to choose between alternatives which are not well defined. Experience and saavy seems to make a difference. Finally, planners must guess since they cannot know everything about the situations they deal with. So planning seems to be highly personal in nature. How do planners communicate with the society and how can they convey their personal, synthetic knowledge to other people?

The currently most popular answer given by those who have thought about problems of planning, is that there is no communications problem at all. They would say, "At the moment, it may seem that the planner possesses a highly personal synthetic knowledge. But this is not really so. Systematic investigations should show that most, if not all, of a planners' work does involve a substantially well-defined technique which others can understand and thereby participate in using." Whether or not we can <u>fully</u> understand planful activity in terms of systematic well-phrased technique is not my concern at the moment. My guess is that we cannot. My concern is with how can we best communicate and understand what planners do right now and in the near future. It may take much too long to explicitly understand the technique of the planner. We may be able to communicate with that technique in a different and less explicit way now.

Another way of viewing this argument is to ask whether planning is a conventional science. I think not. There is too intimate an interaction between what we know about our environment and our goals, which are self-formulated and self-involved, to believe that we can separate planning as a technique, as a science, from the planner himself. I do believe that it is possible to understand planning in a systematic way, but the appropriate model will not be conventional science.

Let us return to the main argument. We started out asking how synthetic knowledge could be better used in public policy making. Planning provides a useful model in which to look for a possible answer. But if planning activities, which I claim already use synthetic knowledge, are to make sense, if we are to explain why planners are permitted to exist and why plans are actually fulfilled in part, then we are forced to understand how synthetic knowledge can have a public life. I want to propose a model for planning activity that shows how this might work.

CONVENTIONAL MODELS FOR PLANNING ACTIVITY

Before describing synthetic knowing planners, I want to look at some of the conventional models for what planners do. I will talk about two sets of models. The first emphasizes the problems of knowing, while the second emphasizes the processes of mediating diversity

Models of planning that focus on the problems of knowing emphasize the importance of modifying what we do by what we learn. They are almost always cybernetic in orientation, and assume that we may, perhaps asymptotically, trace the consequences of our actions over a period of time with

some success.* Variants of this model put greater or lesser emphasis on how much we need to know and how much we need to learn, but all of the models are centrally concerned with how we use knowledge.

They do not deal in a systematic way with two important aspects of planning. Normative prescriptions, while obviously necessary in any planning activity, are not discussed much. This might be understandable if our problem of knowledge utilization could be well posed without considering normative questions. I do not believe this is possible, however, since knowledge is used to create tentative images of what may happen in the future. We then can compare these to the images we have of the present, and influence present action accordingly. This comparison process requires that the nature of the image we have of our desirable state or path influences the formulation of the likely state or path that will emerge from a planned action. If the nature of these two images were too different, in cognitive style or semantic content, for example, then the comparisons would be impossible. Images of the future determine present action and plans related to it.

Also, information and knowledge usually exist for a purpose. The interestingness of a datum depends on our plans and the desires we have. Normative prescriptions influence these directly.

A more serious objection to these models is that they have overly narrow prescriptions of what we should know about our environment. In current practice, it seems that certain kinds of hard data are preferred over most knowledge that is available. A scientific hard data model implicitly underlies most of these models for planning activity. This scientific

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*There is a real need here for a synthesis of the cybernetic models of planning and the psychoanalytic one (planning interposes impulse and action -- a representation of the ego). What one would hope to do is to figure out how the ego influences the images of the future that affect planful strategies.

model suggests that the personal nature of the planner is something that will wash out when good planning practice is achieved. This strikes me as being a highly unrealistic assumption.

Some other virtues are ascribed to science as a model.

> His [the new planner] special character mirrors the special character of science. To a degree far less common in other interest groups, he has learned to doubt; to question his beliefs, his data, and his findings; to submit his conclusions to critical evaluation by his peers; to tolerate uncertainty and ambiguity; to bear the frustrations of not knowing, and of knowing he does not know; and, by far the most important, to adopt the empirical test for validity. (Webber, 1965, p. 296)

Webber goes on to argue that planners, in their systematic accounting for the effects of actions, "may help to eliminate the most negative consequences of partisanship and of ignorance."

It may be true that science has this virtue. And it also may be true that this virtue is not possessed by partisan interest groups. But I would argue it is not from a commitment to know critically about the empirical world that science succeeds, but from a commitment to understand and know about how the scientist learns of that world. The ability to doubt and to understand partisanship should be better developed in a man who is a synthetic knower than in one who is just a scientific knower. He will know of himself even more. In the next chapter, I show how a synthetic knower can and does doubt, convince others, and test his ideas.

A slight variant of these planning models are those, usually called decision analysis schemes, which try to systematically combine what is known about a situation. Such models do not talk about how we are to learn about the situations, nor do they address the question of what we should know. In that sense they are useful technical additions to our armory, but they are not responsive to my fundamental questions.

A second set of models deal primarily with processes of mediating diversity. They explicitly deny the possibility of making end states well-defined, the possibility of predicting the likely consequences of action over the long run, or the ability to explicitly analyze what we are doing and combine our knowledge in a systematic way. Rather, they suggest that decisions be made incrementally, and that models for combining what we know be in terms of the resolution of conflict,as contrasted to the resolution of conflicting facts. These models explicitly take into account political and social realities. They seem more democratic since one's claim to legitimate involvement in the planning activity is that one has an opinion that one wishes to push,as contrasted to having knowledge.

But these models still do not deal with what I consider central questions. There is still no good idea of what is worth knowing about the world or how to certify knowers. In rejecting synoptic technique, they do not systematically consider how we are to deal with performance problems. An important insight that may be adduced from these models is that the relative parity of knowers determines which knowledge gets used to a much larger extent than acknowledged by those who use the first model.

A problem with both kinds of models is that they are trying to explain only part, and perhaps not the most significant part, of what planning is about. The style of explanation used in both is remarkably similar. Planning is an activity which has some very well-described character, which is testably true or false, and which is different from the other model in a distinct and irreconciliable fashion. My concern here is with something more, however. I am trying to develop a model which

appeals to intuition, which realizes the truths of both of the preceeding models, and which will not necessarily be true or false, but more a description of one part of planning activity that I would like to see increased. This description may actually characterize the efforts of the other modelers, but they have certainly done a good job of hiding their intents under a mantle of "scientific" respectability.

PLANNING AND FEELING

It is possible to develop a model for planning activity in which synthetic knowledge plays a natural role. In this model, I make some assumptions about the nature of reasonably healthy people.

1. People are good sensors of the world. They are reliable observers of what happens. Their reliability may be altered by systematic training; whether they see something more clearly depends centrally on what they wish to observe.

2. People can come to agreements about situations. There are many cases in the world where a group of people talking together will eventually come to some agreement about what they know. And for the cases where they disagree, they may be able to understand why they disagree based on some personal characteristics.

3. People's guesses and experiences play a primary role in composing what they know.

4. There may be some techniques which can supplement people's abilities to be good sensors, to come to agreement, and to better use their experience. Yet these techniques are not likely to be useful if they are too conscious.

Given these assumptions, I want to show how synthetic knowers could plan more adequately for feeling and the phenomenal world than conventional planners.

We do plan for affect or feeling. The design of great cathedrals and the production of television are intentional actions whose aim is to evoke certain feelings from the participant in their processes. Novels, movies, and theater share in this quality. All of these activities have very peculiar people involved in creating them. These planners -- novelists, churchmen, artists, and directors -- are different than non-affective planners because they are involved in the production of affect.

In order to make a more schematic investigation of this phenomenon, I will look at what planners do in a particular model, and at what we might mean by affect in this context. I will distinguish between affective planning and planning for affect.

What do we mean by planners and affect? Planning, to repeat, may be viewed as a procedure which tries to use our knowledge of a social system to guide that system in a desired direction, taking into account the alternatives available, and the repercussions of the chosen (and unchosen) actions, while maintaining a future orientation. Ways of knowing, acting, and predicting are crucial to the process.

Affect can be taken to mean feeling or emotion.* As such it tends to be personal rather than social. An immediate problem of affective knowing is how do we "know" what other people are feeling? The solution to this problem lies, I think, in the fact that some people claim to be able to know how other people are feeling, and it is generally acknowledged that they are pretty good at it. But it does present us with the problem that the communication of affect may be more difficult than the communication of cognitive knowledge. If your are "feeling" about an outside world and

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*It may be true as Rabkin, 1970, says that, "Affect in present day theory resembles the phlogiston substance of fire or the caloric substance of heat . . . They cathect ideas in the same way that electricity substance was thought to coat pitchballs." (p. 11)

are empirically oriented, the world may serve as a useful mediating influence around which to discuss what you know of it.

Planning for affect is different from planning for more conventional needs of men. These more conventional needs, which include food and shelter and work, are the more traditional concerns of planning. Yet, different ways of knowing, acting, and predicting may be needed if we are to plan for affect. The question we face is whether there is something called affective planning -- a planning mode that is a product of planning for affect.

Affective planning can be taken to mean planning that shares in the ambiguities and richnesses characteristic of feeling. It is planning that depends on intuition and subjective modes of knowing. To analyze this in more detail I shall divide planning activity into inputs, analyses, and plans (or plan-making).

We may have affective inputs which include intuition, the results of psychoanalysis, or the results of person-centered social studies. One uses the knowledge of self to know of the social system. All of these are highly individual ways of knowing, for which there do not exist generally accepted ways of saying explicitly what one knows.

Analysis of data may be affective or not. How people understand better, without doing "scientific" kinds of verification, is exemplified by "the man who understands people." It is a question of sizing-up situations using much of the unmentioned, non-explicit data that are in the environment. Again an empirical mode is always assumed. John Seeley has stated it well:

> I do take it that there is an apprehensible internal connection among things, and a corresponding highly symbolic way of talking about or representing them, that is set over against the external connection among them, whose vehicle is the sign and whose cumulative theoretical deliverance is science, and the practical outcome of which is technology. (Seeley, 1960)

We can mix affective ways of knowing with non-affective modes of analysis and vice-versa.

An example of the discussion so far is found in the life and work of Clare Cooper. Until quite recently, Clare had done survey research on people's feelings about their homes. To a large extent she had partially affective inputs and non-affective analysis. She was planning for affect. As a result of these investigations and alterations in her personal outlook, Clare recently concluded that an introspective and Jungian analysis of the house as a symbol should lead to new avenues for determining how satisfactions with the home might be increased. At this point she became an affective planner.

I make certain kinds of distinctions here but not others. I am not quite interested in the range of the vision (holistic vs. atomistic), or the style of empirical evidence gathering (natualistic vs. experimental). Rather, I am concerned with what is interesting or relevant about what is known and our attitude towards it. A useful distinction is provided by the clinician-investigator one. A clinician is concerned with, "Empathy, warmth, integrity, commitment . . . ," while the investigator deals more with, ". . . sensitive objectivity . . . formulation into clear and testable theory . . . replicable demonstration." (GAP, 1969, pp. 108, 120)

A plan itself can either be affective or non-affective. The traditional general plans and even many of the new comprehensive plans are highly non-affective in their ways of knowing, analysis, and evaluation of

client preferences. If a plan addresses itself to the sensational level of individuals,* realizes that outputs have much to do with how people feel about their condition, and that changes and management take place on levels of individual psyche, then it may be called affective.

I will call that planning which uses affective modes of knowing or analysis, affective planning.** If we are to plan for affect we shall need affective planners. These new kinds of planners will not lead us to simple solutions to our problems, since most of the traditional complaints against planning will not be avoided. But we will be able to inform our planning by new insights.

Affective planners might adopt a Kantian imperative something like, "Always see in your policy the possibility of making love to those whom you affect, including your self." They might have an erotic, rather than the traditional dominating, sense of reality.

Our choice is not whether we shall or shall not use affective planning. The choice we face is how can we best use affective and non-affective modes of knowing and analysis in doing planning. This issue will become more important as we become more anxious to plan for affect.

PLANNING AND SEXUALITY

We may fruitfully explore the meaning of affective planning in the context of one epitome of affectivity -- sexuality. I want to point out certain parallels between sex and planning, and to use the analyses that have illuminated sexual activity, and related social phenomena, to understand planning and planners.

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* E.T. Hall suggests that we need to plan for the senses.

** Recent discussions of scientific modes of knowing and the behavioral sciences make it clear that intuition, guesses, intensely personal ways of knowing, play important roles in how scientists function. (Polanyi, 1962)

Planning usually means the exclusion of sex. The model of planning that emphasizes information and systematic inquiry, almost always excludes personal data and prefers "hard" information. This need not exclude data about sexuality, but does exclude data that is based on man's sexual nature. The second model of planning involving mediation is mostly concerned with power. Though sexuality is one base of power, it is almost always ignored in favor of political or economic power. Rarely are people seen to be arguing sexually; rather they are using their (political or economic) muscle. A group of planners who might be especially aware of sexuality are those who are concerned with planned change and the use of organizational theory in action. But even they rarely mention sexuality, though it must be a primitive in any theory they propose.

Most planners base their justification and the legitimacy of their interventions on technocratic expertise.* If their person were to get in the way, there would be little reason to listen to them as contrasted to someone else. This desire for a certain form of legitimacy based on input criteria (technocratic expertise) may be valuable for getting into a situation but, in the end, performance probably depends more on the non-technocratic and the personal than most planners would want to admit in public.

Planning may also be anti-sexual. Insofar as planning intervenes between impulse and action, then it may seem like it gets in the way of full impulsive sexuality. But is sexuality "best" exhibited in its impulsive form? We get the impression from the many handbooks concerning sex that planned sexuality has its virtues. A rejoinder that can be made to this perspective is that sexual technique gets in the way of freedom, and that sexual technique implies some normative statements about sexual performance.

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*The rest talk of beauty or political reform.

These normative standards are another way that society articulates its social repressiveness.

Another way in which planning can be said to be anti-sexual is seen when we consider the nature of orgasmic responses. If there is some reason to believe that an important part of well-being depends on full orgasmic response, fully played out, then planning is certainly the wrong approach. Plans rarely get carried out; and most planning is abortive. Were planners to currently plan their own sexual lives, they would make great diagrams (What would be in purple?), and would do marvelously with the reports (Where would there be an evaluation team?), but they might never get to bed. The nature of the social performance of planners is very far from what might be called an interesting sexual performance and this must have a debilitating effect on their lives. At the same time, their sexuality must constantly be frustrated when they go to work.

We note that the frustration of planning must also extend into the milieu of everyday work. Planners, as I have said, work in teams. Often, especially when some aspect of a plan must be produced, they may have to work for some time continuously and quite closely together. What ever satisfaction they may achieve in a sexual way from producing their plans must be frustrated by the nature of the process of producing it. Most planners, like most of the technocratic elite, are men. And most neither choose to have, nor are interested in strong affective or homosexual relationships with co-workers. So in their work, as for most technocrats, they must leave parts of their selves at home.

Perhaps this whole scene is what professional planners want. They may be "up-tight," middle class people who would rather have work that involves neat situations, which are not likely to be reality tests, than complex and ambiguous ones which are always under contest and

modification. All the sterility and impotence normally associated with formal planning may serve the planner's deeper psychic needs.

Even if this picture of the origins of most planners is correct, we should respect them for some very real courageous steps they do take. They are willing to give up the intimacy of the planning practice that they may use for their own lives, and try to work on larger issues over which they have much less control. They risk the likely difficulties of communicating with the rest of society, when they might only look at the more common ones of intimate communication in their own lives. Not many have such larger commitments.

Planners are peculiar in that they prefer the non-routinized and the innovative, over the regular. They are intrinsically concerned with change and the future. They are some of the few societal entrepreneurs around. Like visionary architects, they are always offering images of the future, knowing that they may influence but not shape (in a decisional sense) what happens.

Their concern with change makes them constant societal doubters. Planners are often criticized for pattern maintenance activities, i.e. that they are not much more revolutionary than anyone else. That they are of the society and its elite does not make this surprising. But because planners must always concern themselves with change, they are some of the few people (perhaps like scientists) to whom doubt is a natural everday concomitant of their work.

Most people know that planning causes a meeting of private, meaning individual, and public, meaning societal, interests. What is more significant is that planners must have their public, professional doubts influence

their personal, very private behavior. They bring home the world with themselves and they are among the few technocrats who do so.

What happens to planners who find themselves in situations where they do have influence and their actions can come back to haunt them? Some just retire out of the "politics" of the situation. Others may meet the situation and "grow" into the problems. I would imagine that an adaptation somewhat like the latter will have to be systematically developed since some aspects of society will demand planful guidance as they become more complex. The identity crisis that planners will face, and do face, at these times needs societal and institutional support so that they make a more gentle and successful transition into adults.

Presumably this whole situation might be different if the planners were allied to the very powerful. Planning in Chile or Cuba or the Soviet Union may have quite a different character. The problem in our country is that planners, while agreed with and in the saddle, have no horse to ride on and "can't get it up." In the United States, the problem is that even if planners get someplace, they are likely to view themselves as castrated by the time they arrive.

Planners suffer from constant sexual frustration and their lives are a series of <u>coitus interruptus</u>. It is no wonder they would not wish to exercise their sexuality more.

A way out of these dilemmas is provided by the idea that if conventional planning does lead to some difficulties in sexual quality-of-life, an unconventional planning with people explicitly using their sexuality might be different. Would this still be planning? An explicit model of planners in the world suggests that the answer to this question is yes.

SEXUAL PLANNERS

How are we to transform planning to avoid its becoming a frustrating activity that is debilitating for its practitioners and subsequently limiting for the society? Certainly not just by ordering everybody to be free and open. And not by saying that planning involves sex. For that, too, will not really cause institutional and organizational change. Since professionals have a big influence on how they come to be organized, one approach is to change the self-image of the planning profession.

Some things cannot be changed. Planners must deal with the future and the consequences of present action. And they cannot become anti-intellectual, per se, or anti-critical. The latter is one of their major functions since planners try to make for consistent relationships between present action, future consequences, and desired states. Also, a commitment to sexual planning does not mean that they will become unintellectual. Ideas and their systematic articulation are important -- but what those ideas are and how we choose to systematically articulate them can be quite varied.

If planners were to aim to be better embodiments of the "public interest," they might be able to escape some of these dilemmas. True, there are many difficulties with maintaining an image of a public interest in a partisan world, but I would imagine that a planner could try to ajudicate within a small range of interests as well as search out and highlight what holds the society together. He might act as a good "generalized other," trying to see the various interests as they see themselves and as others see them. The planner becomes a sensitive viewer of the world and himself. He may work in the interstices trying to make for better fit and more coherent direction between actions.

This role would naturally make it easier for the planner to respond to his sexual self. By incorporating this into his practice, it is more likely that he will be a sensitive "other." Not only because people are sexual, but because the metaphors that are suggested by sexuality are different than those suggested by the normal tools of planners -- economics, art, and social science.

The planner would become a designer of actions, in his own mind, that should be more acceptable to others. Knowing others well he could be more sure of their acceptability and the kinds of trade-offs that would be necessary. His individuality would be acceptable since he would be a designer and not a technocrat. The emphasis would shift to creativity and away from justification.

Of course there will be autocrats and evil planners. But they will still be under the control of the polity. The goals that the planner works with, and which influence his action, must come from politics. Methodological subgoals might come from technique or art.

Rather than fear sexuality, we would have them bury themselves in it. Planners would become searchers for fulfilling goals rather than "make do" ones, since they would have such an ethos in their own everyday lives.

The relationship of sexuality and money (made by Brown) is a useful one to pursue here. At one time, planners might have been accused of ignoring costs and the economic facts of their plans. Now they do not, and we are pleased that they are so practical. But now we need to make sure that they do not get buried in the money they are so used to.

What kinds of planners have I created here? If they are sexual, we might want to explore some sexual designations for them and see how they fit.

Planners ideally would be erotic and not horny. Life would not be constantly frustrating, but would always be informed by sexuality. When things become difficult planners might become horny, but more likely, after a time, this would be translated into deviance or repressed neuroticism. Were they deviant, then they could work out their sexuality, though in many forms the deviance would lead to sexually perverted lives which would not be fulfilling. Also, sexual perversion might lead them to be poorer "generalized others" since they would get out of the habit of looking for symbolic interaction with others. On the other hand, if they were repressed neurotics, and were more capable of responding to difficulties in social life by expressing these in their personal lives, we might have them lose their capabilities for vision, utopia, and creative futures.

Finally, we might ask what kind of sex should be part of their lives? The restriction to genital sexuality leads to control and a looking for finite extensions of events. A more polymorphous perverse super-genital sexuality would be a source for greater expression in all systems, a sense that everything matters, and that articulations of events are complex and not easily bounded.

The sexualized planner will have to tread a middle road in each of these qualities. He will want to be erotic, but sometimes realize that he is horny. He will want to be deviant, but keep his ability to repress himself and be responsive to societal repression. And finally, no matter how polymorphous perverse he be, he might want to be able to realize the difference between genital and super-genital sexuality.

What kind of organizational milieu will be needed for this kind of planner? "Any individual through whom subjective intensity may

intrude upon the processes of bureaucratic equilibrium is extremely threatening to our society." (Friedenberg, p. 190) We do not know how to have expressivity, risk, or sexuality become part of the social scene without destroying its possessor. I look into the socialized places for the sexual planner in chapter 8.

PLANNING FOR MEANING

For the affective planner, the world is meaningful. What happens affects how he behaves, and the events that occur have special import for his life. The same is true of his actions as a planner. He assumes that intentionality is a primary characteristic of what happens to people, and that they will assume that what happens is intended, even if some of the manifestations of intent are surprising.

That the world has sense is likely to be a belief held by an affective planner. This sense is an image of what happens that is coherent and holds together. The images that are used in planning serve as contextuating ideas for societal guidance. The planner's social role is somewhere in this process. For the affective planner, the role is to make up these images. As Churchman would say, he is telling stories.

There will certainly be conflict in this world. Novelists fight to impress their images on the society. And so will planners.

A big change will be that planners will have the relevance of their actions and their plans determined by the images which <u>they</u> have created. And the ends to which these images are created is a reflection of their own internal needs. We see that the sense-ness of the world makes for the sense-ness of the person who is trying to make sense out of the world -- planners are in this crucial role.

SELF

I have tried to understand how synthetic knowledge and planning interact and how private synthetic knowledge can become part of our public knowledge through planning activity. My answer is not a very complicated one at one level. I suggest that our selves are to be acknowledged as the sources of our ideas and as sources of the criteria by which we evaluate what we do. Yet once we have come to such a conclusion, we must consider questions of how people are to be trained to be good synthetic knowers in the public realm and how that knowledge is to be better specified. We will approach some of these questions in the next chapter.

BIBLIOGRAPHIC NOTES

Jack Seeley's ruminations about planning and society have deeply influenced my own approaches to these questions. Richard Sennett's analysis of the practice of planners in cities is a nice synthesis of Erikson and traditional ideas about city planners.

John Friedmann and Abraham Kaplan have written about planning as a social process. Webber, Deutsch, and Meyerson and Banfield have presented various versions of the knowledgeable planner. Churchman discusses the planner as an inquiring system with some values always in mind.

Miller, Galanter, and Pribam, and Boulding talk more about planners and their images.

Polanyi, again, is a source for a model of the knower who is also a person.

KNOWING

Public policy in a non-totalitarian society, by its nature, is open, subject to consensual agreement, and often deals with large scale problems. Consequently, the "truths" about questions of public policy turn out different from the "truths" of natural science. The nature of what we know is also different. Synthetic knowing is the essence of this difference.

I now want to look more carefully at the concept of synthetic knowledge. I want to ask the following questions: What are the operating modes of knowing that influence public action as contrasted to science? How do groups of people come to know something? What is the process of verification that is peculiar to synthetic knowledge? And, are there techniques for improving our capability of knowing synthetically.

My purpose here is to offer a model for knowing in the public policy realm that makes it clear that synthetic knowing is an often unacknowledged but essential aspect of policy formulation. At the same time, I want to provide an argument for why we should publicly admit what we are doing, rather than hide behind false and deceptive models.

This chapter will be an essay in applied philosophy. We are continuing the discussion of chapter 2 in a more systematic manner.

SYNTHETIC KNOWLEDGE

Synthetic knowledge exists. Men whom we call "wise" are exemplars of synthetic knowers, for a man who is wise is different than a man who knows a lot. Synthetic knowledge is not a direct product of formal education. Most formal education, in the end, tries to develop systematic ways of dealing with questions. Frequently these ways are embodied in formal rules. Yet we know that wise men do not operate only on the basis of formal rules, but have transcended these rules so that they may be able to deal with situations to which the rules do not properly apply. The self is deeply involved in synthetic knowledge; the man who knows synthetically is as much a part of his knowledge as what he has observed and tried to understand. Synthetic knowledge is vital in the public arena, in which the fluidity and self-organizing nature of the social system makes traditional science and systematic methods seem overly prescriptive and inflexible in their limitations. Because the person and his self is involved with this knowledge, it is possible to replace scientific certainty, whatever that is, by personal risk, the statement by the knower that he knows and is responsible for his knowledge, and thereby retain a measure of public accountability.

THE CHARACTERISTICS OF SYNTHETIC KNOWLEDGE

I now want to describe some of the characteristics of synthetic knowledge and argue why we must concern ourselves with the person as a knower. Synthetic knowledge is distinguished from other knowledge by its orientation toward problems, the softness or vagueness of the data it handles, and its manifestation in terms of intuition, wisdom, or judgment as contrasted to intelligence, smartness, or consistency.

Synthetic knowledge is characterized by thought processes which are more lik problem solving than logical thinking. Logical thought involves an economy of expression and explicitness of meaning, a sureness of deductive power, a completeness of the cognitive field in question, and a high degree of generality with respect to the processes employed. By contrast, problem-thinking tends to be complex both in the statement of the problem and of the connotations of what is being said. No prescribed guaranteed procedures exist for going from the beginning to the end of such thought, but there exist useful procedures, some of which are called "heuristics," which are suggested as possible ways of figuring out what to do. Since no prescribed sets of rules exist, guesses on the part of the problem solver are constantly needed to know which method to try out. A good problem solver not only knows something about the particular rules that may be useful to him, but also knows something about how successful such rules have been on similar problems in the past. In this sense, problem solvers are aware of their problem solving process. Finally, problem solving thought is incomplete, in the sense that the processes you know may be insufficient to solve all the problems that might be statable within the language you have available to you.*

Synthetic knowledge is soft knowledge. Hard knowledge has a systematic, and a well-defined base of support in other known things, and is characterized by having well-defined limits of application and degrees of generality. This is not the case for soft knowledge. Soft knowledge may have very good support, but the basis for that support in previous knowledge may be quite complex, and just why that support is good may not be clear. Soft knowledge does not have well-define limits of applicability since the nature of its support is not well-defined. Soft

*This characteristic is also possessed by complex logical systems but, in contrast to students of logical thought systems, problem solvers are not very much upset by this fact and expect that their methods will never be complete.

knowledge tends to be stored (remembered) in archetypes or in specific case studies, as contrasted to general laws. Diaries and novels are frequently filled with soft knowledge that may be extremely useful, but not particularly well-stated as general principles.

The designation of "soft" or "hard" is not immutable. We may learn so much about a field of inquiry that it becomes hardened. Also, questions asked about a perfectly firm knowledge set may throw a whole field into turmoil. As a result, the methods of deduction peculiar to the field may be doubted, or the experimental data become irrelevant, and the field be comes "soft."*

Intuition and wisdom are examples of synthetic knowledge. Both are characterized by the softness of their knowledge base and the problem oriented character of the thinking associated with them.

Intuition is not meant to be a mystical term. Intuition is exhibited when ". . . an individual approaches a new and inexplicit problem, and solves it without the aid of what would be considered to be adequate information. In this process the thinker or problem solver is seen to draw on his store of knowledge, experience, and habits, to vary these, to carry out covert and even unconscious trial and error behavior, . . ." (Westcott, 1968, p. 40) Archetypes and instantial cases, if we have a rich enough set of them, make for good intuitive power. Of course, a person must be able to use these examples and know (there it is again!) when an example is

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*The history of classical mechanics is a good example of these changes. The two-hundred years preceding the development of quantum mechanics may be viewed as a hardening of classical mechanics. The doubts raised by experiments and quantum theory about the predictions of classical physics put the explanatory apparatus of mechanics into question. Only by the development of procedures within quantum theory which showed that, in a well specified realm, one could continue using classical techniques, could it be said that classical mechanics was hard knowledge again.

sufficiently "close" to the question at hand to be applied. Good synthetic knowers are good choosers of examples.

A significant aspect of this definition is that the person's experience is explicitly used as a tool to explore the space of solutions. This is analogous to the ideas of some phenomenologists that we must use our bodies in order to exhibit intelligence.

Intuition differs from wisdom in that a person can teach it to another. It may not be possible for one person to tell someone else how to think intuitively, but he may be able to act as a model. For example, in the training of a natural scientist it is possible to develop good physical intuition in a student. This intuition does not come solely or mainly from a systematic studies, but most likely comes from imitation of the teacher. In the sense that intuition is something that is teachable, it is neither a residual category, nor a way of thinking that is not easily explained.

Wisdom is different from intuition in other ways. A person who is wise not only has information and technique about his world, but exists in a state of awareness of that world. Wise people interact with their environment to increase their sense about that environment, although they are not necessarily increasing their explicit knowledge of what is going on. Wisdom is intimately bound up in a person's experience and accumulates over his lifetime. It seems quite difficult to convey wisdom to young people or to transfer wisdom <u>per se</u> to others. It is possible to transfer the fruits of it in the form of material records.

Judgment can often represent an exercise of synthetic knowledge under situations requiring choice. The judge must evaluate the various statements concerning a situation for truthfulness and relevance, and

exercise some faculty in choosing the significant or interesting points of difference. He then must decide on one choice. In so far as he involves himself in the process, especially in the choices of relevance and significance, he is using his synthetic knowledge. Perhaps these are the times when his judgments are said to be wise.

THE PERSON AS A KNOWER

Our discussion of some of the manifestations of synthetic knowledge points up how important the person is in such knowledge. What are some of the more explicit characteristics of the involvement between self and knowledge?

Knowledge resides in the user and the observer and not in the objects of which we have knowledge. Knowledge is the apprehension of something by a knower. How that apprehension is organized depends on the aims of the person who knows, as well as the nature of what he knows. The meanings that we derive from our observations and understanding are determined by, and determine, the way we organize what we have seen. One would expect that there are no general ways of systematically ordering synthetic knowledge since two users of that knowledge may have different purposes in mind, and therefore would be expected to have different ways of organizing what they know.

If you know something, how does another person come to know what you know? One perspective suggests that that person must have a very similar experience to the one you had. What is explicitly transmissible from you to another person is different from what you know and believe. Therefore, they must go through a similar experience and not only just hear about it. On the other hand, it is suggested that there

are ways of describing experience vicariously so that another person will know what you know. This is the mode typically ascribed to science.

I think both of these descriptions are true in part, yet they miss an essential point. The way we transmit what we know to others depends on the nature of that knowledge. It is probably true that the more synthetic the quality of what you know, and the greater it depends on your self and your own organization, the greater is the need for another person to go through the experience of knowing in the way you did if he is to understand the situation in the same fashion.*

Knowing does not exist in a vacuum. The social and political context and the "common sense" that is accepted, determines the kinds of doubts that people express.** If we trusted our selves and we believed in a certain commonness of people, then we would not have to worry whether other people can understand synthetic knowers. We would believe them, without questioning them. For example, after a very few tests, we decide to trust most people's sense about colors, or verticality. We trust that they have similar sensing and assessment capabilities as we do. The same should be true for synthetic knowledge.***

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*Ayer, 1958, has argued that we should be able to transmit all the things that we "know." That something is a private feeling is a useful, but not necessary, convention. (pp. 226-254) My own feeling is that whether or not this point of view is correct, an economic analysis, which takes the cost of learning into account, would have to reject Ayer's perspective, at least in the extreme. Rather than tell anybody about an experience, experiencing the experience may be more effective in teaching the person about the experience.

**Schütz has used the fact that we do have a common set of conceptualizations of the world as the basis for his philosophy of social science. The nature of knowers and knowledge acquisition are derived from this observation.

***The determination of color or direction are not simple, as current efforts in artificial intelligence attest. Thus it should not be assumed that they are so different from synthetic knowledge in complexity.

THE NATURE OF SYNTHETIC KNOWLEDGE

We want to review briefly what we might say about the nature of synthetic knowledge. Synthetic knowledge is subjective in that the self of the knower is bound up with what is known. It is objective in that it tries to deal with the external world in such a way that one can affect that world intentionally. Synthetic knowledge is inexact. The set of situations to which our knowledge applies are not well described, and the boundaries may change when we learn new things. Synthetic knowledge is logical in the sense that is purposeful, but not in the sense that it has a very simple or well described structure. Finally, the cognitive style that is most consistent with synthetic knowledge is more likely to be a literary or case study sensibility (ideographic), rather than a symbolic, formal, or generalized law picture (nomothetic).

The preference for the idiographic over the nomothetic cannot be complete, though. A specific, richly articulated, explanatory metaphor still has to be chosen from among presumably many others. (It is conceivable that the synthetic knower has <u>one</u> all-purpose metaphor, but I would find this hard to believe.) Some form of generalized rule probably determines which metaphor is chosen. It is possible that a metaphor for choosing metaphors exists, and no nomothetic principles are around.*

A MODEL OF THE SYNTHETIC KNOWER

As mentioned in Chapter 1, Chomsky's idea of the competent speaker-hearer provides a useful model for the competent synthetic knower. The emphasis that I have given to experience and the self of the knower might

*A way of investigating this question, for example, would be to find out the spectrum of choices of parables available to a religious person and determine how he chooses any one of them for an occasion.

be seen to be in conflict with the idealism (and innate ideas) that Chomsky emphasizes. I do not think that this is so.

First of all, I am not sure that we have to have a position on whether innate ideas do exist. Innate ideas, which take the form of the generative grammar for Chomsky, may be embodied in the form of archetypal examples for the synthetic knower. (See the discussion below of heuristics and superempiricism.) But the knower has experienced these examples, so in some sense they are not innate. The significant operation is deciding that an archetype is relevant to a problem at hand. This "matching" faculty could be said to be an innate ability, but good arguments could be given for it being something that is taught by trial and error.*

When Chomsky abstracts the "competence" from the "performance" of good speaker-hearers, he assumes that there is some meaning to competence outside of performance. For a synthetic knower this cannot be the case. Only in performance is his knowledge meaningful and responsible. (For someone who is studying synthetic knowers, the distinction may be useful, but should be avoided in any case. The dangers in creating distinctions that are meaningless in _praxis_ is that one's consequent ruminations about the distinguished situations may no longer be applicable to the original questions.)

I now want to "answer" the questions suggested by Chomsky's ideas and posed earlier (p. 1-11). (1) The grammar, which may be a deep or surface one (I am not sure), of synthetic knowers is explored in the next three sections of this chapter.

(2) The nature of the experiences that cause imprinting and sets

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*Relevance, for phenomenologists, would be exhibited in the form of _Sorge_ or _Dasein_. This is peculiar to a human being. But it is not an innate idea in any more sense than we would say that anything that makes people what they are, are innate ideas.

the advice-giver into a competent state should be found in studies of the history of individual advice-givers. (3) We will have to search for an alternative to the radical scientific theory in order to prove the utility of a theory of synthetic knowledge. The theory presented here is a beginning. If the theory results in better action, which I will discuss a bit later, then the theory might be said to be a good one.

CREATIVITY AND MACHINES

How is new synthetic knowledge created? Experiences accumulate in a person and after some time that person is more capable of giving good advice. He has a richer set of archetypes.

This answer will seem strange to persons occupied with building the body and store of knowledge. From my perspective, when one more person increases his knowledge, even if everybody but he knows what he learned already, the amount of knowledge goes up. Yet it is not so strange. Since synthetic knowledge can be exhibited by giving advice, we would expect that an increase in number of advice-givers would result in an increase in knowledge. Machlup also counts dissemination activities is his accounting of the dimensions of knowledge economics; it seems impossible to distinguish new from repeated knowledge in a precise way. This would suggest that even if we were to develop ways of conveying capabilities inherent in synthetic knowers through vicarious or surrogate experiences, we would want to count the creation of new synthetic knowers as part of new synthetic knowledge.

If we could really define a new bit of synthetic knowledge, then the method of its creation would be clear. It is created as a product of experiences which are not similar enough to past ones to permit easy applications of past action to the present. Being forced to act, the synthetic knower creates knowledge by his action.

Could we have a machine that had synthetic knowledge and could give advice? If that were so, then we would be sure that we could codify the methods of synthetic knowing and what is known. From current research, it seems that we could probably develop a machine that could absorb experiences and structure them. This is most likely to be successful in cases where we require the machine to deal with only a single type of experience. Whether the machine could give advice is a moot point. Advice-giving depends on the character of the person to whom advice is being given. And this means that the machine that can take in experience, must also be able to use its experience flexibly. This has not been demonstrated yet.

THE DANGERS OF SYNTHETIC KNOWLEDGE

If people can go crazy, and synthetic knowing is intimately dependent on persons, then it is likely that there may be some dangers of synthetic knowledge related to the dangers that some people perceive in the mentally deranged. It is certainly the case that some of the mentally ill are quite ill, but much of current criticism of these designations points out the social sources of them and their dubiousness. Yet there are dangers if synthetic knowledge goes crazy. I think, however, that these dangers are not greater than the dangers that men face when <u>they</u> go crazy, and the benefits to be gained by acknowledging our selves in the knowledge process vastly outweigh some of these dangers.

That conventional knowers deny their own person's involvement with what they know, does not mean that they are not involved. The systematic procedures which try to eliminate personal bias, will also make it difficult for a group of sick persons to diagnose their illness internally. The self-examining quality of synthetic knowers saves them from this problem.

If synthetic knowledge is attached to persons, then it may turn out that there would be the development of a super elite of synthetic knowers, which is even more dangerous than the elite we now have of scientific knowers. As I discuss further on, I think that most people are capable of being significant contributers to synthetic knowledge, and all are capable of challenging it on its own grounds. Hopefully, this will minimize the danger of elitism.*

Some will say that a major problem with synthetic knowledge is that people cannot be relied on to know about things if they do not care very much about them. My belief is that we cannot rely on people who do not have a stake in their knowledge above and beyond the status that knowledge possession gives them. Commitment, when explicitly stated, gives one an understanding of another's valuational scheme and organizing tendencies. This may provide for a more intimate basis for trust than only "examining the evidence."

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*It would be nice to believe that synthetic knowers could transcend their eliteness. Even if all can be synthetic knowers, if such an ability is valued, then differentiations of ability will be discerned and valued accordingly. The trick is to somehow avoid valuing one's self based on this.

GROUP KNOWING

In this section we want to examine how other people know what you know, and how you know that they know what you know. Understanding this will be essential if we are trying to understand the nature of public action that is based on synthetic knowledge. As I discussed earlier, many activities, such as planning, depend on the communication of states of knowledge. We shall now look into some of the possible ways of doing this.

The personal character of synthetic knowers might make synthetic knowledge not amenable to sharp disagreements between knowers. The dialectic, a useful way of exploring the consequences of knowledge, would seem to be irrelevant to the intense personalism of this knowledge. As we shall see, the virtue of synthetic knowledge is that the way a person comes to know something becomes part of what he knows. Challenges to this way seem quite possible. On the other hand, the need for action as a result of synthetic knowledge cannot permit a real stand-off between knowers, if they must act in concert. The polarization of a dialectic cannot be maintained longer than the time allotted to before-action thought.

GROUP KNOWLEDGE DOES NOT EQUAL THE SUM OF INDIVIDUAL KNOWLEDGE

We might say that the knowledge that is possessed by a group is just the sum of the knowledge possessed by the individuals who comprise the group. But we know this is not the case. Trivially, if we have a large number of people who consider themselves a group of knowers, then each can specialize in one aspect of knowledge. He can have faith that someone else

within the group will know of the fields about which he has not learned very much. But this picture is over-simplified. Organizations, or groups of people exhibit some particular characteristics which make the trivial model unreal. In an organization, the process of public confirmation of what is known, the consensual agreement to act as if something were the case, involves more than people agreeing individually that something is so. It is likely that the consequences for the organization, and the relative positions and relationships of people within that organization, will influence what comes to be accepted as known. At the same time, we may have, within an organization, islands of belief in certain knowledge. The islands develop their cohesiveness partly on the basis of that shared knowledge.

Still, one disjunction that I would hope to bridge is that between public justifications for knowledge and private justifications. Insights that people may possess about the world, which may be very useful for their own action, may need entirely different rationales when presented in public. I sense this in writing. If we were to accept the highly self-oriented character of what we know, then it might be possible for there to be greater congruence between the justification we give to ourselves for what we know and that which we give to others.

Group knowledge cannot be simply the sum of individual knowledge. It may not be possible to combine the sensibilities of very disparate knowers in such a way that the combination would be useful for action. For example, if two knowers had irreconcilable differences such that one believed something to be true and the other, false, and no one knew how to deal with such an ambiguity, then what would be the gain of adding their knowledge together? There must be a certain level of homogeneity

of cognitive style and experience among knowers if group knowledge is to be useful. Chomsky's model suggests that on at least one level, that of understanding how we manipulate what we know, there may be a common basis. Advice-givers may actually have a small number of operating styles, through such they go from their experience and their observations to give recommendations. How we do, and might, come to group knowledge of situations is explored in the next section.

However, two knowers are never identical.
Even if they have similar partial sets of experience,
they would have to have similar sets of experiences for their whole lives to be possibly the same. The influence of early development on the interpretation of what we see is substantial.

MODELS FOR GROUP KNOWING

What are the ways by which a group can come to know something? How should they develop procedures to integrate the synthetic knowledge of their members, and thereby come to a better understanding of a situation. These questions concern both those people who are advice-givers and wish to improve their competence, and those who are looking for advice and wish to know how they may choose from among advice-givers. I discern two models for such group knowing methods -- an economic model and a dramaturgic model.

The economic model for group knowledge is called economic because it assumes that the individual knowers are independent and it tries to combine what they know in a way that their dependence on and interaction with each other is controlled and small.* Economic models lend themselves to

*This is remiscent of much of economics and physics.

mathematical representations and accordingly there has been substantial investigation of their formal properties. Let us look at several of these models.*

The Delphi method for combining the wisdom of experts is one of the most notable. A series of questions are asked of a panel of experts and, they indicate their answers, giving both an estimate of the answer and perhaps, an estimate of the error. The manager of the Delphi exercise then combines the answers of the panel, averaging them in some way, to obtain a measure of the mean answer and its dispersion. He then feeds these back to the panel and asks them to re-estimate their own personal answer to each of the questions again. What is hoped, is that the differences between panel members revealed to each member as a result of the first round will cause a panel member to take that difference into account in his second estimate. It may cause him to re-think his way of coming to the first answer he gave. Note that, because there is a manager of the Delphi exercise, and he intervenes between the panelists, there is no personal interaction of the panelists. This is considered desirable since it is felt that personal influence and prestige may get in the way of more adventuresome or unorthodox answers.

From the point-of-view of those who would have us use more synthetic knowledge this objection seems curious. Personality and commitment seem essential. And if we were freer in the exercise of each, then some of the objections voiced by the Delphic supporters would be less important.

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*I have left conventional science out of this discussion. The main reason for doing so is that while truth-finding may be characteristic of scientific method, group knowing is meta-scientific method. The influence of Kuhn's work lies in his pointing up this distinction. How scientists come to a group knowledge of things is no different than the synthetic knowers' methods.

Another procedure which disentangles the influence of experts even further, yet does permit them to indicate their personal commitments and beliefs in an answer, is provided by statistical decision theory and decision analysis. Experts are asked to suggest what they believe is the likelihood of certain events taking place and how much they would bet on their estimates. Systematic procedures then exist for combining these probabilities and bets to obtain a most likely set of probabilities for the group. This most likely set would pay off the largest amount of money if the group were right. The commitment aspect of the expert is explicitly taken into account in this method, but the interactions of experts is left out and significant ambiguities exist about the interactions.* An example will make this latter point clear.

Say we have a group of experts, each of whom is asked to choose between situation A or B. Each expert makes his own estimate of the probability that A or B is the winner, and the odds he would bet on each choice. Using the above procedures, each expert comes to his own conclusion as to which choice he would bet on. It is possible that each would have different estimates of the probabilities and betting odds, yet all the experts agree that they would bet on choice A. If we averaged the bets at this point, trivially we find that the group bets on A to be the best choice.

However, it is possible to construct plausible cases wherein if we first averaged the probabilities assigned by the experts (a not unreasonable thing to do), and then averaged the bets they would be willing to make,

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*A parimutuel system assumes that all the bettors are equally expert (weighted only by the amounts of their bets). Presumably the odds at any time determines, in part, betting behavior. In this sense the experts' judgments are pooled. A "prisoner's dilemma" situation, in which the experts would be better off if they pooled their judgments, is another case.

then choice B would turn out to be the best bet. The first case is called the Paretian optimum, for each man is happy with the solution, even if a systematic way of combining results, the second or Bayesian, disagrees with him.

A variant of the decision analysis idea is the perceptron. A perceptron is a weighted sum of the opinions of a set of experts. No interaction is permitted between the experts, nor is their own self put into the situation. At any time, the weighting factors given to each expert are fixed, though we can conceivably create a scheme whereby the perceptron could change its weighting factors depending on past experience. I mention perceptrons only to make one point about them. If we assume that the knowers have fairly well-defined ways of operating and are not particularly complex, then the capability of a perceptron is remarkably limited. The ability of a perceptron to analyze new situations, except in some very special cases, may turn out to involve the perceptron's having an expert for each situation. The sum of the information needed to store these special case judges (and their weighting coefficients) may be greater than the sum of the information needed to describe the situations originally.

I am suggesting that, if we are to combine our judges in a particularly simple way, and we assume that the judges are not particularly complex, then we really do not have too much of a capability at all.*

Economic models, by their nature, do not deal with the selves of the knowers in a deep way.

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* The difficulties that have been found in brain simulation efforts, reflect this point. See Minsky and Papert.

Dramaturgic models, however, deal with interaction and self, and assume that the basic processes involved in coming to some sense of group understanding, require interaction and an external presentation of that which is internal. These models are not so easily quantified, though they may be characterized systematically.

Bargaining models are some of the most simple, well-specified, and best understood of the dramaturgic models. The importance of feigning and concession have been thought through. Bargaining models take into account the values of each knower, the possibility that concessions now result in greater rewards in the future, and that each bargainer must deal with his own image of the other, as well as his self. A problem with bargaining models, when we are talking about a set of knowers, is that we do not know what they are bargaining for. What is the currency they can exchange with each other? Why should they bargain? We have to add to the bargaining model something that represents their personal commitment to the ideas they possess. It is then clear that what is being dealt with when people bargain about what they know is their selves, the reliability of their observing and thinking processes, and the esteem in which they are held by others. Bargaining provides one means of converting personal knowledge, personal sense about the world, into socially determined rates of risk. These risks ascertain the "truthfulness" of a statement in terms of the likelihood that such a statement will lead to a certain end.

Still, if someone were to bargain with his life when he is about to be shot, we might doubt his assessments of situations. Sincere bargainers must have some degree of voluntary choice when they bargain. Because they have the option not to bargain, and just go away, the fact that they enter into a bargaining procedure suggests that they are committed to what they say.

Another useful approach is the Yaqui way of knowledge. If we are to talk about the ways we have come to know things, then we must have a common language to describe those ways. At the same time, that language determines how we conceptualize what happens. It should be possible to have a guru who is able to structure the experience of a set of knowers, supplementing their ability to describe what has happened to them, so that they may be able to talk to each other better. This implies that the guru is capable of developing archetypes, so that others may appreciate the one he is describing in their own terms. A less likely alternative is that the group itself develops a language in which it may talk of its own experience. Perhaps this is a skill that ought to be taught in school.

Another realization of a dramaturgic model, is one in which we perceive the knower as part of the system he knows. What he learns about that system depends on how he evaluates what he does not know about it. Then, the problem of group knowledge really becomes, how should one knower interact with other knowers to find out what he does not know, and how should all interact with what they know about, to find out what they do not know.

For example, if we are to evaluate a social program, we could have an evaluation staff that is charged with evaluation. An alternative is to diffuse this task throughout the organization, and have someone in charge of low-level coordination. The evaluation's value to the organization should be substantially greater when we use the second method. This method has sufficient feedback to help the organization and strengthen its members.

Dramaturgic methods of combining what individuals know, so that they may have some sense of group synthetic knowledge, are probably the most

useful and most consistent with what I have suggested so far concerning knowledge in public actions. Their emphasis is on how individuals change in the process of knowing and how they take the world into themselves when they learn. To obtain the aggregating facility in economic models, these models have abstracted and simplified actors this makes it difficult to understand (for an economic model) how rich past experience is played out in the present. If our concern is with how people use what they know in differing situations, dramaturgic models do the best job.

The discussion in this section may be viewed in the light of some aspects of the sociology of knowledge. These suggest that the problem that I discuss here is fake. It is not the case that some people know things and that they are trying to convince others of what they know and thereby reach some consensus. Rather, the whole social system determines what can be known. Those who have the real power (often economic and other powers are equated) control the world of ideas. Within that world, there may be some arguments about what the group knows, but that world is limited. We are all marionettes.

Perhaps we are. But I doubt that we can be so simplistic in deciding who pulls the strings -- power is a co-ordinate relationship, and the overall influence of wealth power, although substantial, is not complete. An alternative position is that we are culture bound, that our abilities to conceptualize are severely limited by language and common categories. Even is we believe that this is true, this perspective does not account for the emergence of revolutionary ideas in any place. The seeds of revolution and change may be inherent in a certain form of society, but it is not apparent that the seeds of ideas are there also.

People make the world for themselves from their experience. Sometimes, if only because they are not well programmed machines, they do the unexpected -- including having some new ideas. How these ideas make their way in the world, and they do, since some survive, is my concern. This question cannot be answered in the context of the picture of society with a Bill Baird at the top and the rest of us on stage. Bill is down there with us; that is the big difference.

CERTIFYING SYNTHETIC KNOWERS

If knowers are not all the same, how does a group of knowers decide to admit a new member into their ranks. What are the professional standards for synthetic knowers?* We would expect there to be two sets of standards, one, of the profession, for admitting people into its ranks and keeping check on them, and one, of the society, that determines what is professional performance. These are intimately related, but it is likely that the profession has the weight of control over both.

The popular way of determining professional standards is in terms of credentials and examinations. Credentials are obtained by going to school and passing school examinations. They represent the past with respect to the certifying agency. Professional examinations are given to test current performance and knowledge.

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*I jump here from an organization of knowers to a profession of knowers. The reason for doing so is that any group that has no public commitment can decide to bring in new members with constraints only determined by the wishes of the membership. On the other hand, a profession needs to continuously guarantee that a certain service will be provided by one of its certified members. These external constraints determine, in part, the examination and formal character of admission standards.

Synthetic knowers might opt for an alternative credentialling procedure. The covert assumption of the conventional procedure is that commitment to the profession is a product of the substantial study required to pass the examination -- otherwise, why would one go through the effort. The socialization during training channels this commitment into professionally acceptable forms. Synthetic knowers would reverse the covert and the overt. Commitment would be tested first, while systematic knowledge would be assumed to be acquired. If you are committed to a profession, then it is natural to assume that you would want to know enough to be a competent practitioner.*

What may be implied by these methods of certification is that someone is certified insofar as his joining the group represents an involvement of himself. Then, and only then, will the risk he takes and his degree of involvement in the synthetic knowledge the group possesses, represent as much of him as the profession would expect him to give in his own advisory work.

Those who are outside of a profession would find these methods of certification amenable to their challenges. Because most professions cannot guarantee perfect performance, most of us must accept their claims to competence on faith. On the other hand, it might be easier for the client to assess commitment to the client. Since quacks can actually do substantial harm, we would still want some technical performance measures, perhaps set by the profession. But these can only be viewed as preliminary to professional certification.

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*The early craft guilds had this character. My guess is that the length of time for the apprenticeship was not so much determined by what you needed to learn, as by a test of commitment. That this procedure conveniently kept the numbers of those in the profession to a manageable level does not preclude another reason based on commitment.

CONCLUSIONS

The problem we face is that people who know and who have some sense of the experience they have, do not know what they know. At the same time, other knowers and users of their services must evaluate these knowers and choose from among them for advice. A dramaturgic synthesizing technique is helpful. Such a technique combines (1) the virtues of commitment of individuals, with (2) a bargaining process that permits them to interact so that they may iron out their differences, with (3) an attempt to formulate a language so they can describe "where they are at" to each other, and with $(4)_A^a$ realization that the knowers are part of what they know and that they must interact with that at all times. Since most planning activity today elides over these points, we might question the relationship such activity has to what is known.

TRUTH FINDING

I want to look next at the precesses by which we come to believe that something is "true." I want to understand how a person increases his knowledge and how he combines what he knows to form his images of what is true. This is a different problem from that of group knowing, since truth finding can be done by one person. Here we are concerned with verifying that what a person knows relates in a sensible way to the objects about which he knows, rather than with the process of reaching a consensual agreement ab what is known. Clearly these are related processes and as suggested in the previous section, comparisons of what people know with what they know of are intrinsic to the functioning of group knowledge processes.

We shall want to examine tentative models for synthetic truth that include one's self. First I want to ask, why in the world should we look for truth?

WHY HAVE TRUTH FINDING?

We search for truth about a situation because we believe that some statements are more useful than others for understanding how we should act in order to achieve what we want. Also, we want to be able to deal with outright, intended, misleading statements on the part of other persons.

It is strange that we believe that some statements are more true than others. It is especially strange to believe that we might order statements in a hierarchy in terms of their truthfulness. Both beliefs reflect a fundamental belief that knowing has something to do with better action.

True statements are those statements which guide a person to action which is more likely to lead to intended consequences. A statement is true for a person who is concerned with a certain type of action. There are some classes of situations for which a very large number of people do agree on what are the true statements. Some of these, commonly known as scientific problems, are remarkably well-defined areas of concern and rarely deal with (the "self" of) self-organizing systems. Others, which comprise our common-sense ideas of the world, are so pervasive that we assume them for most of our other activity (including truth finding). When we question these latter statements, we become philosophers.

My guess is that, for most problems of public action concerning public policy, there are classes of statements which are probably more true than others, but it would be quite difficult to order the truthfulness of statements within each class. If we are concerned with one man's action at one time in one situation, then it may be possible that the class of relevant true statements is substantially smaller than the class of statements which are not true, and also, that the class of statements that are true is small of itself.

Thus, I assume that statements which we call "true," affect how we act and increase the possibility of our acting in such a way that the consequences of our action are intended.* Also, there are true statements.

A second reason for having systematic ways of discovering the truth is that there may be intentional fakers among those who are said to know

*What exactly is "intended" at any time is a real problem with this definition. Is long term intent or intent at the moment of action the appropriate measure? What if we cannot apply a discount rate? More importantly, are we to consider conscious intents only, or as I believe we must, need we consider un-conscious intents also. A statement that is "consciously" false, might be "unconsiously" true. Also, the designation that a statement about a system is "true," may falsify the statement by having the system react to the designation.

something. It would be preferable to eliminate them from consideration in coming to consensual understanding of what is true, before they confront other believers on a personal level. Say, however, that two persons disagree, and they are acting in good faith and neither is a charlatan. We will need ways of systematically dealing with the very substantial differences i their representation of what is true. Then we may be able to handle diverse descriptions of a situation, yet not be forced to eliminate any one, even though it differs with another.

Finally, we want to find out what kinds of truth finding are most appropriate to each occasion in which we have to plan and therefore have to know something about what we are going to do.

What is maybe most disturbing to those who are absorbed in truth finding is that, for synthetic knowledge, truth-finding cannot be an end in itself. Responsible action is an end. If the truth is useful, fine. But we have no guarantee of this. We still have to ask whether knowing more results in better action, even if the "more" that we know is true.

KINDS OF TRUTH FINDING

As in previous sections, where we have found that it is useful to divide methods of knowing and group knowing into those which involve the self and those which do not, we find a similar split when we look at methods of finding the truth. Each of these methods can be characterized in terms of: (1) how many statements are true for a given situation, (2) how critical the truth is to the occasion we are discussing, and (3) how well-defined the truth statements are. In each case we want to understand what is the characteristic of the method of truth finding that is most significant for understanding synthetic knowledge.

Truth finding by resolution is a paradigm of what takes place in a scientific revolution. Resolution occurs when we are given a small set of statements which are candidates for truthfulness, which tend to exclude each other, and which are well-defined. One finds the truth by choosing one statement at one time in a well-defined way and designating that as the true one. Scientific research methods have been well developed to do precisely this at certain crucial times. But not all scientific activity is concerned with resolving the truth in this grand sense. Much of it is concerned with accumulating small truths which lead to the development of a class of mutually exclusive statements for which resolution does take place. Still, we may formulate a model of scientific activity which says that we are always doing some form of resolution when we do science because, when we measure some quantity, we are then excluding other values as candidates for that quantity.

A serious objection to this model of science is that it is never possible, in a formal way, to resolve a truth from a set of statements merely by doing experiments. The faith of the experimenter in himself, as well as some real leaps of faith in the deductive schema, are needed to choose the one truth. I think that this criticism is crucial and it justly emphasizes the importance of self in resolution-type activities. For the moment, however, the fact that most of those who are concerned with painting a model of scientific activity prefer not to admit the possibility of self playing a central role in that activity is perhaps more important than what may be true about scientific activity.*

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* That men may act in social institutions (or political ones) to force consensus about what is true is conceded by many scientists. (Recent research suggests that Newton's behavior in spreading his theory is a good example of this. [Manuel, 1968]) What they do exclude is the psyche of the scientist and they tend to see him exclusively in the social role.

The social function of assuming that scientific activity is characterized by resolution is that the reliability of the results do not depend on the person who performs the activity. Since so much of it is esoteric in nature, it is important that science assures the rest of the society that though scientists are not accountable in general, scientific activity has built in accountability. The self is left out of the resolution hypotheses for the simple reason that to admit that the self is part of it, is to take away the legitimacy of scientific resolution in social situations.

We search for a solution when we do not have a small class of truths from which to choose. A solution is a truth in a very different sense than a resolution is a truth. Solutions can be characterized by their multiplicity, and our task is to choose just one from a reasonable number of possible solutions. We find solutions to problems rather than choose from some well-defined alternatives. These problems are typically rather poorly posed and it is the function of the truth finder or solver to pose the question well enough so that he can find an answer. Much of scientific activity is actually of this type. As I argue further on, to have a problem, whether it be about science or about any other thing, represents a state of not knowing what to do or what the alternatives for action are. Since problems are not well posed, the solution to a problem turns out to involve a reformulation of the problem in such a way that the solution becomes clear and better defined. The reformulation is done by the solver, and his self can be deeply involved in doing it. We can see that wise men provide solutions to problems, while it is not so clear that we want or need wise men to resolve among well-defined choices.

Legal truth finding is a method distinct from that of resolution or solution. Justice demands that a trial arrive at a correct verdict, and that the jurors be "sure" of it. There is only one truth, the occasion is a moral one, and that truth must be very well-defined. The truth is exhibited in the decision of a jury or a judge. Facts about the case are relevant to finding the truth insofar as they contribute to the sureness of the decision.* That conviction depends on there being no reasonable doubt as to the guilt of the accused makes it unclear whether we are dealing with the problem of resolution or solution. The legal model is only slightly relevant to most cases of public decision making since rarely must we be sure that we are acting correctly. But it is significant that the vagaries of men are an intrinsic part of legal truth finding.

I now want to look at some methods of truth finding which involve the self in a more systematic way: the evaluation of social programs, heuristic reasoning, and super-empiricism. Each gives us a hint as to what the truth might be.

The evaluation of social programs may be viewed as a process of learning. One finds the truth by constantly reformulating one's understanding of what the problem is and what the desired goals are. Such a model of evaluation permits the possibility of many truths. Each of these truths depends on how the system has evolved; each incorporate action as an intrinsic part of the truth finding process, and for each, the problem is not likely to be well posed. When we evaluate, we are not only trying to decide what should be done, but we are concerned with what should have been done and what happened in the past. In this sense, evaluation is not a

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*Experts still play a complex role in the law. Expert knowledge is forced into confrontation with other expert knowledge in a trial. What is sufficiently common knowledge to be incorporated is always an area of controversy.

process of finding a most desirable truth so much as one of finding a set of do-able actions related to achievable goals that meet the needs of some group. Since the evaluator is the person who is doing this reformulation (of history), his self plays a central role in the design of the evaluation. Rather than view evaluation as a process of doing experiments independent of the personality of the experimenter, a view that is held by many, I would view evaluation as a process of becoming more aware of what the situation is and was in a certain program. This perspective makes it clear that those who do the evaluation of the program need to be those who are deeply involved in the program. The evaluators may be people who are not technically trained. They evaluate because they must understand their action better so that they may direct their future actions toward more satisfying ends.

Heuristic methods of truth finding bear a close relationship to how we think. A heuristic is a rule of thumb that may work in finding a truth. Typically, we have a collection of heuristics in our head for figuring out what may be true.

Heuristics include generate-and-test, matching, hill-climbing, and heuristic search. In generate-and-test, we have a procedure for generating possible truths and a way of testing each for truthfulness. In matching, we have a collections of true statements and match the proposed statement with one of them. In hill-climbing, we compare the statement we have with some other proposed statements, and if one is closer to being true, then we choose it as our new truest statement. In heuristic search, we try to connect what we know with what we want to test for truthfulness. We see if we can go (in a logical sense) from one statement to another by means of

a series of steps. We have a set of transformation operators which change statements into each other. We then explore applications of these operators to what we know and see if we come closer to what we want to prove. If an operator sets us closer, we remember it; otherwise it is rejected.

Implicit in all of these methods is the existence of ways for comparing statements, or for testing the truthfulness of a statement automatically. For many problem areas, these ways to not exist.

To summarize, heuristic methods of truth finding usually lead to several truths, each of which helps in working on the problem at hand. Heuristics require fairly precise problem statements.

Super-empiricism is a way of relating evidence through general archetypal laws. Super-empirical truths are well chosen examples (done by "good choosers"?) which encompass a substantial amount of observations about the world. They are not abstracted laws, but are more like ideal dramas of what takes place. Super-empirical truths are not unique, although one version of the truth may be especially useful to each man. They are usually concerned with situations involving people and they may or may not deal with well-defined problems. Super-empiricism involves a leap of faith from a set of experiences to an ideal characterization of that experience. This is an essential part of synthetic knowledge. People believe super-empirical statements because they put together so much of what they know in a systematic way and these statements provide operating models for action in the future.

Novels and plays are the most likely sources of super-empirical truths. Yet it is also possible for descriptions of activities outside of a fictional context to be true in this way. In commenting on everyday life, the truth finder may epitomize it. Mere listing of details or cases that are relevant to a certain truth is not sufficient. The truth finder must point out what makes a set of cases illustrative of an ideal type.

Super-empirical truths deeply involve the self of the knower. He must match his own experience set with the ideal picture and distinguish the most significant aspects of that experience set from other parts. He is always trying to make another knower understand by emphasizing that part of the experience of the other knower which makes it clear why the super-empirical truth is correct. This is like the Yaqui way of knowledge. When we try to understand synthetic knowledge, we will often find that truths expressed in terms of paradigmatic stories are the most effective way of telling what we know.*

Each of the preceding kinds of truth finding points up some important characteristic that is related to synthetic knowledge. Methods of solution depend on how a problem is formulated. Evaluative techniques suggest the importance of the self in describing any situation. Heuristic models are concerned with the possibility of having open and constantly changing images. And the archetypal super-empirical model suggests the importance of the images that we use internally, to organize what we know, for external statements of truth.

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*It should be possible to become fairly systematic in characterizing the value of the stories for understanding situations. In trying to set up artificial belief systems (within a machine), Colby and Smith developed measures for the credibility of a proposition. They are based on its (the proposition's) foundation in other statements that are believed (in the sense that it could be "deduced" from them), and its consistency with other believed statements (in the sense that they could be "deduced" from it).

KNOWLEDGE TECHNOLOGY

So far, our discussion has focussed on the nature of synthetic knowledge. I have tried to show how one person may teach others what he knows. I now want to examine possible techniques for conveying and improving synthetic knowledge.

A technique is a systematic procedure that is specified well enough so that someone else can understand and reproduce what you are doing.* Technique is desirable insofar as it does not become dogma and that it is modifiable by thought and by learning from experience.

To increase our capability for knowing synthetically, we shall have to educate ourselves and our institutions. Here and in later chapters, I discuss techniques and activites that can enable us to change our selves.

As I have suggested before, our problem is to develop institutionalized places for "action." In these places, our intuitive knowledge, which is highly personal, is transferred to the social realm, and our ignorance, which is also personal, becomes social risk. We want to make the self and self-interest become part of the social milieu. I propose that we do this by making one individual's synthetic knowledge interact with that of others. Interactive techniques that I shall discuss include gambling, goal-seeking behavior, coalitions, shared imagerial systems, conscious problem-solving (design), and methods of increasing intuitive power.

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*I have defined "technique" in the sense of systematic procedure, rather than in terms of a personal trick way of doing something. This is to put the definition in the same sense as technocratic has come to mean.

I want to explore a variety of techniques whereby knowers may interact and come to understand a situation. As a result of these interactions, the knowers will understand the situation better. Though they may not come to a shared or even amalgamated conception of what is known, they will have influenced each other's beliefs. There is a parallelism between the techniques I discuss here and those that I discussed in regard to group knowing and truth finding. But, in the present cases, our concern is with influence and not necessarily with coming to consensus or truth.

If we are concerned about public action, what does "understanding a situation" mean. In understanding a situation, we must know something about the possibilities for our action in it. Understanding includes both a static part -- what is, and a dynamic part -- what is possible. Even in dynamic understanding, however, we never predict. We simply see what the potention changes are. The path that is chosen is known only in action.

INTERACTIVE TECHNIQUES

Gambling or <u>efficient knowing</u> is a practical and well-specified technique for combining the knowledge of knowers. Efficient knowing is a procedure of using what we know to understand a situation, where it is assumed that the definition of the situation and the likely set of consequences are well-defined and fixed. The valuational scheme is in terms of trade-offs.

We have discussed efficient knowing before when we examined decision analysis. How people gamble and their personal estimates of odds compared

to more scientific determinations (probability and decision analysis) of the odds have received some attention. Systematic techniques have been developed to find the most fruitful way of investing in research, while minimizing cost and risk. Utilitarian procedures, such as cost-benefit analysis, are another approach to efficient knowing.

Efficient knowing technologies have some deep problems. They demand clear statements of future alternatives, and of values and probabilities. The former requirement makes it difficult for such a method of knowing to incorporate learning and changes of objectives, while the latter may represent unduly strong requirements on our ability to predict.

Strategic knowing is a modified form of efficient knowing where a cybernetic sense informs the concept of the best use of what you know. What we may learn from our inquiries will cause us to change our values, probabilities, or goals. At the same time, our current actions are seen in the context of a collection of coordinated actions in space and in time. A sense of strategic knowledge is what informs planning activities. Yet it is not often the case that those who are solving problems have such a sense. They do not appreciate how the information they gather is related to what they are trying to understand.

Strategic knowledge techniques leave out important processes relevant to synthetic knowledge. The personal dynamics involved in learning are not discussed. More importantly, no mechanism of integrating what people know, so that goals are set, is given. Strategic knowledge, like efficient knowledge, assumes that we are given the information and we need, somehow, to process it. It provides a way of integrating disparate information, but it does not provide a way for letting the information of one knower inform the judgment of another.

Coalitions of individuals in which a group of knowers is required to come to some statement about their knowledge so that they all are satisfied, provide an important medium for combining what people know. People are forced to use coalition methods when the rewards for their services are provided only to the group. Much studied in social psychology under the rubric of group problem solving, techniques involving coalitions depend primarily on personal influence. This is in direct contrast to Delphi techniques. Coalition pictures of group knowledge point up the importance of short-term bluffing for some of the actors. They take positions which they do not necessarily hold. In coalitions, there is a possibility that personal interest will be translated into a socially measurable object, for, to concede a point, someone must realize that his concession is likely to bring him more good than harm. In a coalition situation, a currency develops between individuals which relates what they know to their personal stake in that knowledge. The virtues of science are incorporated in such a process, in that, if two knowers disagree, they must come to a common statement that can be issued by the group. Strong contradictions are thus ironed out.

How does experience or knowledge become expressed in terms of this currency? If it is purely on the level of histrionic ability, which may be feigned, then why use coalitions? My guess is that, if personal influence within the group can be made to depend on the commitment of an individual to the solution of a problem, then it may be possible for coalitions to be responsive to synthetic knowledge.

Designers have to produce single things that will do a number of tasks at the same time. In fulfilling the requirements of a design, they have to synthesize. The distinctive methods they seem to use involve

breaking down a problem into component parts and then, by selecting from sets of stock solutions for the sub-problems, putting together a solution.* The process is sequential, since the solution to a current sub-problem depends on the preceding ones. It is also tentative in that a particularly difficult sub-problem may force rejection of solutions chosen for already "solved" sub-problems. This is a procedure quite suited to a learning and simple-minded creature like man.

One of the significant aspects of design as a knowledge technique is its procedural specificity. Most of the other techniques I discuss are black boxes with respect to implementation.

Imagerial schemes offer a practical technique of synthesizing knowledge and making such knowledge available to others. Synoptic images of situations, filled with particular detail (to make for easy projection), and generalized situation (to make for wide applicability), use the imagination of the knower to go from a problem statement to a course of action suggested by the image.

The syndrome model that is used to describe medical disease is a good example of this. One tries to describe a disease that is manifested in terms of distinctive characteristics easily identified by others. The intuitive understanding that someone is ill and that a set of individuals have a common illness is abstracted to a small number of identifying characteristics which will connote to another physician a similar state of health.

We might think it would be possible to generate all the syndromes and classify people's states of health (with respect to such syndromes) by systematic combinatorial methods. But most such combinations would have a population that is very low, if not zero. The function of imagerial schemes, such as syndromes, is that the experience of an expert is used to

*How exactly one should, or does, break down and then put together a problem is a question of current controversy.

generate the most likely set of cases. Archetypes, are similar to syndromes. Myths are yet another way of organizing synthetic knowledge. The myth becomes a way of accounting for a large amount of data yet, at the same time, it is a synthesis of what people know, both in remembered experience (history) and personal experience.

INTERACTIONIST KNOWING

A big technological change in knowing would be an explicit and continuous concern with the knower in the process of figuring out what is known. Rather than develop procedures which systematically proscribe the actions of the knower so that he is not overly involved, we might admit of all involvements but require as full reporting of them as possible.*

In social research, the methods characteristic of symbolic interactionism offer a good example of an ambiguity with respect to this point. The scientific Comtean model is not dead in the minds of the symbolic interactionists and they do not want to get too personal. So they prescribe the degree of involvement of the knower if he is not to become "overly" influential on his findings. On the other hand, he is encouraged to deeply involve himself in his situation and take participant roles, since it is assumed that this is the only way to learn some things.

Psychotherapists must also be aware of their behavior in the process of knowing. Training analysis serves this funtion by giving them first-hand experience of being analysands. Surgeons do not have their appendixes removed, however.

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*The cost of doing this reporting should not be underestimated. Since the knower wants to convince others of what he knows, he might consider this restraint on his behavior worth the cost. Still, some kinds of known things are never likely to be known except by one person, since reporting the process of knowing either by recollection or real-time recording, destroys the experience.

The techniques mentioned in this section represent a beginning in the development of methods of teaching synthetic knowers. Where we go from here depends on the social utility of these techniques. In chapter 9, I try to describe a society responsive to synthetic knowledge and, in chapter 10, I investigate some teaching methods.

CONCLUSION

A synthesizing capability is the basis for a certain kind of knowing useful in public action. This knowledge can be challenged, tested for "truth," and taught to others. We will next want to see how it should be applied to situations which we will call problematic.

BIBLIOGRAPHIC NOTES

Scriven discusses exactly what is involved in "seeing" and the problems involved with intermediate images. Kaplan, on intuition, and Gouldner, on wisdom, investigate social science knowledge. Westcott has a comprehensive review of intuition. Though I have read Laing, it was not in the context of writing this. His influence must have gotten through the back door.

Churchman, and Minsky, emphasize the importance of the user and semantic character in organizing what is known (the last part of Minsky's address to the ACM on problem thinking is a good statement of the value of program writing as a way of learning). Rescher and Helmer gives a detailed analysis of inexact knowledge to justify the Delphi procedure.

Chomsky (see Hook for some comments) expresses his philosophic position best in Language and Mind. See also the comments by Harman.

Advice-taking and giving are discussed in McCarthy and in Krieger (1970).

There is a literature on intelligence in organizations which Wilensky covers. He also discusses models of truth finding.

The Delphi method is covered in Helmer. Raiffa presents the basic ideas of decision analysis in an easily understood form. Schelling and Goffman, from rather different perspectives, come to rather similar conclusions about risk.

Casteneda's anthropological study of a guru provided the inspiration for my exposition of the Yaqui way. Burke gives a concise summary of dramatism.

Although Ayer really does not deal with the meat of social knowing, his discussion of the distinctions that can be made is valuable. Lichtman's Marxist critique of the sociology of knowledge, as propounded by Mead and followers, is worth reading.

The third section of this chapter has similar references as the second. Newell should be consulted for a discussion of problems and heuristics. Webber also discusses problems in social and political contexts.

Denzin gives a good methodological summary of symbolic interactionism. Cohen reviews the literature on gambling. Churchman discusses strategic knowing. Simon gives a useful description of design.

Like Laing, Boulding's influence on this draft has only been indirect through current culture and my past reading of him in a different context.

Buckley makes the useful distinction between economic and dramaturgic modes.

PROBLEMS

I have talked about the nature of knowledge and how it is confirmed. I have also talked about planning as a model for an activity which combines knowing and acting. Still, I have not investigated the process by which we use our knowledge to figure out what to do. A useful model of such a process is problem solving.

PROBLEMS

In some situations, problems are ways we formulate our inability to figure out what to do. Situations come first, and problems are abstractions from them.* Our discomfort with a situation is the basis for a problem. Planning usually consists of problems. Frequently public policymaking is also formulated in this fashion. But is this always the case? I think not.

There are many times when the way we deal with our inability to figure out what to do is not posed in the form of a problem. There are some situations where we have questions, but we know what to do about answering them. If we know what to do right now, we do not have a problem right now. It is conceivable though, that a moment later we are in a problematic situation. For example, scientific tests to determine what is true are not really problems, in this sense, since the actions for performing a scientific test are well specified.

*Note that we can have a situation consisting of problems. This essay is a statement of, and working on, a problem about problems.

Another situation in which we do not say that we have a problem is when the actions we might take do not exclude or affect each other. Similarly, a problem does not exist if no matter what we do, things will turn out fine. We may still have a question of choice; however, we do not face a problem but a dilemma.

From these observations about what a problem is not, we might conclude that problems have two important characteristics. The first is that problems involve action that takes place now, and second, problems involve choices that matter.

I want to discuss the nature of having a problem, the nature of problems, and what it means to work on a problem. This discussion will provide clues about where we, as problem posing people, involve ourselves in the problem process. In all cases, the problems we are discussing are social and political and, most often, are concerned with public action.

CONVENTIONAL PROBLEM SOLVING

This chapter does not discuss much of what would be called conventional work on problem solving. Within psychology and computer science, substantial research has been invested in trying to understand the nature of problem solving. The research designs are all of the same sort. Given a problem statement that is fairly precise and descriptively complete, how does a person work on it, or how should a machine be programmed to work on the problem? Almost always, it is assumed that a solution exists, in the sense that a short statement can be given which "solves" the problem.

Kleinmuntz, Taylor, and Newell should be consulted for some recent reviews of this work. Let me quote from Newell: "A rather general diagram, shown in Fig. 10.1 [next page], will serve to convey a view of problem solving that captures a good deal of what is known, both casually

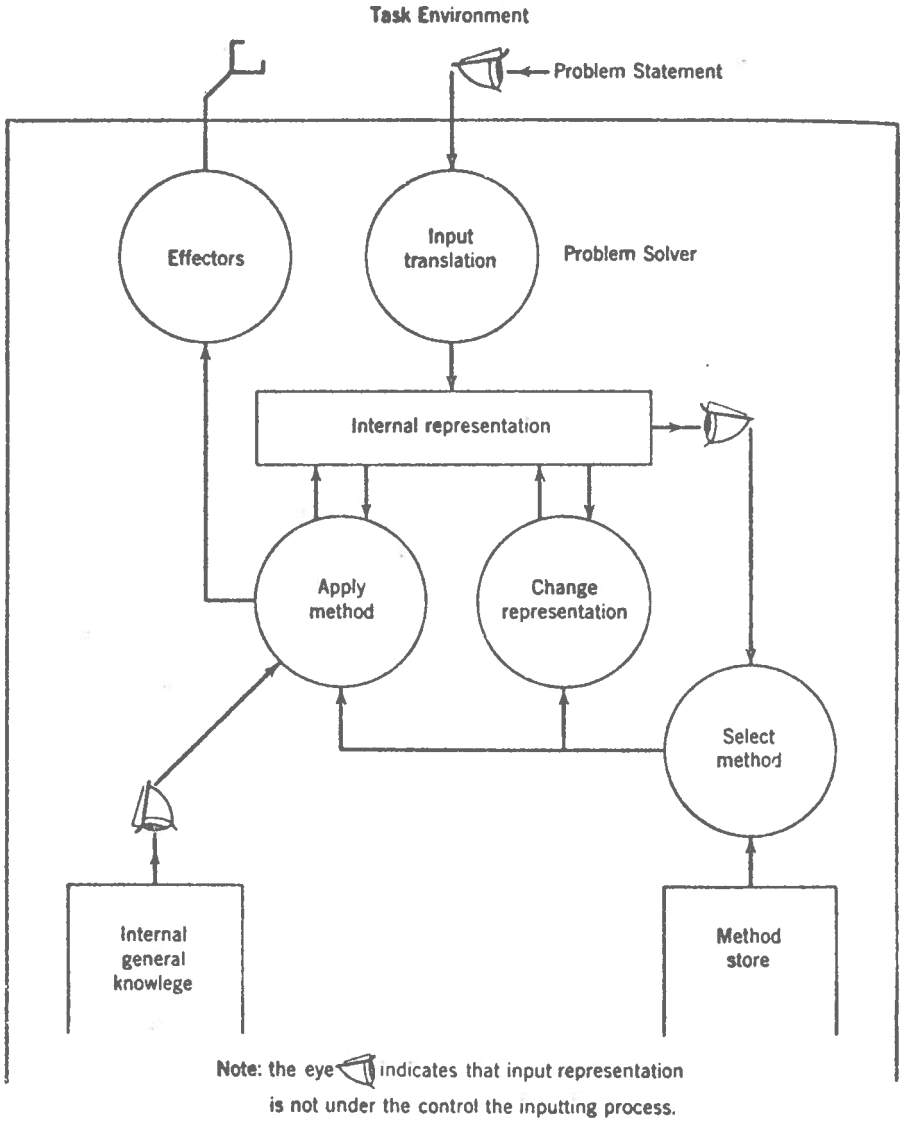

Figure 10.1. General schema of a problem solver

and scientifically. A problem solver exists in a task environment, some small part of which is the immediate stimulus for evoking the problem and which thus serves as the initial problem statement.* This external representation is translated into some internal representation (a condition, if you please, for assimilation and acceptance of the problem by the problem solver). There is located within the memory of the problem solver a collection of methods. A method is some organized program or plan for behavior that manipulates the internal representation in an attempt to solve the problem. For the type of problem solvers we have in mind -- business men, analysts, etc. -- there exist many relatively independent methods, so that the total behavior of the problem solver is made up as an iterative cycle in which methods are selected on the basis of current information (in the internal representation) and tried with consequent modification of the internal representation, and a new method is selected." (Newell, 1969, pp. 367-369)

The problems to which I am directing my attention do not have solutions in general. As I will discuss, they are almost always so poorly posed that the studies from conventional problem solving do not apply directly. The studies may apply when some of the big problems are reduced to subproblems that are of the conventional character.

Now let us explore what we mean when we say that we have a problem.

HAVING A PROBLEM

Problems become defined in terms of one's own experience and self. They are had by individuals who have had some experience related to

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*"Its statement form is clear when given linguistically, as in 'Where do we locate the new warehouse?' Otherwise, 'statement' is to be taken metaphorically as comprising those clues in the environment attended to by the problem solver that indicate to him the existence of the problem."

the problem. To "have a problem" is an experience. Having questions about planning, is to have problems.

Problems are held by people. Since a problem involves a choice of current action, and those who act are individuals, only persons can have problems. When I say that a society or an organization has a problem, I am saying that I have proceeded to synthesize my experience about some aspect of that collectivity and defined what I believe are the choices available to each member of the society. But the problem is posed by me. Others may concur in the definition or choose another one. Often when people say that the society has a problem, what they are trying to do is to co-opt (by taking over the problem defining process) the set of choices that are to be designated by the members of the society.

Problems are not suppositional, for they involve genuine choices of action. We may be able to feel that we are dealing with a problem outside of history, but all problems that are genuine involve actions that are likely to be taken. Since a problem is posed in time, we may view a problem as a critical point in a sequence of actions and view the action previous to the problem's statement as the experiential base for posing the problem. Our "working" on the problem is, to a large extent, a choosing of our future actions.

Because persons have had different previous experiences, it is unlikely that problems held by one person are held by another. A situation may seem problematic to two individuals but how they define the problem is likely to be substantially different for each. A situation that may seem problematic to one person may not seem problematic to another. For another person the choice may be clear, and the actions may

not involve thought or alternatives. Typically, people with different cultural backgrounds will define problems differently, not only because they may have a different language for describing situations, but also because different situations may have choices that matter and are valued.

These considerations suggest that problems must be self-defined or they are not true problems for the person who has them. We may view problems defined for a person by someone other than himself, as cases of gross manipulation of an individual's action. One's problems must come from one's self. If not, then whose choices are being faced, whose alternatives of action matter? In a sense, problems defined by someone else result in false actions since you are not acting in terms that make sense to you, but to someone else. To have problems is part of being autonomous and, in having a problem, one is setting up his own view of the environment. Insofar as we each have our own problems, we have control of an image of the world and the image we convey to others in that world.

These observations have immediate application to social research. Outsiders, typically, enter a community, study its operation, and proceed to define the problems of that community. From what I have said so far, this behavior amounts to taking over the image-making capabilities of a community and it represents a significant power play on the part of the researcher: The usual reply is that the ability of a community to define its own problems is rather weak and, therefore, "they" need the aid of outside help. This may be true, but the ethics of social research, especially those concerning full disclosure and scientific accuracy, are not consonant with the possibility of a community's retaining sufficient control over its image after it has called in the researcher. I would expect that if social research is to avoid this intrinsically dangerous character of its work, it will have to modify its ethic.

Planners, whether formally designated or not, pose the questions about planning. They are concerned about a community, whether national or local. They are in a similar position as the social researchers and the previous argument applies to them. But the argument applies in an even stronger form to planners, since their questions are about current actions and future alternatives, namely, problems.

THE NATURE OF PROBLEMS

I now want to look at the characteristics of problems that distinguish one problem from another. These characteristics include the structure or definition of a problem, its malleability to re-definition, and the nature of the solution to a problem. I will emphasize the importance of the individual to a problem's specification.

Problems can be more or less well-defined and well-prescribed. The quality of the definition of a problem determines the way we work on it. I shall call the work we do on problems, once they have been initially stated, the process of de-problemizing a situation. I note that de-problemizing refers to the situation which is the source of a problem, and not just the problem itself. If you put energy into the problem and do things about it, you are "working" on it. If you believe that the problem has a specific de-problemization which really deals with the questions in the problem-as-posed, then a "solution" is said to exist.

A problem related to a situation is well-defined if a way of de-problemizing the situation is available which is well specified and leads to a satisfying prescription for action on the part of the problem poser. Another characteristic that is significant for the well-definedness of a problem is that the method of de-problemizing is <u>automatic</u>, or sufficiently

well specified so that we can give an explicit set of rules for a person to de-problemize the situation for himself (or with a group). This means that, not only must the de-problemizing method be clearly stated, but also that the person with the problem can actually follow the instructions. Our definition of a well-defined problem is peculiar in that we require such a systematic procedure for de-problemizing the situation. Frequently, such systematic procedures permit us to then give a set of criteria of qualities to be searched for in the problem statement to know if the problem is well-defined. This is the characteristic of much of formal logic.

Most of the time, this criterial set does not exist. Usually, we deal with systems which are self-organizing, which can exhibit goal-oriented behavior, and which are self-examining. As a result, we never can give a simple rule for saying when we have de-problemized a situation; nor can we say that we have a solution that is true or false in the sense that it logically follows from the problem statement; nor can we say that we may apply a de-problemizing method that we have developed in the past to the current situation. The past influences our description of the present, yet there is no reason to believe that the present is similar to the past. Situations tend to be viewed as unique in self-organizing systems and that makes their de-problemizing extraordinarily difficult.

Our second major difficulty is that we do not have a good language for describing most problems. There is no canonical form for posing problems and, therefore, there is no obvious way of limiting our solution sets. For a similar reason, the set of permissible operations that we may perform to de-problemize a situation is unknown, and may arise only out of the statement of the problem. To summarize, there does not seem to be much hope for problem working (or "solving") systems.

Most problems that are faced in public policy-making are poorly defined since they involve a self-organizing system, which includes the problem worker, and an insufficiently powerful descriptive language to provide for canonical treatment of situations. If you believe that you have a handle on how to de-problemize a public policy question, then I suspect that it is likely that a good deal of your self is involved in your technique. You must be capable of understanding where you are within a situation, abstracting what you understand about that situation and relating it to what other people understand. Then you must believe that you can provide a set of actions for yourself which will de-problemize the situation. Insofar as problems are posed by someone in the public realm, and these problems are real non-cooptive ones, then the self of the problem poser is deeply involved in the problem.

Not only are we concerned with the degree of definition or problems, but we are also concerned with the possibility of changing those definitions. It is the experience of most problem workers that the ability to change our definition of the problem is one of the most powerful tools in working on a problem. Having a large number of ways of representing a problem is very much like having a full three-dimensional view of a scene. What turns out to be significant in many problem areas is that there exists a representation of the problem, a de-problemizing representation, which immediately suggests a suitable de-problemization of the situation.

When people work on problems, they often try to tell someone else about the problem. In conveying the essence of the problem to someone else, the problem may get re-defined either by the person who is telling of the problem or by the person who is listening. The interaction of the selves

in such a transactive procedure injects the possibility of new representations of the problem arising because of the experience of the hearer. Thus, a problem that is malleable to re-definition is also one that is likely to be de-problemized.

Lastly, we want to consider the question of whether problems are solved. A solution to a problem exists when we have a situation in which a series of well-defined choices for action are posed and one choice is taken. Most problems are not solved, but some are. Frequently the problems we solve are the ones for which we do not have time to do much thinking, or those which are so resistant to redefinition we solve them in an ad hoc way. Note that the solution of a problem may not be equivalent to the de-problemizing of a situation. The original reason why the situation became a problem may still exist, but we have bought short-term relief from the annoyance that we had.

Most problems are not solved, but only de-problemized. The reason why the situation became a problem fades away. What happens is that the problem is reposed and weakened and sections or parts of the problem may even be solved. Also, we may not really wish to solve a problem, but only wish to work on its solution. In this sense, de-problemizing is an active process that is beneficial of itself. It is often said that a man who poses a problem also possesses its solution within himself. No one else can possibly offer him a solution since his motivating concern is dealing with the original sources of the problem and not the problem-as-posed.

I have talked a good deal about having a problem and what problems are and I even mentioned the process of working on a problem. But I have not discussed problem working. I want to do that now.

WORKING ON A PROBLEM

We work on problems not only to de-problemize the situations that brought them out, but because we enjoy working on them as such. In working out a problem we are also working out our own positions with respect to the questions posed, perhaps implicitly, by the problem.

If we are concerned with specific methods that are used to work on problems, methods which manipulate the problems and which may inform our own self-conceptions, then we do not find much relevant research. As I have said, most research has assumed that problems are well enough posed so that our major concern is with solution. It is possible to develop models of problem working which include a self which learns, which has experience, and which increases its experience, but even here most models assume remarkably well-defined problems.

Artificial intelligence research suggests some characteristics of the way fairly well-defined problems are worked. Sometimes the problems are just solved, because the way we have described the problem immediately leads to a solution. More frequently, we have to try a variety of ways of describing a problem until one leads to a solution. Another possible technique is to assume various simplified forms of the problem, for which solutions are clear, and then apply such solutions to the more complex problem. All of these techniques are helpful in conceptualizing the methods that we use to work problems that are well-defined. But very little is said, even in this research, about dealing with problems which are not well-defined in their original statement.

I expect that, if problems are poorly posed, we will have to find techniques of problem-solving and problem-working which will depend on the past experience of the problem solver. Some of these techniques may be uniquely

suited to human beings. "Think of God." or "Take a nap." might be good recommendations. Fancier procedures, such as synectics or brainstorming, could be helpful. But if we want to have procedures that will help a machine to deal with poorly posed problems, a different style of prescription will be needed.

Some of the heuristic methods discussed in chapter 6 might help. But they will probably have to be specialized to certain fields of problems and they will have to assume a certain store (experience) of cases. They become part of a machine which has "experience" and matches new problems to old experiences. For the matching procedures to work at all, a stylized presentation of problems is likely to be required. A machine has, in effect, a "cognitive style" and can best interact with problems presented by a certain type of person.

CONCLUSIONS

I have tried to emphasize the importance of self in the definition and working of problems in this chapter. I have suggested that if the self is not involved at that level, then it is likely that problem solving and problem-working become an oppressive task which does not lead to answers true to the person who is working them. We now want to ask what kinds of organizations are most likely to provide sufficiently open environments so that problem-working may be responsive to the self. Such organizations will be needed in future public policy research and administration.

BIBLIOGRAPHIC NOTES

Polya offers an extended discussion of "having a problem" and the use of hearistics in mathematics.

Newell discusses ill-structured problems. Reitman is an earlier source for this question. The volume edited by Kleinmuntz on problem solving gives a synoptic review of the field. Taylor's article is similarly useful. Rittel and Webber point out the essential peculiarities of social and political problems.

Within the artificial intelligence field, Amarel has been forceful in emphasizing the importance of representations. Simon's small volume gives a good overview. Minsky's article makes an interesting point when he calls the simplification I refer to on p. 7-11 "planning." Others have called it "design."

ORGANIZATIONS

Where do you (and your self) work out public policy problems? It seems that this activity almost always takes place in organized groups. In this chapter, I shall be concerned with the self in organizations. Studies of the self in organizations are frequently concerned with the role of experts. We find that traditional models of expertise, even as offered in some of the most recent studies, are inadequate. These models over-emphasize the importance of narrowly defined technical knowledge and under-emphasize the significance of personal commitment in the role model of the expert. I suspect that the source of this misplaced emphasis is the substantial explosion of the importance of certain technologies (electronic and space) in some few fields that have been studied. A concomitant rise in the adherence to a non-political ideal on the part of the scientific community, as they have become better supported by the polity, is a second reason.

Yet, technique operates in many environments, some of which have constraints on its organizing power. Therefore, the persons who have technique have a lot more to do with how they exercise their selves than what is determined just by this knowledge. Also, the base for technical knowledge is, in part, the commitment of the knower and that, too, transcends the knowledge of the technician.

I want to explore the consequences of taking this perspective (and those that I have presented in the last few chapters) as a serious basis for organizational design and functioning.

THE SELF IN THE PUBLIC REALM

I discern a complex of constraints that will appear when one operates in the public realm and at the same time admits the possibility of a highly subjective use of one's own self. Most of these constraints are not particular to operation in the public sector, and some organizational models have been developed to deal with them. We shall find, however, that a few of these constraints are special and we will be forced to search for an adequate organizational model.

The constraints:

(1) Problems are defined by the expert himself and the answers are similarly defined. Someone has to articulate the source of public discontent, and it is frequently the role of the expert to do so. Politicians and others may choose to define the problem, but then they will often search for confirmation from among the class of professional knowers. The problems which the expert works on are his own, and he must somehow convince others that his definition of the problem is an appropriate one.

(2) Problems rarely repeat in real life situations. When they seem to repeat, it is the small differences between previous formulations of the problem and the current one that are crucial to the nature of the desired current solution. Therefore, constant innovation is required on the part of the problem-solver. He must be aware of changes in the style of problem definition and changes in the criteria for the solution of problems.

(3) No action in the public sector is without risk or without losers. Because men are thinking beings and can react to both people's actions and the intentions of their actions, their responses to intervention in the public sector are difficult to predict. Designers of public interventions will find that, often, the consequences of effecting their designs are surprises. These surprises will surprise both the designers and the public, and designs will have to be altered in light of them. The public and the experts must be prepared for this. A knower must be insulated from his failures, in this sense, if he is to succeed in prescribing good actions some of the time.

(4) Because problems are self-defined, are constantly changing, and are unpredictable in their consequences, it is extraordinarily difficult to evaluate the quality of public advice. We rarely can do true social experiments since, if something is learned along the way, we would rather implement it than wait for the next trial. The classical model of a controlled experiment is not useful in a public political situation. If one views evaluation procedures in terms of a learning model, one way out of the controlled experiment dilemma, then we still do not know whose learning is to be measured and how to measure it. The adviser in public does not know the criteria by which his success will be evaluated.

These next two constraints are particular to the self operating in the public arena.

(5) The results of working on problems will affect the self of the problem worker. Usually, those who work on problems are involved with the problem situation in an intimate way. In any case, they have

some commitment to the kind of answer they offer. Minimally, they know what their own recommendations are and can act knowing that a policy maker knows of their recommendation. The public adviser is constantly haunted by several levels of consciousness greater than most others in the society.

(6) His consciousness may even extend to the fact that his own self-interest is involved in the recommendations he makes. Advice that is given may affect the distribution of goods and power. If advice giving is not a complete sham, then power is intimately involved with what one knows. Advisers to the public are deeply involved with political process.

The self of the advice giver is intimately involved with the advice he gives. As a result, it is difficult to disentangle the observer-advice giver from the situation-advice given. This makes for special roles and organizations for advice giving.

SOME MODEL ORGANIZATIONS

Are there organizations that have successfully dealt with all of these constraints? I think not. My reason for believing so is that the self, as such, and the political nature of expertise are explicitly denied roles, at least overtly,in public policy making and advice. Even in conventional research, their role is minimal if it exists at all.

Those who take politics, Marx, and Freud seriously center their attention on these roles. Both in the larger sphere of models of history,

and in models of personal behavior in social contexts, the significance of power and sex as motivations for knowledge are explicitly analyzed. This attitude leads to powerful critiques of what is, but offers a less satisfactory image of what should be. An erotic freedom and approach to the environment just does not say enough about what to do to the man who is organizing to do public policy research and understanding. So we must look elsewhere.

We do find a more modest approximation to a public policy organization in innovative scientific research. All the constraints but the last two are present. In innovative research, problems must be defined by the researcher himself; innovation, by definition, is required; risk is substantial; and how research should be evaluated is difficult to know, especially in its intermediate stages (which may last many years).

The parallel between innovative scientific research and public policy advising is not surprising when we realize that information needs and production requirements critically influence organizational structure. As I have just pointed out, scientific research organizations and public policy advisory groups have very similar purposes when viewed in this light.

What has been found in studies of scientific research organizations? They are characterized by a non-hierarchical structure linked in a loose and changing way. Individual fulfillment is not viewed as being subordinate to organizational success, but rather as coequal to, if not paramount over, organizational goals. The structure of the organization is such that competence in solving problems as formulated

determines command structures rather than hierarchical positions within the organization.*

It would seem that this model should be a good first approximation to some of the characteristics of a public advice organization. But it is not perfect. Let us look carefully at some of the differences likely to be induced by the constraints of politics and self.

Knowledge is political. What one knows can and does influence the distribution of power and those who are powerful can and do determine what is known. Yet this model does not acknowledge that knowers are a class and have their own self-interests. Nor does it acknowledge that different knowledge will serve the interests of different classes. Also, since the content of most scientific research is different than that of public policy making in more than subtle ways, the ethics of science, which involve something about knowing the most about things, will conflict with the ethics of public policy making, where knowledge about a situation should not be too explicit if we wish to have a reasonable working out of problems (by means of compromises and deals).

Nor is the self dealt with in an adequate way in these models. If individual competence is highly prized in scientific research, it is the individual as a person and not as his self that is valued. It is assumed that his psyche plays a small role in what happens, and it is also assumed that this role can eventually be washed away. For example, the report of the hippie systems programmer should look no

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*In organizations where rank cannot be avoided, such as the army, adaptations to this rule are made. Men are summarily promoted to suitable ranks dependent on their technical expertise, avoiding the normal process of rising through the ranks.

different than that of the straight one. (It might have to be better for the hippie to have been kept on the staff.) We find that in order to adequately analyze people's public behavior (for policymaking) we must know of their psyches, and not only of their more publicly given reasons for holding certain beliefs. The nature of confirmation in advice giving is such that it is possible to justify, with seemingly equal degrees of "objectivity", disparate positions. The psyche of knowers must be integrated into what is known.

Still, it may be wondered why we have to be concerned with a different definition of expert when we are dealing with public advice giving as contrasted to scientific research. An expert exists only in a polity. To be an expert means that some amount of choice is assigned to you. A polity permits someone, most frequently in a public fashion, to make choices for it, and thereby, perhaps temporarily, gives up some of its power. Scientific research and public advice giving represent very different polities. Hence the very different definitions of expertise.

ORGANIZATIONS FOR ADVICE GIVING

These problems of organizational design are likely to be resolved by designing organizations with two special characteristics. The first is that we invest the authority of expertise in those who have a prudent <u>personal</u> risk in the venture to which they are giving advice. They must be committed to the organization in which policy is carried out and not to some outside (professional) organization. This means that the designation of expertise may often be vested in those whose technical competence, as conventionally defined, is low,

but whose commitment is high. We then will make explicit allowance for the self in public policy-making and for the interest of the self and the class of knowers in such action.

There may be some problems with duplicity on the part of knowers. They may say they are committed but really not be. There is not much we can do about this. Another problem will be that professional organizations, which set standards and certify professionals, become useless artifacts in this system. Their resistance to it will be substantial. Still, I would think that a personal risk criterion is a good one. Experts need to be accountable, both to their professional interests and to those whom they help. If accountability criteria are difficult to set, especially on the output or user side, it does not mean that we can ignore them.

A second requirement will be some arrangement to diffuse through the organization the knowledge possessed by the so-called experts. It will then be possible for the commitment of the experts to lead to belief in their recommendations by members of the organization. Not only will they (the organization's members) be convinced of the goodness of the recommendation, but they will believe it and have a commitment to making the recommendation succeed. Such a diffusion of knowledge is likely to prevent the creation of elites within organizations, especially if these elites are of those who are most committed.

INDIVIDUALS

These recommendations will be very demanding on people since high degrees of trust and openness will be required. People will

have to be able to tolerate high degrees of uncertainty, be non-judgmental, and trusting. A social commitment of the individual self is needed if we are to use both commitment and knowledge diffusion in the expert roles. It is likely that this kind of social commitment will meet with resistance since experts and others may view it as a fragmentation of the self. Also, knowledge of ourselves is frightening to most of us, yet if we are to be responsible in these situations we shall have to know more about ourselves. The demands likely to be placed on the self, when we use our selves in public advising, will need a specially well trained self. I now want to discuss how such selves are likely to be developed.

BIBLIOGRAPHIC NOTES

Rittel and Webber have defined the nature of public policy problems that make them difficult and perhaps "wicked." Robinson is useful on the Freudian left.

Burns and Stalker, Wilensky, and Argyris talk of the organization of systems for producing and distributing intelligence.

Maslow, in discussing the psychology of science and the problems of these special experts (Theory Z), provides part of a new model for the expert.

BEYOND POST-INDUSTRIALISM

I now want to explore the larger societal implications of a commitment to self knowledge in public action. This will lead into a discussion of societal forecasting. I will develop a heuristic model for understanding (rather than predicting) coherent social change in terms of a theory of crucial resources.

I then want to explore how similar models underlie the current set of predictions of an oncoming post-industrial society (PIS). There are some flaws in these predictions, both in the statements that we are in a PIS in America now, and in seeing PIS as a long term trend. (Which part of our society is PIS and whose interests are served by saying that PIS is the wave of the future?) I will propose that a beyond post-industrial society (BPIS) model should provide a decent prediction of what might be, an accurate reflection of some current trends, and an ideological alternative to PIS.

I describe the characteristics of a BPIS based on feeling and self knowledge. I then suggest possible ways we might measure the state of a society to determine if it is BPIS. Finally, I include an appendix by Peter Marris which is critical of the "newness" claim I make. (I am not sure how to answer Marris' remarks, since I really do not disagree with what he says.) In the next chapter, I discuss the structure of BPIS in more detail.

PREDICTIONS

I view future prediction as political and present oriented. The future that is predicted, and the images conveyed by these predictions, determines the conceptual possibilities for societal direction. When we assert that the society is changing in a certain direction, persons who are convinced by these assertions will act in ways to fulfill the prophesies. It is true that some future are "impossible," but most are not. People who sketch future societies create determining images of the future. And in doing so, they are political for they can affect the power distribution that will be.*

Future prediction is certainly present oriented. It tells us about the future so that we may affect our present action. A more subtle point is that future prediction cannot really be about the future since it cannot be tested against future events. Very narrow predictions can be tested. But usually, the process of making a prediction changes the situation in which people act. Sophisticated predictions can take these reactions into account. But even they cannot deal very well with innovations.

One value of predictions for the future is that we can define surprises better. Without modern physics, the fact that a rocket lands on the moon is a surprise; with it, the fact that we miss our landing point by 100 meters is a surprise. We note that such a surprise is used

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*A more cynical view is that those in power control the image making apparatus (the future studiers) and, therefore, futurism is mere legitimation of the present. I think that this control is never perfect, and sometimes legitimating revolutionary images do have the good fortune of being adopted by social changers.

to improve prediction. When this happens for future studies, and I think that it will not occur soon, then systematic prediction can be said to be mature.

It will not occur soon because so many of our predictions are of, and in, complex environments, in which we cannot adequately describe our assumptions. Also, most ceteris paribus assumptions give out too easily. So most of the time, when we make societal predictions, we end up learning about how society works now.

The predictions I will be discussing here are political and present oriented. I will try to show how they select out certain of today's activities for future growth and dominance.

POST-INDUSTRIAL SOCIETY

It is quite popular, today, to predict the coming, if not current presence, of a post-industrial society (PIS). Preliminary to describing what might be beyond PIS, or alternative to it, I want to examine the discussion of post-industrialism in the literature.

Industrial society, in which the factory was a social force and mechanics and thermodynamics were the basis for physical (as contrasted to political) force, has been around for a long time now. After a few hundred years, one would expect that students of society would try to see if different formulations of society, alternative to the industrial model, would be of use. Also, it might be expected that industrialization would not be a completely stable style, and would have self-transforming components causing industrial society to be superseded.

The United States has convinced itself by the end of the second third of this century that things have really changed. By the end of the

first third, Recent Social Trends had appeared and systematic measures of social change were institutionalized. In the past few years, these changes have come to be called post-industrial. What are their characteristics?

PIS is one in which theoretical knowledge plays a crucial role. As a result, the institutions of education become the central ones. Concomitantly, the service sector of the economy becomes more significant (in some sense) than the manufacturing sector. Technologically, the rise of electronic technology (transistors and computers), as contrasted to older technologies, becomes the hallmark of change.

Perhaps most curious is the assertion that conventional politics is becoming obsolete. Marxist analysis no longer has its conventional meaning since it was a description of an industrializing society, and we are now post-industrial. Whether or not we are "beyond ideology," we are supposedly in a different place.

Many people are unhappy with the post-industrial model. Some might quibble with the statistics, but the real argument takes place on different fronts -- in terms of politics or humanism.

The political critiques of the PIS model say that it is insufficiently analytic about the nature of power. PIS is advocated by those who are in the university -- this of itself does not vitiate it as an idea, but the source does influence the assessment of the importance of trends. These trends, plainly argued by the advocates of PIS, would result in increasing centralizations of power and even less control over life being exercised by ordinary men. The technical character of government would result in some form of technocracy. Also, PIS seems quite irrelevant to the underclasses. The poor do not seem to be a part of PIS and more importantly,

they will be left even further behind as time goes on. What is needed is a future which systematically incorporates the left-outs as a product of the predicted trends.*

Humanistically, the critiques of PIS take off from the "scientific" character of the knowledge that is used to govern. The limited conceptions of man's abilities implied by the development of a meritocratic intellectual elite, and the behavioral science model of society, clashes with current conceptions in humanistic psychology.

An amalgam of these objections is found in the more anarchistic critics. They assert that power must be decentralized and men thereby will be humanized. Technical knowledge is only secondary to this goal and, more importantly, might need to be abandoned since it would be in opposition to a more anarchic world.

My own view is that it is not worth arguing with the "facts" about PIS. Rather, one should argue with the assumption that society will be knowledge-based as a long-term trend. For any single cohort, I would guess that it will be a short time for the cohort to get over the knowledge stage. Knowledge and "scientific" style, if they include some sort of societal self-examination, will be overtaken by their examiners. A question-asking society will have a hard time maintaining the status-quo, and that is why we must try to see what are the alternatives or immediate successors to PIS.

BEYOND POST-INDUSTRIALISM

Now I want to argue that a major problem for planful actors beyond or alternative to post-industrialism will be making policy that is related to

*Leiss suggests that the "newness" claim that is made for knowledge as an important factor in production is suspect. Actually, knowledge has been seen as such a factor for a very long time.

affect. How we might justify such a statement is the subject of this section.*

In saying that affect will become more important in the future, I mean that affect will be a resource crucial to the functioning and politics of society. The heuristic that I offer for understanding how change occurs is a model that is based on the succession of values (and consequently valued objects, goals and resources). My purpose is not to predict the future in any sense, but to advocate the possibility of an alternative future. (I could write a novel, but as I suggested earlier, what I am doing now is the best I can do.)

In order to state my principle of succession, we will need a definition of a crucial resource. A crucial resource is one that will be critical to the production of the desired objects or states of the social system.** The word "resource" is intended to convey the connotation that is given when one uses the words "natural resources." An object becomes a resource when it is designated by man as being fundamental to some other desired end. No commodity, no material, is objectively a resource. Resource status may come and go, dependent on the needs of men for materials.

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*This section might be called an effort in "value impact forecasting". Baier, 1969, has a series of seminal articles on how values can be used as predictive tools. Toffler's article discusses the role of the value impact forecaster. Baier and Rescher's articles go into some detail about how we might predict values and use these predictions. Williams, 1967, also discusses the problem of following the changes of values and measuring such. Taviss, 1967, suggests that value changes take place when it becomes beneficial (in a utilitarian sense) to change. This is much like my analysis, in which the concept of a resource incorporates the changing costs of maintaining a value.

**"Critical" is used here in the same sense that it is used in "critical path method." Note that there are some activities, like food production, essential to the survival of any society (or individual in this case), but not critical to the goals of a society which does not worry mostly about them, like starvation.

With these definitions, it becomes almost a tautology to say that the crucial resources in the society are those resources which are most critical to fulfilling the goals of that society. Crucial resources and their consequent goals are intimately related.

When do the crucial resources change? Changes in the crucial resources and their consequent goals occur when it becomes uneconomic to maintain their present status. A resource may become so plentiful that it is no longer crucial compared to other materials. The goals to which the resource was instrumental are fulfilled. For example, food is no longer a crucial resource in the U. S. and the satiation of hunger is no longer a goal (with some notable exceptions). Another possibility is that a resource may become so costly that the goals to which it is instrumental are abandoned. Land, as a representation of political and social worth for each person or family, was once a goal in this country. Now, most land as a physical good is no longer available and this goal has been abandoned.*

This is a peculiar definition of resources (in "crucial resources"). Usually the goals remain fixed and resources are substituted (depending on which are cheapest) over time to fulfil these goals. Crucial resources are defined partly in terms of how they fulfil goals and the substitutibility idea really does not apply. When we talk about the succession of consequent goals below, we shall see that we can define goals in such a way that resources do play a conventional role.

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* Wilson, 1970, has taken a view similar to this one. However, he assumes that the needs, à la Maslow, are a progression such that satisfying one causes people to go onto the next.

When crucial resources and consequent goals are abandoned, new ones must emerge. Is there a way of understanding the sequence of goals?

What will be the next need for men? Does there exist a hierarchy of needs of men in society? At various times, religions and other philosophies have tried to specify these needs. More recently, psychological research by Maslow & Rogers has suggested that there may be a needs structure that can be "scientifically" determined.

I want to argue that these hierarchies provide us with a means for understanding future goals and crucial resources. As a speculative principle, I will define the following "true" goal: The developmental needs of individual men become the basis for the sequence of developmental goals for our social system. Ontogeny may recapulate phylogeny, but here we have reversed the picture.

Such a synoptic view of history is easily falsified.* In doing this survey we hope to get some idea of what will be the successor to PIS.

I want to try to relate some of recent history to the needs structure of man and thereby set the stage for looking at future needs.** The chart below summarizes the argument.

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*The purpose of this kind of rule is not to offer a new religion. Rather, it is urged as an aid for organizing the argument, and as a means of helping the reader. Historical determinism is neither assumed or desired here.

**Galbraith, in Baier, 1969, uses a similar historical sequence to lead to his "technostructured" society. He is concerned about the crucial factors of production which are not completely equivalent to my crucial factors.

Historical Period	Crucial Resource	Needs of Men*
Traditional	Rituals, Divine Right	Physiological
Pre-Industrial	Agriculture, Nurture, Land	Survival
Industrial	Capital	Security
Post-Industrial	Knowledge	Exploration
Beyond Post-Industrial (Late sensate?**)	?	Affiliation Existence } Affect Apprehension

Margaret Mead in offering a perspective on this chart, would say that the first three stages are post-figurative, where the elders taught the younger; the fourth stage is co-figurative, where elders and youth learn together; and subsequently, we will be in a pre-figurative society where the youth teach the elders.

In these models of individual development, individuals start out with a basic need structure for food, clothing, and "necessities," and subsequently have needs which tend to be expressed in terms of personal development, special kinds of personal experiences, and articulations of sensibility which may be expressed by intellectual achievement. Thus, the question mark posed above for the Beyond Post-Industrial Society suggests that sensual development might well be what we could expect in

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*Graves has tried to develop an explicit hierarchy in the "third force" psychology tradition of Maslow and Rogers and I use his hierarchy here. (Graves, 1969)

**Kahn and Wiener, 1967, using an analysis based on Sorokin's ideas come to similar conclusions. But their perspective tends to be gloomier than my own. We may have an affluent and self-developing society, but it will include good measures of alienation and not the most Maslow-like self-development. (Kahn, 1967, p.217)

the future. Affect is what we shall call this crucial resource. Affect will be said to be a resource for the development of society in the Beyond Post-Industrial era.

Affect will be taken to refer to: (1) the sensuous aspects of life, (2) self-awareness and understanding, and (3) a similar understanding of others. A distinction is often made between affective (feeling) and cognitive (knowing) faculties. As I have argued earlier, I think that this distinction is probably false, and dangerous in any case. How we know is determined by how we feel and our selves. Affect is distinguished from objective knowing and feeling.

Affect seems to be a non-social concept. I think that this is not true. Rather, affective people will result in social organizations which will be very different from those dominant today. My conception of affect is centered on smaller relationships, however. How these work out in the larger world is only partly understood. (See Chapter 2) My guess is that a society which has no sense of social affect will not be able to maintain individual affect production very well.

As a consequence of the development of a new crucial factor in a social system we would expect to see new modes of differentiation of relationships, and new kinds of reward structures. We would expect that the differentiation of the varieties of affect would imply new kinds of inter-personal relationships, new varieties of sexuality, and new kinds of work and play. Significantly, few if any of these experiences will be "new" to history, but in intensity and popularity, they would represent a substantial change.*

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*Petronius' Satyricon may outdo in intensity the beyond post-industrial style. Perhaps the new addition for the U.S. will be distributing this good more equitably among all the population.

As for the reward structure of the society, expressive freedom may be the important reward for the future. Rewards are now in terms of certain kinds of work which may be intellectually very freeing or related to mobility. Money suffices for those still in the industrial age. If artists are those who have traditionally been the expressive among us, then I would hazard a guess that the rewards of the future will be in the form of a life that is lived artistically.

In BPIS, the affective emphasis will result in the greater importance of psychological dimensions, sensation, and inter-personal relationships insofar as they yield value to the persons themselves.*

EVIDENCE FOR AND CONSEQUENCES OF BPIS

I want to look at the evidence for and consequences of affect becoming a crucial resource in our society. Even if post-industrialism is only a short run phase, those who have tried to demonstrate that it has happened have had statistics on their side. Education, manpower, and knowledge statistics are systematically and institutionally gathered today. (This is the best evidence that PIS is around in some form. Perhaps the embodiment and articulations suggested for this phenomenon by its advocates are incorrect, but the fundamental statistics are there. (Sheldon, Ch. 1, p.21)). We are not so lucky for BPIS. So I shall have to rely on statistics that are only casually gathered and idiosyncratic cases. How are we to structure this evidence?

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*The marketers must see this if they are to succeed. "The emerging American consumer will place emphasis not as much on subsistence needs, as on psychological and social needs." (Madden, 1969)

Daniel Bell organized his evidence for the post-industrial nature of our society in a convenient way. I shall paraphrase his organizational headings for the purposes of this argument. We expect that the affective society will have a personal service economy. We expect to see more T-groups, counselors, psychologists, psycho-therapists and more of the services that they offer. Greater proportions of our income will be spent on individual development. We might also expect the society to be organized in terms of a helping relationship and this would engender new possible careers. Finally, we might expect that work would tend to become more expressive and play more instrumental. Thus the nature of the patterns of recreation might alter dramatically and at the same time we would see changes in the nature of work and the kinds of occupations that seem to be growing.

> ...socially necessary labor would be diverted to the construction of an aesthetic rather than repressive environment, to parks and gardens rather than highways and parking lots, to the creation of areas of withdrawal rather than massive fun and relaxation.* (Marcuse, 1969, p. 90)

Secondly, we should see a growing pre-eminence of a feeling class. The elite of the future will not be those who are most in command of intellectual resources, but those who are most capable of using, creating, and disbursing the affective. Today, more and more leaders are looked up to as gurus -- new politicians whose affective attractiveness seems at least as substantial as their political effectiveness. Jesus had this role also. The big change is that our future leaders may be less father figures and unique charismatic types and more like husbands and brothers.

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*I am sure that I would not join Marcuse in rejecting the value of the popular culture, but the general trend of the statement is in the right direction.

Rewards characteristic of underclasses and once considered undesirable by the elites are becoming desired by many who would be part of the elites, e.g. "soul". The "new elites" are demanding process-affect rewards rather than capital or credentials. The "new elites" demand mobility, demand to work with people they like, demand a certain community in what they are doing. Their work, if it is becoming more expressive, means that the kinds of people who can lead must be more expressive in and of themselves. The development of informal networks of individuals, solving problems in unconventional ways, may be part of the pre-eminence of the new feeling class. Even the center of post-industrial values, the university, has been charged with a need to deny, in part, the desexualized values and become sensual.

The characteristics that lead to valued statuses in a BPIS will be distributed differently than those in a PIS or an industrial society. This should make it possible for some power redistributions to take place. There is no necessary reason to believe that the elites of today will have the "right" characteristics. But neither is it clear that they will not. Today's elites are likely to be affectively more powerful than the non-elites. But these elites are not in control of, and perhaps do not realize the need to control, some of the affect producing systems. A coup of sorts is required by the left-outs in the near future.

Still, I have little hope that things will be better just because of such a change. The powerful control too much. So even a BPIS will not result in a sufficiently egalitarian world. This is especially the case on the international front. Not much of what I have written here really deals with the world outside of the U.S.. And we see time and

again the important effects of international events at home -- Viet Nam and the Mid-East most recently, China and Japan in the future. I do not know what will happen.

We shall also see the growing centrality of psychological, personal affectivity as a source of innovation and policy formation. If leaders are more affectively oriented, and technical professionals are more self conscious, then the nature and content of policy will reflect this. Social planning and social action will be more committed to understanding how people feel about policy. As we realize the importance of subjective evaluations of social change, we enter a stage where affect will be a source of policy. A growing number of people who are concerned about personal psychology have come into the policy-making community.

There is also the possibility of self-sustaining affective growth. There is reason to believe that we may develop, in the near future, a substantial fraction of the society which spends a major part of its effort in personal, individual growth. To support these people, we may offer to use them as our teachers and let them spend a part of their time becoming more developed. This is the human potential movement. At the moment, this movement is not self-supporting and profits from conventional economic financing. Mostly rich people are involved in the movement.

Finally, we are seeing the creation of a new affective technology. This technology takes its form, in part, from today's semi-specific psycho-pharmacology in which people take pills to make them feel a certain way. In literature, the realm of confessional poetry and highly personal

writing by Sylvia Plath and Phillip Roth, for example, seems to be a new way of trying to understand our development personally. Third force psychology, with its application to individual change and development, is part of this new technology. Psychoanalysis, which uses affective devices in part (e.g. transference), is one of the early technologies.

ON THE DATA

I had originally hoped to be able to present more concrete evidence for the trends I have discussed. Unfortunately, such data are not collected since no one is asking the right questions yet. Let me suggest the kinds of evidence I would like to have.

1. Personal service economy: number of people in helping professions, how much spent on personal development (counselling, self-help books...), new professions related to this, recreational demands by type of recreation.
2. Pre-eminence of a feeling class: profiles of leaders of various activities, images of the desired kinds of work.
3. Affect as a source of policy in society: case histories of how people decide what to do, what are the recommended ways of knowing how to act (training of decision makers).
4. Self-sustaining affective growth: what part of national income goes for growth activities, how many people are being trained for such activities, time devoted to such activities.
5. Affective technology: breakdown in time of "inventions" in this field, number being trained in research, amounts being spent on this kind of research, new uses of the law with respect to such activities.

In the next chapter, I do some systematic analysis which could be useful for putting such data into a coherent framework.

CONCLUSION

A beyond post-industrial society is possible. What we have to ask ourselves is whether we like the idea of a post-industrial society. If not, how are we to change things? My guess is that the best procedure for change is to create new resource situations and pull the books out from under the PIS.

A BPIS will make it possible for synthetic knowers to operate more effectively. If synthetic knowers can get and use power to facilitate change in new ways, then a BPIS is probably in our future.

Appendix: Letter from Peter Marris to Martin Krieger

May 25, 1970

Marty:

The more I think about it, the more your paper seems to me a restatement of Christianity -- without archaic theological premises and institutional accretions.* When you write of the production of affect, you don't mean any affect -- you don't want to make life more painful. Nor, I think, do you conceive affect hedonistically, as pleasure. You are concerned with a quality of relationships -- especially such relationships as friendship, romantic love, parenthood, student and teacher, student and student. And this quality seems to be Christian love (or charity, or compassion).

Your suggestions of how to create love between people are also Christian. You imply, for instance, that love depends on equal relationships -- and Christianity insists on this. (Jesus appears in the New Testament, for instance, to mistrust family relationships, because they are possessive: here and there, he seems to reject the right of parents to assume authority over their children.) The techniques of Christianity correspond to your psycho-therapeutic techniques, more or less. The Catholic Church, at one extreme, has confession (an analogy with psycho-analysis), and a Quaker meeting is not, I think, so very different from an encounter group. Indeed, there seems to me to be a clear line of evolution from evangelical religion to the Oxford Group to Moral Rearmament to Synanon, Encouter Groups, and such. Christianity has also tried to reconcile two kinds of knowing -- affective planning, and planning for affect. There is a concern with faith, prayer, communion with God, and a concern to institutionalize good relationships and rules of conduct.

You ask two kinds of question: questions about knowledge -- what is it? how do we use it? -- and questions about happiness -- where do we find it? how do we produce it? how do we evaluate it? Both, I suppose, are aspects of the fundamental question of the meaning of life. These questions have been asked, in much the same sense, for two or three thousand years. So it seems misleading to frame your argument as if you were dealing with a new age of man. For some reason, a kind of historicism is in fashion: first there was the neolithic age, then there was civilization, now we are post-civilization

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*See chapters 5, 9, & 10 of this manuscript.

(Kenneth Boulding); the end of ideology (Daniel Bell); post-capitalism.... We are surely at the end of something, and the beginning of something new. (Today is the first day of the rest of mankind's history.) This is fine if your purpose is to dramatize the novelty of our situation. But it tends to discount the relevance of all past human thought and experience. I was thinking of some books I've read from different times and places -- Thucydides history of the Peloponnesian War, the take of Genji, the Canterbury Tales, the Book of Chuang Tzu -- and the problems, the arguments, the anxieties and searching do not seem radically out of date. The relevance of a book does not seem to depend on where, or how long ago it was written, but as its preoccupation with particular social conventions or systems of thought. (Corneille is boring, because his legalistic problems of honour are specific to a particular code; and I think Simone de Beauvoir's novel, The Mandarins, will soon seem boring, because the characters are preoccupied with intellectual problems of political honour which are largely arbitrary, and of their own making.) Historicism seems to lead to a kind of functionalism since the present is clearly different from the past in its social and economic institutions, the purposes of past societies are derived from the functions their institutions fulfilled. Thus the purpose of Ancient Egypt was to sustain a theocracy, the purpose of 19th Century Europe to promote industrialization, the purpose of Feudalism to sustain a Baronial oligarchy. But clearly these are not our purposes: we want to find the good life. Thus the future is made to appear exaggeratedly different -- as the only society whose purposes are not interpreted as a function of its institutions, since the institutions have not yet been created, but we know what their purposes could be. Cause and effect is reversed. But, of course, Priests and Barons and Capitalists were searching for the meaning of life, too: and, at the time, they interpreted their purposes according to their religion (as we do) not according to their institutional functions. To be sure, religion rationalized institutions -- but not without a continual anxious, critical debate: the times have always been out of joint, society a corruption of ideals.

I think, too, that the questions about knowledge which you raise are also very ancient. The anti-rational tradition is as old as the other. That is, the search for knowledge by awareness is as old as the search for logic systems. I think there is a cluster of attitudes which go together: The Taoists (let's call them) despise worldly success, technology, etiquette, institutions; they

believe in cultivating experience through meditation, drugs and progressive education; they reject any loyalty in relationships which would distort or damage the capacity for feeling, they make fun of rationality by bizarre and shockingly inconsequent statements -- in short, they repudiate the claims of society for order, mutual responsibility and mutual comprehension. But they are neither cynical nor hedonistic. Their home is the hermit's cave -- or a broken-down farm in North California, maybe. The Confucians are system builders: they respect success, submit to order, develop an impersonal logic of proper relationships, attach great importance to loyalty and honour. They believe in examinations, social indicators, and filial piety. Everybody, of course, is more or less both a Taoist and a Confucian -- according to his mood, how successful he is being, and the role he is playing. Is it possible or desirable to make a synthesis of these two modes of knowing? Does not sanity and humanity depend on a constant equivocation between them? Every Confucian should bear in mind the emptiness of his system, every Taoist the sterile selfishness of his solipsism. That is to say, the system may be orderly and just, but it is no substitute for love; and the contemplation of experience is no substitute for the arrangements that may protect the possibility of such experiences.

It seems to me that the history of affective planning has been disastrous. Let me suggest why. If you start out from concern with intensity of perception, then what is valuable is bounded by the self which experiences. So long as you are only trying to heighten perception by drugs, meditation or courses in art appreciation, that's fine. But as soon as you become concerned with relationships between people from this point of view, you can only speak of the effect of others on you -- since this is the only true value. Hence, for instance, romantic love tends to reduce the loved person to a cypher -- the symbol of beauty or goodness which produces love in the lover. Romantic love is characteristically (in the literature) very egocentric (what I feel, how miserable you are making me). Still, it's an exciting and sometimes profound feeling, and can turn into a more humane kind of love. But an ego-centered social or political philosophy is almost a contradiction in terms. When the Taoist turns from contemplation to action, he can only think of the assertion of his will, since will is the active mode of self-bounded experience. But if individual will is the supremely important thing, it cannot compromise with the will of others: it can only treat others as objects to be manipulated, or destroy them. So it leads to nihilism (as with Dostoevsky's characters) or fascism (Nietsche) or Holy wars of extermination.

It remains true, though, that Christianity has never found a form in which its conception of life can be realized. The usual explanation is that the costs of Christian behavior are too high -- the sacrifices of wealthy, the restraint of aggression, the inhibition of lust and greed are too high a price to pay for indeterminate rewards from loving. (The proposition has been made more attractive by implying that there will be material compensations in another world, but this has never been altogether convincing -- and, in any case, it seems to work like an insurance policy where you get full benefits, even if you make only one payment just before you die.) I think you are suggesting that the costs may be less in the future, because a very rich society can satisfy most wants without the need for aggressive behavior -- and hence people can be brought up to be gentler without damaging their chances.

I don't know where these comments are leading -- except to say that I think you are trying to make Christianity operational, using techniques of planning, and without, of course, calling it Christianity (which would put people off). It seems worth trying, at least. . . .

One other thing seems very important -- you might make more of it. That is, the relative cost of a concern for love. As you say, it does not seem amenable to technology, so the cost of such activities becomes higher and higher, in comparison with the cost of producing a car or refrigerator. American society probably, I'd guess, has fewer people professionally concerned with the quality of relationships than most (could you measure that?). At least, it seems obvious that relationships through which affection might be expressed are being replaced by technologies which fulfill the explicit purpose of the relationship, but not its incidental affection. (Teaching machines can teach, but not love, as teachers can; a vending machine sells, but doesn't ask you how you are, and whether your sister has got over her operation). Hence the impoverishment of affective relationships. How would you plan to correct this, and what would it cost? That's one question you ask. The other is (I think) how do you know when your plan is succeeding?

What sort of empirical research would be relevant?

Peter

BIBLIOGRAPHIC NOTES

A seemingly infinite amount has been written recently about future prediction. Recent Social Trends (ed. Mitchell) is the important social report of the early part of this century. Polak, 1961,gives an extensive argument about the importance of future images. Kahn, Bell, Duncan, Mead, Brezezinski, Toffler, Drucker, Sheldon and Moore, and Galbraith are a healthy sampling of current work in future studies and measurement. The reports of the Institute for the Future (Middletown, Connecticut) are worth scanning. The above literature presents a description of PIS.

Birnbaum, Hampden-Turner, and Goodman give good critiques of PIS.

Resources are well defined by Perloff (Ch. 1), and Firey gives a more comprehensive theory of resource character.

Maslow, 1968, and Rogers, 1960, have useful discussions of the needs of man and his possibilities. Their detractors are too numerous to mention. Bennis, 1969, discusses the new elites. Duhl, 1967, and Mead, 1964, give an extensive discussion of networks. Costello talks about the psychological technology in policy sciences.

AFFECT AND SOCIETY

INTRODUCTION

In the previous chapter I argued that affect and feeling are likely to become values of great importance in the future. What I propose to do now is to see if we can develop some indicators for the present and future quantity of affect in the society, and some models of systems for the production and distribution of affect.

When we look into the future, we are looking for: (1) leading innovative, growing, yet still unpopular ideas; (2) groups whose behavior patterns will influence the larger society; (3) economic activities whose magnitude may be small now, but should be growing substantially in the future; (4) life-styles which may not be very viable at this time, but seem promising as to their future viability; (5) activities which can become self-perpetuating and self-reinforcing; and (6) techniques which can enhance affect with sensitivity and efficiency.

The production and distribution of affect are ongoing if not major activities of our society. Resources are devoted to such activities and systems have been developed to maintain them. We want to look at the organizational structure of these activities, distinguish the peculiarities of this structure (contrasted to other knowledge related activities), and develop models which suggest how such systems and resources can be

best used in an affect oriented society. Ultimately, we might try to write a treatise as Machlup has done for knowledge. (Machlup, 1962.)

AFFECT

We want to measure the extent of activities that contribute to affect in our society and the affective level of individuals in it. To do so, we need a useable definition of affect. Affect will be taken to be emotion, sensitivity, perception of others, perception of self, or sensual involvement with other objects and the world. Affect will be our rubric for the aspects of man characteristic of his human sensual being in the world.

As I have pointed out in other parts of this discussion, "affect" is not meant to exclude cognition as such. If we examine and are aware of ourselves and how we affect others, then our cognitive faculties will need to be used very powerfully. My purpose here is to examine activities which educate our affective selves. Only a small number of these activities will be exclusively affective.

Some kinds of affect are not included in this survey. I want to distinguish between collective and individual affect. Smelser has discussed many aspects of collective behavior which might be called collective affect -- including panics, crazes, and hostile outbursts. (Smelser, 1962.) A truly inclusive accounting would have to examine such behavior. This study, however, focuses on the development of individual affect. Some collective experiences, if not all of them, can serve to produce individual affectual change. Insofar as they do affect

individuals, such collective behaviors will be included in this study.*

No matter how precise our definition of affect may be, we have no guarantee that we will be able to measure it. Usually, definitions of measurable quantities need to lead to operational activities, if we are to have some shared agreement as to what we are measuring. It is difficult enough with cognitive knowledge to do this and it will be almost impossible to get much agreement with respect to affective states. The situation is even worse than it seems at first. Most definitions of affect include words like feeling and emotion. Feeling and emotion are certain internal states which do have, it is often said, behavioral equivalents. So we must go out and measure behaviors that are related to feeling and emotion. But, "...the behavior itself will become the goal and not an indication of the attainment of the goal." (Eiss, 1969.)

An alternative lies in explicitly phenomenological investigations involving self-reports of feelings and emotional states. Substantial research has been put into this field, and there are many who believe that self-reporting methods yield reliable and useful information about the affective states of individuals. (Rogers, 1961.) I shall use this kind of evidence quite frequently in order to understand affective states.

I hope that the use of overlapping evidence will serve as a partial substitute for a precise definition of affect and an absolutely sure way of proving that it is there. In the end, the reader will have to

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*By taking this perspective we avoid double counting which would take place if we counted collective affective experiences and individual affective experiences at the same time. Still, there are some communal experiences which need the perspective of larger measures. Many of these experiences are positive and self-reinforcing. I do not know how to assess community affect.

compare my measures with his own feelings and use himself as an ultimate measuring instrument.

AFFECT INDICATORS

We can develop some statistics which can be used to monitor the affective level of a social system. These indicators have several characteristics quite common to all social indicators. (Sheldon, 1968; HEW, 1969.) Our indicators will tend to measure outputs of affect production systems, such as the affective level of individuals as contrasted to inputs, which may be teachers, or dollars or classrooms. Indicators may be proxies for measures of these outputs. And some of these proxies may turn out to be input measures. We hope that our indicators will serve as predictors for future change in the society. I would note that a change in any indicator does not necessarily mean that affect only is related to that change. For example, many of the indicators change due to greater prosperity in the society, yet we choose some of these measures of greater prosperity rather than others because we suspect that they correlate better with affect level.

What do we want to measure?* We certainly want to measure the degree of emotion and feeling that people have. We also would like to measure something to do with the normative nature of this feeling. Are

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*Although it is a truism in the natural sciences, the delicate nature of what we are trying to measure here brings up the question of how our measurement alters the situation and process we are measuring. When we ask someone how they feel, do they tell us things to make themselves look good to the interviewer? This is an old problem of survey research. I do not deal with it in detail here. Rather, I believe that if we do want to measure affective states, we shall have to develop a theory of how the measurement affects what we are measuring and correct our data accordingly.

people happier or are they less happy, for example. I shall spend most of the discussion on degrees of affectivity rather than on the precise nature of the feelings experienced -- this seems to be a more do-able approach.

We shall first look at measures of personal reaction to societal affect production facilities, and then at the quality of the societal arrangements themselves.*

PERSON RELATED INDICATORS

1. Happiness

Happiness can be measured. I believe that happiness measures will turn out to be one of the more fruitful products of social research today. The quotes on page i suggest that this research is a natural concern of social studies.

Most research on the incidence of happiness in society has concentrated on demographic correlates of happiness, or on which activities tend to produce more happiness in individuals. (Wilson, 1967; Robinson, 1969.) Each of these emphases can suggest possible indicators for the affective state of society. Both Gurin and Bradburn and Caplovitz have tried to look at the incidence of happiness with respect to demographic variables. (Gurin, 1960; Bradburn, 1965; Bradburn, 1970.)

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*I would agree to a large extent with Stagner, 1970, when he says:

> ...the essential unit in the data-gathering activity of an urban-intelligence system is the individual person. The crux of the whole problem of urban planning, urban renewal, urban schools, urban transportation, hospitals, and police security systems must be located in the satisfactions and frustrations of individual people.

Bradburn and Caplovitz measured both happiness and affectivity in their study. Happiness was defined and measured by asking people how happy they were. "Were they very happy, were they happy, or were they not too happy?" At the same time, they obtained data on how strongly people were feeling (degree of affect) by measuring the quality of their feelings in a period of time previous to the survey. They could then correlate the degree of happiness and the degree of affectivity with demographic variables. They find (Table 2.10 of Bradburn, 1965) that people who are young, better educated, and richer tend to be happier. About 24% of their sample was very happy, 60% were pretty happy, and 16% not too happy. Affectivity shows similar trends. Although the Bradburn-Caplovitz data do not permit a complete regression analysis of happiness versus demographic variables, it is conceivable that this kind of survey could produce this kind of information. It would then be possible to measure both happiness and affect by knowing certain information about the demographic structure of the society. Using the measured correlations, we might even try to measure the past states of happiness of the society.*

Several pitfalls are inherent in using such procedures to estimate societal affect level. Structural changes take place in the society which may change the importance of certain demographic variables for predicting happiness levels. For example, we certainly would not want to use the same income level distribution in evaluating 1920 happiness that we use in 1960 happiness. We need to adjust measures for changes in the cost of living. In a society where the mean life span is changing rapidly one would expect similar problems in looking at the age breakdown of the population. If there are rapidly changing roles, as will be the case for women, we may have a similar

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*See the appendix to this chapter.

problem. All these observations imply that we might need to use new surveys of happiness levels every time we want to do a measurement rather than use demographic correlations.*

Certain activities are correlated with states of greater affect and happiness. In Bradburn and Caplovitz' study, they suggest that one of the few correlates with true positive happiness states is social interaction.** Other surveys might be able to determine other activities which induce happiness and affectivity. We might then want to measure the extent of such activities to get a handle on the affective level of society.*** (Krieger, 1969 a)

A serious objection to all measures of happiness is that people's minds are so dominated by the system (the oppressors, etc.) that they really do not know whether they are happy. This may be true. Yet such a perspective precludes believing any evaluation of the quality of personal life based on asking people questions -- for they will always be under some illusory state.

Another critique of happiness measures says that measures of happiness ignore the possibilities of human life. People say that they

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*A continuing study has been proposed by The Survey Research Center, University of Michigan, of self-perceived satisfactions with and of life. (Campbell, 1970.) Robert Weiss of Harvard proposes to do a similar survey. (personal communication).

**Alfred Adler also came to this conclusion from his psychoanalytic concerns. "The mode of relationship that lies at the root of effectiveness and happiness is cooperation." (Hemming, 1970)

***N. Rescher argues that if we are concerned about the social policy aspects of happiness, we need only worry about the more standard social welfare concerns. I would disagree. (Rescher, 1969.)

are happy, although they do not know the real possibilities of their lives. I think this objection has some force. Happiness is related to expectations, and there is a bias of cultural relativity in all happiness measures.

2. Family Functioning

Much of the cognitive knowledge that children develop is sourced outside the family and inside the school. But many of the affective aspects of life still (but for how long?) take place in a family environment.

Whiting has tried to develop a scale for measuring family functioning that might be useful in suggesting how much affect is being produced in the family. (Whiting, 1968.) His family functioning scale measures physical health, adult education, parents' perception of children's school performance, adult employment, earned economic status, community contacts, primary family interpersonal relations, extra-family interpersonal relations, condition of housing, and number of legal involvements. A Whiting type scale might enable us to differentiate between families producing more and less effect. Whiting's research, however, does not tell us this.

The value of measures of family functioning may be independent of the apparent structure of a family. If there are new kinds of communal life developing, in contrast to families of the conventional nuclear or extended type, then we will also want to measure the functioning of both.

3. Self-Actualization

Maslow has defined a person to be self-actualized in so far as he fulfills his potentialities of being human and feeling and being. Although Maslow's definition has an unending infinitude of possibilities, we still use the concept. By abstracting the most salient characteristics of persons who are clinically designated as self-actualized, it is possible to develop survey instruments that could be part of a national measure of actualization. (Argyris, 1965, 1968)

The measures that we have discussed so far have one common problem. No immediate social policy action is implied by any of them, given a normative prescription for well being. We shall discuss some such social actions later in this chapter.

Before doing so, some behavioral measures of affect level are worth exploring. They imply some narrow actions that might be used to make things "better".

4. Discretionary Time

We might suppose that people who have greater discretion and choice in their work are likely to be more fulfilled individuals. If work provides them with chances to exercise their personal characteristics, then it is likely that work will tend to produce greater sense of self rather than less. It may be true that the kind of job one has is

unrelated to affect production, since it may be that the activities that are not directly related to the job, but associated with work, are more important. Still, it seems likely that jobs with greater discretion and more choice are likely to produce people who are more capable of exercising their feelings. If we accept such a supposition, then we might be able to obtain some measures of the amount of work-related affect by knowing how much discretion people have in their jobs.

Some work has been done on exactly this. (Jacques, 1969.) Jacques measured the felt fair pay for jobs versus the individual's time span of discretion in order to develop a rational incomes policy for Great Britain. For our purposes, what is most important is that he relates some measures of felt fair pay to time span of discretion. If I assume that felt fair pay is actually related to income, then I might estimate that about 30% of all workers in the U.S. have substantial amounts of time of discretion (1 month) in their jobs.

This kind of proxy for affect levels relates income levels to affectivity. It is another way of getting a handle on how affect level is related to certain demographic variables.

5. Kinds of Work

We might also try to look at the kinds of work that people do. To repeat, I would guess that jobs with some discretion and choice offer possibility of self-expression, while those which do not possess these opportunities do not. If we chose those "choice" jobs to be in the

professional, managerial and craftwork categories, then it turns out that about 39% of white workers are in this class, while only about 19% of blacks or non-whites are.

Another possible measure of affective level is one which relates status, choice, and freedom to demographic variables. Some problems may make such an indicator useless, however. The relative value of social versus individual choice is not easily determined and we only measure individual choice. Furthermore, if we are trying to measure something like the diversity of roles available to the individual as a measure of the affective level, we have to be sure that diversity of roles implies diversity of affectual types.

If an affective society is in the offing, activities that might be affect producing should be showing different growth behavior than those which are not. Although the evidence is not overwhelming, the sales of florist shops and music stores are growing somewhat faster than groceries, and art museum attendance is changing much more rapidly than sport attendance (although sports watching can be effective affectively!).*

Another opportunity for developing indicators or predictors for future activity may lie in examining the numbers and varieties of deviant groups in our society. It is likely that the common will not be the source of the future; innovation for society may well come from those who do not cope quite so well. (Calhoun, 1969) The non-copers in a cognitively

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*The substantial growth of the growth center movement may be a useful indicator. See Koffend, 1970.

oriented society are likely to develop new institutional frameworks which, if affect is going to have a major impact on our society, may be the institutional framework that will take over. In this light we might spend some time looking at communal farms, those who have given up the work ethic, and those who have given up the knowledge ethic.

SOCIAL STRUCTURAL ASPECTS OF AN AFFECTIVE SOCIETY

I now want to examine some of the social structural aspects of an affective society. I will take a modest approach and look at a few aspects of the production and distribution of affect and the kinds of institutions that might do so most effectively. I shall not deal with the value changes that will need to take place internally. (Maslow, 1968; Rogers, 1961)

The production and distribution of affect in a society may be viewed as a problem in developing human resources. A very peculiar aspect of human resources, as contrasted to many other resources, is that we do not know if they are limited at all. Unlike extractive materials, we do not have to concern ourselves with depletion at this time since we do not know what are the limitations of an unaugmented human brain. We shall be concerned about the total resources of the society rather than the developing of any single individual, yet the resources of the society will be in some very real sense a sum of resources of individuals.

Some of the inspiration for this section must be laid to Machlup. Although the treatment will not be completely cast in a form that an economist would find most satisfactory, some economic ideas serve usefully in this discussion. This section does not share Machlup's inclusiveness or exhaustiveness, of course.

THE MANPOWER PROBLEM OF AFFECT PRODUCTION

How are we likely to change the amount of affect possessed and demonstrated by members of a society? Does there exist a mechanical or chemical answer? Or, as I tend to believe, is the most effective approach based on person-to-person contact?

Before resolving this question, as well as looking at some specific techniques for affect production and distribution, I want to develop a more general perspective and model for looking at the problem.

The model I wish to spend most of my time on is affect production which arises when people are dealing with other people. There are a few peculiar aspects of this activity which I think are worth emphasizing.

1. People who produce affect in others will have affect produced and enhanced in themselves as a product of their activity.* Unlike most of what is called cognitive teaching, I believe that the process of affective teaching will have an extensive effect on teachers. Teachers of affect teach with affect. It may be true that only extraordinary teachers will learn from their students when they are teaching cognitive knowledge, but it seems to me that it is all but a very few who will not learn from their students when they are doing affective teaching. This means, as I explore more explicitly below,

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*Fuchs, 1968, in discussing a service economy, points out how the served's time is a vital factor in the activity. This contrasts with valuing the time of some raw material in a manufacturing economy. Also, the productivity of the served contributes to total productivity, even if it is not normally counted. (p. 103)

that the most effective way of producing affect in a society is when everybody is teaching everybody.*

2. How productive can we be when we are involved in affect production activities? If we are doing affect production by means of people-to-people interaction, then the intervention of "modern" technology is not going to do us much good. As Baumol and Bowen point out in their discussion of the performing arts, the inability of an activity to utilize labor-saving technology tends to make it more expensive as time goes on. (Baumol, 1966.) So it would seem that affect production activities should become more expensive and more luxurious as we become more and more technologically capable.

Several alternative outs are available. We may decide, with our increased technological productivity, to demand less of what can be bought technologically and spend more of our time on affect. This implies that our consumption levels of conventional goods will not rise substantially and that we will voluntarily decrease our consumption of material goods, and perhaps even of knowledge goods, so that we can spend more time on affect production activity. This would convert affect production activities into merit goods, and make their prices an inaccurate reflection of their value. Another alternative is to develop a new kind of technology,

*Melvin Webber, 1968, suggests that "...learning may become the major non-paid occupation of large segments of the population," in the post-industrial era. Only in a beyond post-industrial age will we have united learning and teaching and realize the ambiguity of both of these roles.

a person changing technology, which will do for affect production what scientific technology has done for material production. Such a hope for technological aid is realistic; a psychology that is oriented to such problems is developing today.

3. A model of affect production which involves people who teach other people while learning from them, may be especially appropriate in a rapidly changing social system. In such a system, where knowledge of how to produce affect may change rapidly as techniques improve, there is no guarantee that the teacher always knows best. Thus, the professional or medical model, in which a teacher does his very best to teach and retains little responsibility for failure, since his technique may just not be good enough, may need to be replaced by a therapeutic or anti-professional model, where a "teacher" is responsible for his action and efficacy in a much more intimate way. (Krieger, 1969d; Bennis, 1968.)

4. This model of affect production highlights the (opportunity) costliness of keeping the teacher up to date. For example, psychiatrists spend about a third of their time, not dealing with their patients, but engaging in activities which have something to do with keeping themselves up to date. (Whiting, 1969.) Yet it turns out that if we wish to do massive affect production we shall have to spend much more of our time relating to each other. If some kinds of relationships do not meet demands for the training of "helpers" then new kinds of interpersonal behaviors will need to be invented (new modes of "teaching").

Certain of these assumptions and conclusions can be explicitly formulated in some simple models and I want to do that now.

SOME MODELS FOR AN AFFECT PRODUCTION SYSTEM (APS)

In this section I want to explicitly develop some abstract models for an APS. At the same time I want to contrast APS's with ordinary teaching processes (usually of cognitive knowledge).

I assume that in any APS there is a teacher (a guru) and students. The function of the teacher is not to impart the knowledge that he possesses to the students. He is in an almost reciprocal relationship with the student where he has something that the student seeks, and he seeks something from the student. If this blurs the role of the teacher, fine. We can just as well say that in any APS we have at least two gurus (conventional "student" and "teacher" roles). For conventional cognitive teaching, the distinction between teacher and student has played, and continues to play, a very powerful role in characterizing what happens. Finally, we do not assert that those who are older teach to younger, nor do we assert that people do not "learn" from their peers or themselves.*

Model 1:

In this model I try to look at the relationship between quality, quantity, and style of education. I want to point out the advantages of a person-to-person system in which both persons are assumed to be part

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*People do lots of things other than participate in conscious affect production -- they sleep, eat, clean house. These activities may be most important for APS. To get around this, I shall say that when these activities are part of the APS, they will be included in the model, by treating them as a regular APS activity.

of the learning process, as in some APS, as contrasted to a system where, even if person-to-person relationships take place, education is only evaluated in terms of what the "student" receives.

Conventional Case (I):

Consider a social system where we have N_y young people and N_o old(er) people. Let us say that they spend all of their time in the education process.* We are maintaining the convention of the "teaching role" and of the "student role".

We can ask what fraction of the time does each group assume the teaching role, and we call these fractions a_y and a_o, for youth and oldies respectively. Today, we might find that $a_y = 0.05$ at most and $a_o = 0.90$ at least.** When people talk about post-industrialism, they suggest that a_o should decrease somewhat (adults should learn), but they rarely suggest that a_y should be increased.*** (Webber, 1968.) Those who are concerned about post-industrialism assume that when one is teaching, one is not learning, and vice versa.

What amount of time is spent on teaching? It is:

$$(N_y a_y + N_o a_o) \times (\text{Hours in a day}) = \text{Amount of time teaching} = T$$

How much time do the students "receive" in education? It is:

$$(N_y (1-a_y) + N_o (1 - a_o)) \times (\text{Hours in a day}) = \text{Amount of education received} = E$$

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*See previous footnote

**Note also that if $a_y \neq 0.0$ then the youth are doing some teaching, whether it be to themselves or the oldies. In 19th century England, and informally today, older students taught younger students.

***When this is suggested, the generation gap is cited as a reason. (Mead, 1970)

Now it is not difficult to see that:

$$E/T = s = \frac{N_y\ (1 - a_y) + N_o\ (1 - a_o)}{N_y a_y + N_o a_o} = \frac{N_y + N_o}{N_y a_y + N_o a_o} - 1$$

is the ratio of students to teachers in a classroom.*

We shall take as our criterion for the amount of education produced, the magnitude of E. For its quality, we use the student-teacher ratio, s. When E is large and s is small, we have an optimal situation.

If we wish to maximize E, then the a's should be small, but if they are small, T is small and then s = E/T is large. Therefore, increasing the amount of education seems to result in poorer education.**

APS Case (II and III):

For the proposed APS, the distinction between teacher and student is not so clear. Teachers are always to some extent students. For the sake of simplicity, we can say here that whenever a "teacher" teaches he is also learning. Still, students are not considered teachers. (Case II)

We get a new value for E, E':

$$E' = (N_y + N_o) \times (\text{Hours in a day}),$$

and for s:

$$s = E'/T = \frac{N_y + N_o}{N_y a_y + N_o a_o}$$

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*We note that for primary schools the $s \approx 20$, while for secondary schools $s \approx 30$. See U.S. Statistical Abstracts 1969, pp. 101, 119.

**Recovering such common knowledge says that this model is not beyond belief.

Now as we try to improve quality by decreasing s (increasing T), E' does not change, since it does not depend on the a's. When we designate more "teachers", which is what happens when we increase the a's, we do not lose "students".*

A last case (III) is when all student time is considered partially or wholly teaching also. Then we have:

$$s = 1 \quad \text{and} \quad E'' = N_O + N_y \ .$$

If we look back to the discussion of the previous section, we see that this model is faithful to the points we made. The greatest amount of education produced is when everybody teaches everybody -- Case III. Technical changes will be needed to realize the productive cases II and III. If the teacher spends his time on keeping up-to-date, he cannot be part of the educating system and cannot fulfil the possibilities suggested in Cases II and III.

Model 2:

The first model has looked at the APS as an economist might. How are resources being allocated among teaching and learning? We may also ask the question, "What kinds of things take place in such processes, as a consequent of the organizational forms that we have?" As a first approximation to an answer to this question, I want to look at the number of interactions that take place in various organizational forms.

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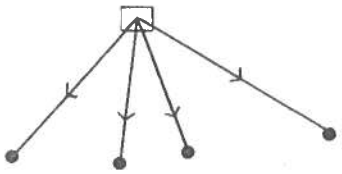
*If we say that a teacher is only partly a student and only part of his teaching time is spent in learning, the trade-offs are better than the conventional case, but not so good as in this case.

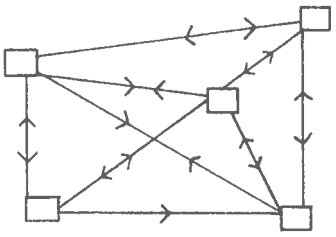
Consider a group of people. They may be organized in two, among other, structures. The first is hierarchical:

Case A:



Another form is more mutual:

Case B:



The arrows and lines indicate where interaction takes place. Neither of these pure forms is found in practice, but as archetypes they prove useful.*

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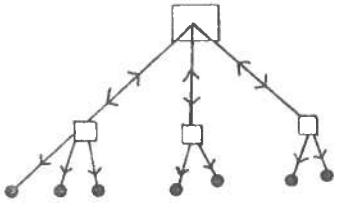
*For example, the following multiple hierarchy is quite prevalent:



See LaPorte, 1969, for further discussion of complexity.

We denote the number of interactions for a formation, f, by I_f. We note that for n objects, the number of twofold combinations (which are the ones we will limit ourselves to here) among them is:

$$\frac{n(n-1)}{2} = \frac{1}{2}(n^2-n).$$

For formation A:

$$I_A = n - 1,$$

where n is the total number of individuals involved.

For formation B:

$$I_B = \frac{n^2 - n}{2} .$$

Now $I_A/I_B = \frac{2}{n+1}$, which suggests that configuration A becomes substantially less productive, in the numbers of interactions, than configuration B when n becomes greater than 3 or 4. Configuration B is used to characterize APS's in Model 1.

Say one person withdraws from the group. Then for case A, the change in the number of interactions is 1. (Unless it is the teacher, and then all is lost). But for case B, the number is n - 1. (Note that the fractional loss is about the same in both cases.) B configurations are sensitive to the loss of a member, but survive the loss of any member; A configurations do not.

We have still to address ourselves to the quality of these interactions. Are they one-way or two-way? Which way does authority flow? In any case, is structure really related to the mutuality and equity of relationships? As a first approximation to the quality question, let us deal with the problem of overload.

When individuals interact, they can become so preoccupied with interacting with many people that the quality of the interaction with any one becomes trivial. On the other hand, multiplicity, of itself, may be fruitful. I want to develop a measure of the total interaction, which weights interaction for overload.

Consider a set of N people who are being formed into two groups of n_1 and n_2 persons ($n_1 + n_2 = N$). What size should these groups be if we want to maximize the total interaction?

Say that L(n) is a function that describes the quality of a single interaction when someone is interacting with n persons. And let J_a be the total interaction strength for configuration a.

For case A, one person will have to be the teacher in each group. Also the teacher's interaction load (the n_1 - 1 others) is different than the student's (the 1 teacher). If we split each interaction half way between teacher and student, we have:

$$J_A = \frac{1}{2}\left[L(1)(n_1-1) + L(1)(n_2-1)\right] + \frac{1}{2}\left[(n_1-1)L(n_1-1) + (n_2-1)L(n_2-1)\right] .$$

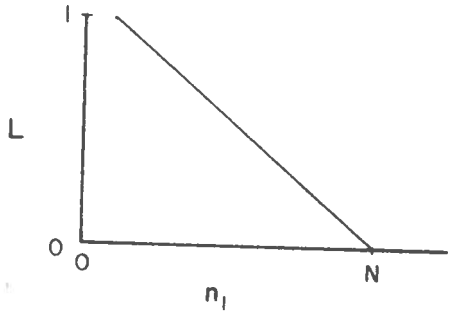
The first term is the students' half of the interactions, while the second accounts for the teachers'. Each sub-term is a product of the number of interactions times a weight for each interaction. For example, the first term -- L(1) x (n_1-1) -- is the interaction strength for any single student who interacts with one teacher times the number of students in the group, n_1-1.

For case B, we do not have the student-teacher distinction, and

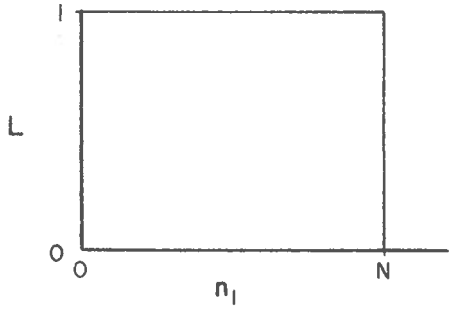
$$J_B = L(n_1-1)\,\frac{n_1^2 - n_1}{2} + L(n_2-1)\,\frac{n_2^2 - n_2}{2} .$$

What would the load function, L, look like? Ignoring synergism, and mass hysteria, I would guess that $L(1) \sim 1$ and $L(\infty) \sim 0$. Obviously, a well specified form for L needs to be known before the best configuration is clear.

I now want to compute the interaction functions for cases A and B for two forms of the load function, L. The first form will be a linear representation:



A second and simpler form will be a constant L:



The linear form is somewhat more realistic than a constant, but I include both to give some feeling for the varieties of behavior of the J_a that are possible.

For case A, and a linear form for L (which we approximate by $L(n) \lesssim 1 - \frac{n}{N}$, we have that:

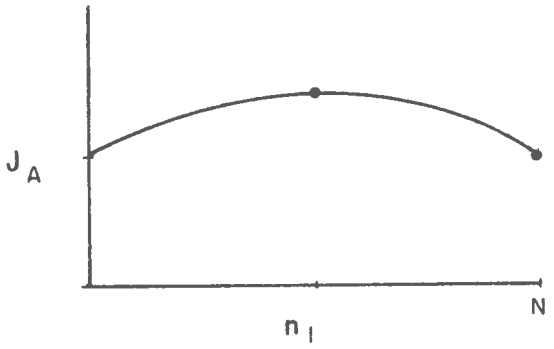
$$J_A = \frac{1}{2}\left[n_1\text{-}1 + N\text{-}n_1\text{-}1\right]$$

$$+ \frac{1}{2}\left[(n_1\text{-}1) \cdot (1 - \frac{n_1\text{-}1}{N}) + (N\text{-}n_1\text{-}1) \cdot (1 - \frac{N\text{-}n_1\text{-}1}{N})\right]$$

$$= \frac{1}{N} + \frac{N\text{-}2}{2} + n_1 - \frac{n_1^2}{N} \quad .$$

$$= \text{constant} + n_1 (1 - \frac{n_1}{N}) \quad .$$

Which looks like:



For case A and a constant L, we find that:

$$J_A = \frac{1}{2}\left[n_1\text{-}1 + N\text{-}n_1\text{-}1\right]$$

$$+ \frac{1}{2}\left[n_1\text{-}1 + N\text{-}n_1\text{-}1\right]$$

$$= N\text{-}2, \text{ a constant} \quad .$$

Now we want to look at case B, linear L. First let us approximate J_B by:

$$J_B' = L(n_1) \frac{n_1^2}{2} + L(n_2) \frac{n_2^2}{2}$$

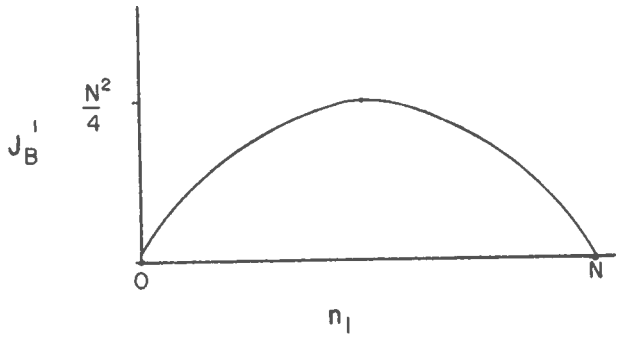
which is equivalent to saying that $n_1 \approx n_1\text{-}1$. We now substitute the value for L, $L(n) \lesssim 1 - \frac{n}{N}$, and get:

$$J_B' = n_1^2 (1 - \frac{n_1}{N}) + (N\text{-}n_1)^2 (1 - \frac{N\text{-}n_1}{N}) \quad .$$

After some manipulation, we find that:

$$J_B' \lesssim \frac{1}{2}\left[n_1(N-n_1)\right]$$

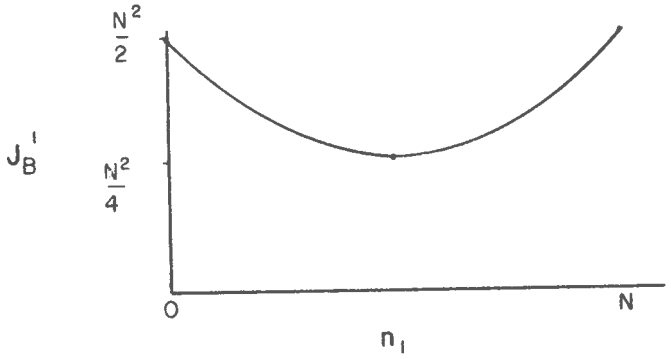
and that it peaks for $n_1 = N/2$.



Now if L is a constant (no interaction effect), then we have

$$J_B' = \frac{1}{2}\left(n_1^2 + n_2^2\right) = \frac{1}{2}\left[2n_1^2 - 2n_1N + N^2\right]$$

which peaks for $n_1 = 0$ or N. (We assume $L(n) = 1$.)



We note immediately the differences between the cases for a linear and a constant L function. In configurations A or B, a linear L leads us to prefer an equipartition of the group if we want to maximize the amount of interaction. On the other hand, a constant L leads us to choose that the group remain together.

What do the L functions represent? They are a convenient way of summarizing one aspect of the technology of group interaction. The change in the behavior of the interaction function can be seen as a consequence of a change in the technology of interactions.

Other Models:

There exist several other alternative models which I do not believe will be as useful for affect production as the one proposed above.

One such model will be that of collective behavior. Perhaps we can induce collective behavior states in the society, or in sub-groups of the society, which create highly sensitized individuals. (Smelser, 1962.) Intentional communities sometimes have this function. However, collective behavior systems are not easily controlled, by anyone, especially over a long period of time. They may not be specific in their effects either. Often they lead to massive catharsis rather than sensitization. Plays and films frequently have this quality. A minor point, but important for those who are not anarchists at heart, is that it is likely that such techniques of affect production will destroy the affect producers themselves.

Another alternative may lie in technology and psycho-pharmacology. Drugs or special mind controlling devices may turn out to be useful, effective and low cost techniques for creating affect in individuals. It is likely that they can be controlled and made quite specific. My objection to the use of such instruments, except in a supplementary role, is that I do value (symbolic) interaction. (Blumer, 1969.) Perhaps machines will be able to offer exciting interactive environments. I might still not be willing to go along with a scheme of using machines for APS, however,

since I believe that there are many cogent reasons for the person-to-person model. Among others, it tends to develop a more shared value conception in the society and some sense of consensus about major issues. This can be valuable in nation building and maintenance.

Another affect production model is involvement with inanimate objects. The production of affect by paintings and by nature, for example, may well be significant techniques for APS. But, is it truly an involvement with inanimate objects that produces such an affective state? Or, is it perhaps, the interaction with others who have had a similar kind of experience? In any case, I think that the urgency of interaction with individuals is not present in the interaction with nature, except under crisis, and probably is not capable of being directed. Perhaps, a positive psychological landscape gardening can be developed (as the Japanese have done) which will actually aim in a very specific way to create affective states in individuals, but I view this kind of activity as being at most supplementary to the person-to-person techniques.*

PERSON CHANGING TECHNOLOGIES AND PERSON CHANGING ACTIVITIES

Our discussion of APS, thus far, has been static and has concentrated on organizational configurations. I now want to examine how an APS can develop over time and become a viable institution. I also want to look at the substance of the change that is wrought in people by the APS.

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*A national sculpture program, giving employment to those who would be artists and supplying sculpture for the environment might be a win-win proposition in this light. This is in accord, in part, with some ideas of Marcuse. (Marcuse, 1969, p. 90)

When we talk about deliberate personal change, we must be aware of the ethical consequences of such an effort. When we act deliberately on another person, even if we do not treat them as an object, we must still have some sense of social responsibility for our action. In a later chapter I discuss the nature of open personal change, the importance of always leaving the path open to no change, and how this process differs from brain-washing. In the end, I do not believe that any criterion will make the distinction between open and repressive change explicit and clear; rather, we must be always on the alert to the dangers of repressive change.

The Stanford Research Institute Educational Policy Research Center has looked into ways in which people's affective levels can be altered. They call processes for doing this, if they are formalized, person changing technologies. (Morgar, 1967; Harman, 1969.) Person changing technologies cover a broad spectrum of activities from meditation and psychedelic drugs, to encounter groups, synanon games, radicalizing confrontations, and deliberate provocations of instructive encounters. A table on the next page, taken from one of the SRI reports, suggests the dimensions of person changing technologies. I would distinguish between person changing processes that are person changing technologies (PCT) and those that are person changing activities (PCA). The technologies are conscious processes for causing personal change, while the activities are the actions we do which cause personal change but which are not primarily and consciously intended to do that.

I want to ask the following kinds of questions about PCA's and PCT's. What is the cost of training individuals? What are the foregone opportunities in the process of training them, such as losses of income and friends? How much affect is produced now by this activity? What is

TABLE I

Elements of "Person Changing Technology"	Typical Outcomes
Meditation Yoga Psychedelic drugs Hypnosis, autohypnosis Psychosynthesis	Awareness of spiritual dimensions, of transcendental self, of the "hypnotic" or "encapsulated" nature of ordinary life
Sensory awareness	Sensitivity to feelings and emotions, beauty
Self-awareness exercises Psychotherapies Group therapy	Sensitivity to human closeness, self honesty, realization there is nothing to hide
Sensitivity training Encounter groups Gestalt therapy Group nudity, marathons	Spontaneous response to experience, self-expression, individual autonomy, emotional freedom
Psychodrama	Removal of guilt and fear stemming from early training regarding morality and sin
Synanon games New Theater (ridicule of Establishment, crudity and nudity, audience encounter) Forceful disruption of normal social process Underground press Radicalizing confrontations	Ego-reducing experience, awareness of ego-defense nature of social institutions and customs
Deliberate provocation of "instructive encounters" such as police confrontations, black-white confrontations, etc.	Perception of oppressive nature of social institutions

the quality of the affect? How does it perpetuate itself? The last question is especially important if an APS is to be viable.

I want to discuss a variety of PCT's and PCA's in varying degrees of detail. The purpose of this discussion is not to be inclusive, but to suggest how a more inclusive study should be structured.

In discussing each of the various person changing processes I will first discuss the situation of the process, then the training of new teachers, and finally how such a process might be evaluated.

PERSON CHANGING TECHNOLOGIES

Personal encounter groups operated under the auspices of the YMCA at Berkeley, California represent a technological development in the use of certain kinds of group processes.* A sustaining program has developed which involves between 300 and 400 members of the university community each quarter.

An encounter group is a small group of people which tries to explore the interactions of its members. Problems (not all, or mostly, negative) become defined by means of the interaction of the group members among themselves. The emphasis is on the "here and now" and is sourced in the gestalt therapy movement, phenomenology, etc. There is one member of the group which provides guidance for the group and who is called the "leader". Leaders have been trained in guidance. They use a battery of techniques, but there is no prescribed method for leading.

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*My source of information for the discussion is interviews with the staff. The director of the survey, Dr. James Bebout, has been especially helpful. See also, Bebout, 1970.

Groups consist of about ten or eleven members and one leader. They meet for one evening a week, plus one weekend retreat. Since they are organized around the university academic quarter system, the duration of the group's identity is about ten weeks. Groups can, but do not often, continue unchanged for a second quarter. About ten per cent of the participants drop out over the ten week period. Participants pay about $20 for a quarter's membership in a group. This covers most of the cost of running the program.*

Potential leaders are chosen from members of the group. About 15 per cent of the group's members have the opportunity to become leaders. In order to become a leader, an individual goes through a second quarter of training in special leader groups. Since all members of the leader groups have been in at least one previous quarter of the personal encounter groups, they have some sophistication about what goes on. About half of those who do a quarter of leader training become leaders. Thus, about 5 per cent of the members of any personal encounter group eventually become practicing leaders. We note that since the ratio of leaders to members is about 1 to 10, the mean number of groups a leader leads before he retires from the leadership role is about two. Leaders are paid $80 a quarter for their effort, which works out to about $1.00 an hour. This sum, though not substantial, is significant for many leaders; if students or wives, it may represent the only paid work that they do. Unlike some other PCT's, encounter group leaders go on to other PCT's and

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*Note that these arrangements imply that little is sacrificed for trying the encounter group compared to psychotherapy. Almost half of the participants tried an encounter group after therapy.

related activities -- group work, Peace Corps, social action -- where their leadership skills are useful to the ends of their new activities and to the production of affect.

In evaluating these groups we must take into account their self-proclaimed purpose.* Most people who join personal encounter groups are not seriously ill. The few that have very difficult problems (perhaps 5 per cent) are referred to psychotherapists (usually by the group leader). In a protean world, of which Berkeley is a paradigm, it is likely that problems of understanding the world around you and your own reactions to that world are not solved by referring to tradition. Members of encounter groups often view groups as ways of working out some problems they perceive in their lives. Frequently, the encounter group is used as a preliminary to dealing with some external problem in a more direct way. Also, many members view encounter groups as means to personal growth, as contrasted to the remediation of personal problems. Encounter groups serve some functions that might be easily found (or even avoided) in traditional societies, functions for which freidnship may have worked in an industrial society and those for which common kinds of friendship do not seem to be so successful in the post-industrial society.

These considerations suggest that the evaluation of the success of encounter groups may be done in terms of behavioral measures and self reports. For example, the drop out rate seems to be reasonably low, considering the conflicting pressures that tend to occur in an academic community after half way through the term. Also, the continued survival of the

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*I have not attempted to survey the laboratory training evaluation literature here.

program at a substantial membership level from quarter to quarter indicates that the public response to this program is good.*

These behavioral measures can be supplemented by psychological tests. A group's evaluation of the change in its members as well as self-evaluation of change can be measured and compared. A self-chosen sample, paid for its effort, goes through systematic tests, including Q-sorts, before and after the group experience in order to develop more comparable measures of self change. This work is currently under way.

Personal encounter groups are a technique for spreading knowledge of self and the affective aspects of life among a large number of people at low cost. It is significant that a few percent of the Berkeley population has been exposed to this process. One can only speculate on the effect of encounter group technology on the general affective quality of the Berkeley community. Do people talk, deal with and feel themselves better in Berkeley? Are they more aware of and willing to engage each other?

Another person changing technology is psychotherapy and psychoanalysis. A variety of professions supply services which could be called psychotherapy. (Schofield, 1964). These include psychiatry, psychology, and social work. Though there is a wide divergence in the amount of training required for these professions and the exact type of therapy offered by each, there are many common aspects among them.

The person who is to receive psychotherapy, frequently called a patient, most often comes voluntarily to the therapist. It is usually the case that some problems in life are bothering the patient and also

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*Maliver, 1971, points up many of the difficulties with encounter groups. These include the inadequate training of leaders, the dangers of group pressure, and the possibilities for hurting emotionally ill persons. As I have pointed out above, the dangers from professional practice need to be minimized and presumably this will happen in the encounter business.

that the patient wants to ameliorate these problems.

He does not view the therapy process as one of growth and positive development. Therapy is administered on a one-to-one basis. The patient is in a distinctly different position than the therapist. On the other hand, it is presumed that the therapist is learning from the patient and a high degree of mutuality is involved in the relationship.* The length of treatment is quite variable. It may extend from 1 or 2 visits to several years. The cost of treatment tends to be substantial and usually will range anywhere from $15 to $45 an hour for the time of the therapist. The lower figure tends to reflect subsidized services.

Group psychotherapy differs mainly from this in that several people are involved together in the therapy process. Often the people in the group help each other. In most cases, a therapist is there at the same time. Again, the therapist is not an equal to those who are receiving the theraputic treatment.

The administration of therapy does not lead naturally to the production of therapists. Therapists are produced by post-graduate training of other prcfessionals such as psychiatrists, psychologists and social workers. They consciously choose to be therapists and then they obtain the requisite training. The chart below suggests the variety in training times, costs, and intensity of training available for various therapeutic professions.

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*The therapist must be very aware of his own role for there to be mutuality in therapy. It is he who must surrender some power, and it is he who is offering the service. The patient is in a complementary relationship and can demand some mutuality. Yet the success of the therapy process may depend on transferences which will deny the patient the right to have his opinion count much for the therapist. Shelly, 1964, discusses the interchanges in therapy, the cognitive complexity of the therapist-patient interchange, and the meaning of mutuality and "understanding."

A Comparison of the Training of the Three Major Psychotherapists

Specialist	Total Years of Training Beyond High School	Estimated Cost of Post Graduate Specialty Training*	Years of Graduate Training Before Intensive Psychiatric Experience	Estimated Proportion of Graduate Training Years Clearly Relevant to Psychotherapy
Psychiatrist	11-12	$ 8,000	5	one third
Psychologist	9-10	2,500	2	two thirds
Social Worker	6-7	1,000	1/3	four fifths

The production of therapists and teachers is incidental to the process of therapy. There may be special techniques of therapy for those who are going to be therapists, but this is small effort compared to the resources that go into therapy.

It is quite difficult to evaluate the effectiveness of therapy.** (Lesse, 1968.) It is clear that for many it seems to work. What is difficult to discover is what aspects of psychotherapy are most significant in effecting change. Some have argued that the most significant aspect is the "care giving" one. (Schofield, 1964.) Others see a great deal of merit in the specific techniques used by the therapist. And others argue

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*"These are crude estimates of the direct expense to the student of his training and they are very conservative. They do not include the sizably greater investment of society in the student's education -- the cost of facilities, equipment and teaching staff." (Schofield, 1964, p.120)

**Within a therapeutic profession one might find a set of internal criteria for success. For example, the patient's acceptance of the therapist's model, and an increased vulnerability in the patient, are such criteria. Whether these are useful measures of the performance of the profession, or only measures of the success of a profession in spreading its dogma, is still an open question.

for the trouble shooting aspects of therapy. If we fall back to self-evaluation, then the fact that the service is still used, has adherents, and continues to be used despite the many attacks on it, suggests that it serves some useful functions (even to the patients). Whether therapy serves the function of cure or amelioration of the problem state, however, is another question.

Therapeutic techniques tend to deal with different kinds of problems, usually of a more intense sort, than those dealt with in encounter groups. They require intensive extra training for the practitioners. This training is frequently out of the mainstream of the therapeutic experience; those who choose to be therapists, will make the choice often before having experienced therapy. Finally the one-to-one character of the process makes it extraordinarily labor intensive with respect to the production of an affect changing hour.

This extended discussion of two kinds of affect production by means of helping persons was meant to illustrate possible extremes of the affect production systems available. I have tried to point out the differences in the cost of training, in the foregone opportunities, the nature of how the affect is produced, some brief remarks of the effectiveness and quality of its production, and, finally, how such processes produce new practitioners. I shall try to systematically summarize this data after I discuss some person changing activities.

The person changing technologies that I have discussed thus far are all labor intensive; this has implications for their productivity. They require trained personnel whose productivity per person hour seems

quite constant with respect to what we would normally call technological improvements. Baumol and Bowen have pointed out that in such a case the cost of providing a service will rise rapidly in a technologically advancing society.(Baumol, 1966.) Insofar as mean wage rates and the cost of living are determined by technologically improvable activities and wages are related to productivity, we will find that the mean wages of workers could rise without inflation. This, however, does not necessarily apply to those in affect production activities. Wages certainly could be related to productivity, but there seems to be no likely way of increasing productivity for most affect production activities. The net effect is that the cost of affect production activities will rise rapidly with respect to other items that are sold in this society, or affect producers will be paid considerably less than they ought to be paid, considering their training and status, or a mixture of the two will hold.

If most people in a society were in APS's, then this argument might be avoided. The effects of saturation, see model 1, of all human resources would make the prices of hard goods a problem more amenable to central control. This implies cheap durable goods. (Burch, 1970.)

If we want to saturate the therapeutic system, we probably would want to de-professionalize it. Here we have a technological change which avoids scientific technique. There is considerable support for de-professionalization, aside from arguments for encounter groups.

> Lincoln Hospital in South Bronx sees 600 psychiatric patients in a year and the local spiritualists see 900. The spiritualist naturally talks a different language. (Rabkin, 1970, p. 10)

> Spiritism as practiced by our Puerto Rican patients provides many of them with a means of coping with adversities. (Psychology Today, 1970)

> As far as treatment of the mentally ill is concerned, the foregoing indicates (a) that, owing to the proneness of preliterate Africans to regress massively to psychotic levels under stress, spontaneous remissions, if not recoveries, in a favorable environment are common, irrespective of what kind of treatment has been administered; (b) that ego support and especially group support, loosely called suggestion, are important therapeutic agents; and (c) that, in accordance with prevailing belief systems, the focus of the therapeutic approach must be on the disturbing agents rather than on conflict resolution. Hence preliterate Africans are poor candidates for insight therapy but are exceedingly amenable to what are, to them, magical procedures.
>
> From this point of view, the native healer and the prophet healer score over the scientifically trained psychiatrist, especially as there is no cleavage in belief system between patient and healer. As far as the native healer is concerned, factors which can be identified as of curative value are (a) potency of some herbs administered, (b) high prestige of the native healer in his own community and often far beyond it, (c) detection of the supernatural cause of the illness and promise to counteract it, (d) symbolic function of some of the procedures adopted, such as expurgation and ablution of evil spirits, and, (e) reduction of fear concerning real or imagined dangers by means of sacrifice, flagellation, and application of painful irritants which have no expiatory atoning quality but are meant to assuage and to expel evil spirits.
>
> (Wentrob, 1968)

Still, things are not so simple that we can all become therapists. The major virtue of professionals, besides residual ones of managing in a system created so that only they can comprehend and deal with it, is that they do not make too many major mistakes. Physicians do not kill

too many of their patients. The success of a profession lies in its ability to extend the areas of its competence in providing help without causing more harm than good. (Hence the rejection of heart transplants as a recommended technique of physicians.)

Similarly the major challenge in designing better techniques of affect production will be to create ways of avoiding disasters, of easily and effectively remediating mistakes, and of feeding back this experience to the system. We are not calling for a technology that will produce more affect, but rather one that is capable of making more people low-risk producers.

What hope is there for mechanical improvements in affect production? Person changing technologies have not been very much explored and so one would think that their productivity should rise or could rise substantially. It seems unlikely to me that we will want to increase the sizes of groups. Also, as I observed in the earlier models, we want the leader or therapist to be a person, and not a machine, since mutual social learning could not occur in the man-machine case.* Changes in the quality of therapeutic techniques seem more hopeful. For this to happen, a framework for evaluating the quality of therapies and their relative costs (resource demands) will have to be developed. I try to do the latter further on in this chapter.

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*It is possible to conceive of a machine which serves as an intermediary, synthesizing the responses of its patient and using these in developing ways of dealing with other patients. If all the machines in therapy could share their learning, then things might be better. But then we are back to some profession (populated by intelligent machines) and the dangers here are the same old ones.

SOME PERSON CHANGING ACTIVITIES

The very conscious and contrived nature of affect production that characterizes person changing technologies can be fruitfully contrasted to the more natural and regularized activities. Person changing activities are not consciously chosen for self change. People choose them only in the sense that they choose to be part of the social structure. Examples of such activities are bringing up children and falling in love.

Let us look at two ways of bringing up children in Western society. The conventional style of upbringing involves the intimate interaction of a mother and her child. For a period of about three to five years, the mother is the major source of support for the child. In some parts of the society, where there are a large number of children in the family, older children do part of the mothering. But, essentially, this process is one-to-one, with the "mother" being in charge.

Mothers, who are leaders, are trained to be good mothers by their own mothers, the social system, and codified versions of social knowledge such as Dr. Spock.

In the Kibbutz, the situation is somewhat different. A group of children grow up together interacting most of the time with each other. Their real parents provide them with some interaction for a specified period each day and presumably fill some of the mothering roles that are described in the conventional case. There is also a leader, an adult teacher, of each group who is a specialist in handling the children

and who guides their activities. But most of the activities center around the children themselves and not their conventional families.

The leaders of these children are technically trained. As for the children, who are their own leaders, their training must be by means of peer social process and the teacher's word.

How can we evaluate either of these two systems of bringing up children? One of the peculiarities of person changing activities is that the evaluation of their success is intimately dependent on the social system in which they occur. We could ask if the children that are trained by either of these PCA's are adequate to meet the needs of their society. We then would find ourselves with the structure-functionalists' problem: is what is, what ought to be? We do need a method of evaluation that is respectful of different cultures. But even in this respect, there are difficulties. Whether Kibbutz trained children were better fighters in the Six Day War than conventionally trained children, for instance, does not seem to be a very useful criterion, especially if the evaluator is a pacifist. Similarly, training in a collective society with collective modes of thought may not do children much good if the society they enter is individualist in orientation. (Bronfenbrenner, 1970; Bettelheim, 1968.)

We might try to evaluate these person changing activities in terms of how much affect they produce. The question we face in this case is, affect of what kind? For example, if we are looking for collective behavior patterns characteristic of massive good feeling, one version of upbringing might be more effective than another. On the other hand, if we are looking for capabilities for loving individuals, another kind might

be more effective. This does not mean that the affective effectiveness of PCA's cannot be evaluated. It is just that we have to define much more clearly what kinds of feeling we wish to evoke in a population. The explicit choice of which kinds of affect we wish to evoke in the population is probably very similar to choices about political styles and cultural realities. Such explicit choices seem very difficult, and therefore I would suspect that explicit choices of the kinds of affect we want will turn out also to be very difficult. For if explicit choices of affect are concurrent with changes in politics and power relationships, there is no reason to believe that those who are in power will be willing to give up their special status.

Romantic love, as a widespread activity related and leading to marriage, is a recent invention. It is likely to have been a product of our wealth, our ability to move around inexpensively and rapidly, and our decreased dependence on the extended family.

Romantic falling in love is a very particular set of behaviors. It involves one-to-one interaction, in the context of a peer group doing similar kinds of activities. It happens before formal marriage. And it is the determinant of whether that marriage takes place.

People learn how to fall in love romantically from literature, from the mass media, and from their peers. They also learn from a sequence of experiences of falling in love, each time presumably getting more adept at communicating their intentions. They also learn something about falling in love from their parents.

Non-romantic falling in love is very different. First of all the pairing is arranged by outsiders in a formal way. It is still a one-to-one precess, but it takes place after marriage, or as a consequence of the fact that the marriage arrangements have already been made. Although it might be said that romantic falling in love is an adjustment to predetermined social conditions, non-romantic falling in love is most explicitly such. Whether one needs to be trained to fall in love is another question. Traditions can provide a set of prescribed behavior patterns which lead to greater accommodation among those who are to be married. If one chooses not to fall in love, it does not matter since the marriage will take place anyway. Since falling in love is a secondary aspect of non-romantic marriage, we have a situation where training may be quite randomly distributed.

Again we face the problem of evaluation. It would seem quite likely that more affect is produced in the case of romantic falling in love than in the non-romantic case. Yet we do not know what kind of affect is produced by each activity

PCA's are distinguished from PCT's by their degree of embeddedness in the mesh of society. It is easier to evaluate PCT's because they are undertaken consciously and, presumably, purposively. So we are tempted to think of PCT's and their technique as major instruments of public policy intervention.

Yet PCA's are more pervasive and influential in everyday life. They determine the context in which PCT's operate. It is possible to make conscious choice, on a societal level, concerning PCA's (viz. the kibbutz and Soviet child rearing.) In doing so, at least

at first, a PCA may become a PCT, and the attendant problems associated with the visibility of technique become important. Affective changes probably will have to be partly in the form of technique and partly in the form of societal rules, the mixture being determined by what is possible.

Having looked at some person changing processes, I want to see if we can develop a systematic way of synthesizing what we know.

THE ECONOMICS OF PERSON CHANGING

Most of my discussion of person changing processes which might be useful for affect production has concentrated on the input side of the problem. We have been concerned with people and time. The lack of commonly useful output measures and, more significantly, the lack of consensually agreed upon output goals is a reason for this. The analysis I shall offer next concentrates on inputs and looks at some of the structural aspects of the production of new leaders. An evaluation of the kinds of affect produced will have to wait for further investigation.

For the economic evaluation, I have treated the APS as embedded in a larger economic system. This means that I have not evaluated the effects of transferring resources to the APS. I have ignored the opportunity costs of a concern for love.

A Model:

I want to develop a highly simplified model of a PCT (or PCA) that is an affect producing system. Since we do not know much about any of these processes, we need to have a model with few parameters.

A PCT is a process which takes in students ($\underline{i}(t)$, (for input), in year $\underline{t}$), and discharges them after some years ($\underline{t}_1$) of "schooling", of which a fraction of the students ($\underline{s}$) survive (the rest were dropouts). The number discharged in any one year ($\underline{o}(t)$, (for output)) equals the number who came in $\underline{t}_1$ years before times the fraction who survived, $\underline{s}$.

$$o(t) = s \cdot i(t-t_1)$$

Some fraction (x) of the graduates each year became teachers (P, (for professor)) in the system. The number added in year $\underline{t}$ is:

$$x \cdot o(t)$$

After $\underline{t}_2$ years, a teacher leaves the system. The total number of teachers in the system at time $\underline{t}$ is

$$P(t) = \sum_{T=t}^{T=t-t_2} x \cdot o(T)$$

The total number of students in the system at $\underline{t}$ is:

$$S(t) = \frac{s}{f} \sum_{T=t}^{T=t-t_1} i(T)$$

where f is a "fudge factor," determined by the exact way in which people drop out.*

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*If they drop out immediately upon entering, then f=1. If they drop out the day before graduating f≈s.

Now we can say that some of the students are also teachers. We define $P' = P + yS$ as the true number of teachers. We could also define $S' = S + y'P$ as the true number of students, but since $P < S$ in general, this will be ignored.

Example:

An example should make clear what is going on. Let:

$i = 10$ for each year

$t_1 = 4$ years

$t_2 = 20$ years

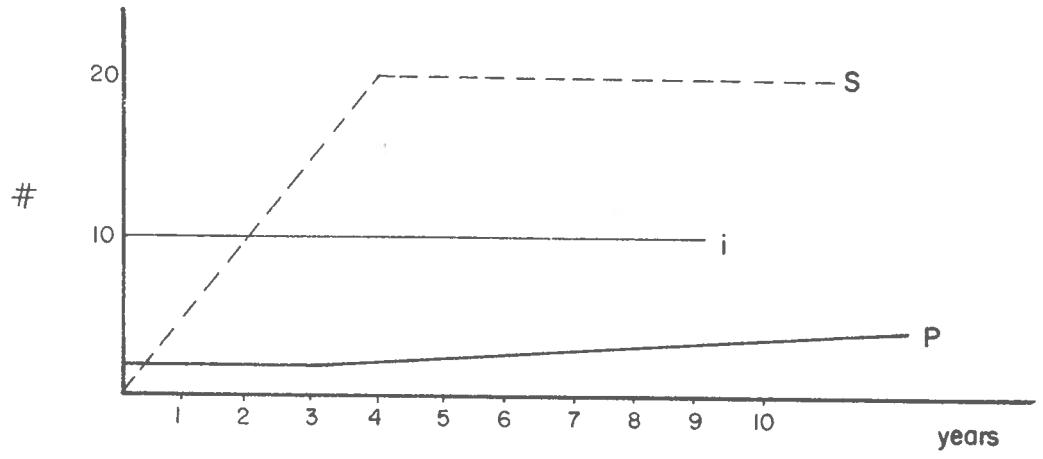
$x = .05$

$s = 0.5, \quad f = 1$

$P(0) = 2, \quad S(0) = 0.0$

$y = 0.5$

The chart below gives the time history of the system.



Eventually, all quantities become a constant as a steady state is achieved.

What is the long term behavior of P,S, and P', for constant i, s, x, y, t, and t_2?

$$o \rightarrow si$$

$$P \rightarrow xsit_2$$

$$S \rightarrow \frac{s}{f}it_1$$

$$P' \rightarrow t_2xsi + \frac{ys}{f}it_1$$

Using some of these systems measures, we can develop figures of merit for an APS.

Our proxy for quality will be the ratio of students to teachers. This is no assurance of quality, except that, in a person-to-person system, if this measure is too large, there will be insufficient interaction.

Quality

$$\frac{\text{Students}}{\text{Teachers}} = \frac{t_1 \frac{s}{f}}{t_2xs + yt_1\frac{s}{f}} = \frac{\frac{t_1}{f}}{t_2x + yt_1/f}$$

For the productivity of an APS we may define two measures. Both depend on our concern with the long term viability of the APS. If it takes too long to teach someone to be a teacher, then it does not matter how good a teacher he is.

Productivity

$$\frac{\text{Years teaching}}{\text{Years learning}} = \frac{t_2}{t_1}$$

or

$$\frac{\text{Years of teaching from a cohort}}{\text{Years invested in teaching a cohort}} = \frac{t_2sx}{t_1s/f}$$

$$= \frac{t_2x}{t_1/f}$$

A costly APS is one that takes a long time to train teachers and has a large value of the teacher-student ratio.

Costliness

$$\frac{\#\text{teachers}}{\#\text{students}} \times \text{years in training} = \frac{t_2 x}{t_1/f} \cdot t_1 = \frac{t_2 x}{1/f}$$

An efficient APS is one in which the number of drop outs is small and which is capable of producing sufficient teachers to keep it going.

Efficiency

$$\frac{\#\text{students graduating}}{\#\text{students entering}} = \frac{o}{i} = s$$

$$\frac{\#\text{teachers produced}}{\#\text{ students entering}} = \frac{xo}{i} = xs$$

$$\frac{\#\text{teachers produced}}{\#\text{students entering}} \times \text{fraction of students surviving} = xs^2$$

(a truer measure of drop out costs.)

All of these figures of merit are minimal measures. They represent resource inputs that should help to make an APS successful. They are necessary but not sufficient.

We can apply these measures to some of the PCT's and PCA's we have discussed. The chart below gives the values of the parameters (guesses!) and the figures of merit.

Some Person Changing Processes and Measures of Them

			Psychiatry	Personal Encounter Groups	Bringing Up Children: Conventional	Bringing Up Children: Kibbutz	Falling in Love: Romantic	Falling in Love: Non-Romantic	High School
x			0.01	0.1	1.	0.05	1.	1.	0.01
s			0.5	0.9	0.9	0.9	0.80	0.75	0.80
t_2			25.	1.	10.	20.	5.	20.	10.
t_1			2.	0.5	4.	4.	15.	15.	3.
f			0.75	1.0	0.95	0.95	0.90	0.87	.90
Q	$\frac{t_1/f}{t_2x + y\frac{t_1}{f}}$	y=0	10.7	5.	.4	4.	3.3	.85	33.
		y=1	.92	.82	.29	.8	.67	.46	.98
P	t_2/t_1		13.5	2.	2.5	5.	.33	1.33	3.3
	$\frac{t_2x}{t_1/f}$		.1	.2	2.4	.24	.3	1.2	.03
C	$\frac{t_2x}{1/f}$		.19	.1	9.5	.95	4.5	17.	.09
E	s		.5	.9	0.9	.9	.8	.75	.8
	xs		.005	.09	.9	.045	.8	.75	.008
	xs^2		.0025	.081	.81	.040	.64	.56	.006

Some interesting observations can be drawn from this analysis.

1. PCA's are more intensive in their use of people than PCT's. This may be due to the payment schemes which are set up for most PCT's and which do not exist for PCA's.
2. That the values of the Quality measure tend to be less than one for the y=1 case, suggests that we need a more realistic Quality measure. This should take into account the condition that some teachers become students, as well as that some students become teachers.
3. From the first measure of productivity, we note the obvious split between professional activities and non-professional activities. Professional activities require much more time for training than non-professional ones.
4. The second measure of productivity turns out to give high values for PCA's and lower ones for PCT's. This is because most PCT's do not naturally succeed themselves, while PCA's do.
5. As for costliness, the intensive training required for PCT's makes them substantially more costly than PCA's.
6. Family kinds of activities are more efficient compared to societal kinds of techniques. As soon as one has to worry about training the successors in a profession, in a way that is not identical to the training of those who are served by the profession, efficiency drops rapidly.

These observations seem fairly straightforward. Why should we do a complex abstract analysis of APS's such as the preceding one? One reason

for doing so is to try to elucidate the essential aspects of these APS's and thereby suggest likely policy choices available.

For example, the requirement of long and artificial training that is required for psychiatry, compared to the training required for leaders of encounter groups, suggests that psychiatry may be a very expensive technique for changing affect in a society. On the other hand, it could be said that expensive activities may be extraordinarily productive of desirable kinds of affect. So what can we learn from such input data? Under some reasonable limitations of resources, we still may be able to derive useful policy choices. If we conclude that one APS is much cheaper than another and affecting many more people than another, then a much more expensive technique is not likely to be worthwhile. Considerations of equity should make this kind of argument even stronger.*

Another very useful aspect of this kind of analysis is that it points out why some activities are so much more costly than others. This analysis of the structure of affect production suggests that the lengthy amount of training required for certain kinds of APS's, and the distance between the leader and the patient may be the crucial variables in determining the effectiveness of an APS.

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*Freeman, 1965, makes a point similar to the one made here when they consider the evaluation of poverty programs. "Suppose short-term treatment institutions for delinquent offenders do no better than long-term ones, if they are more economical is this not something that the evaluation researcher has a responsibility to take into account?" (p.24)

RESEARCH AND DEVELOPMENT

The analysis we have done so far should lead to recommendations for research which would increase the affect production capabilities of society. Systematic models of activities can suggest effective intervention points.

Probably the most significant work will be on changing the nature of the affect production system, diffusing it among all of society. This deprofessionalization will require organizational developments in order to ameliorate mistakes. We will need ways of monitoring various community experiments in helping.

At the same time, we want to have more comprehensive methods of accounting for the various APS that are active. Planful consideration of societal consequences should set the stage for such social changes, especially in our imagerial worlds.

We need to estimate the research resources that are going into studying affect production mechanisms. We want to look at the sources of funds, what kinds of research they are put into, and the likely utility of this kind of investment. For the moment, the data are lacking.

There are some serious problems associated with research on APS's. The most obvious, and probably the most important, are ethical questions. This is the kind of research that is most closely related to people's private lives and the manipulation of their psyches. More significantly, it involves the public manipulation of their private selves. It represents the conscious shoice to manipulate where the end is change in people's self-feeling. We cannot find easy rationales for such manipulation. The fact is that we are intervening to make them better.

I am not sure whether applied affect production research should take place at all. If it should, then it is almost certain that it should be publicly announced and publicly chosen. This kind of knowledge is too dangerous to be produced in a secret way.

Another aspect of affect production research is the necessity for naturalistic studies. If we are concerned about APS's, then many of our studies are going to have to be done in-situ. All the problems associated with the evaluation of research efforts involving local communities will be present in this kind of study. (Marris and Rein, 1965)

CONCLUSION

Affect production and change can be monitored, analyzed, and perhaps altered. We can change the framework in which people help and advise each other. Still, there are many objections to this change, and these objections do not come only from people who have vested interests in the present system. There are many who fear deliberate affective change and their fear has a religious quality. I will explore this phenomenon presently.

22 San Francisco Chronicle ☆☆ Thurs., Jan. 14, 1971

Gallup Poll SF

The Happiest People

By George Gallup

Princeton, N.J.

The happiest people among the United States adult population are likely to be white, in their 20s, married, with a high income and a college background.

These findings emerge from a recent nationwide survey in which 43 per cent of all adults interviewed described themselves as "very happy," 48 per cent as "fairly happy," with 6 per cent admitting to being "not happy" and another 3 per cent who are undecided as to their present state of happiness.

Americans as a whole are happier today than they were nearly a quarter century ago in 1947, a year marked by labor disputes and problems of adjustment to a non-war economy and way of life. A Gallup survey that year found

See Back Page

Gallup Poll:

From Page 1

38 per cent describing themselves as "very happy."

DRAMATIC

The change since 1947 among young adults in their 20s has been dramatic. Traditionally the least happy age group among adults are those 21 to 29 years of age. Only 23 per cent in this group in the earlier survey described themselves as "very happy."

Today they are by far the happiest group of adults, with 55 per cent placing themselves at the top of the happiness scale.

A vast difference in responses is found between whites and blacks. Only one black in five currently says he is "very happy," while nearly half of all whites (46 per cent) so describe themselves.

NEEDS

Happiness involves satisfaction with such basic needs as income and housing. Periodic Gallup surveys have shown a sharp increase since 1947 in the proportion of Americans who express satisfaction with these needs.

Forty-nine per cent of all adults interviewed in the 1947 survey said they were "satisfied" with their family income. The proportion in the latest survey on the subject is 65 per cent.

The Happiest People

Over this same period of time the proportion expressing satisfaction with their housing has climbed from 69 per cent to 78 per cent.

Happiness, of course, means something different to everyone, but the results reported today are meaningful in terms of one's own frame of reference.

JUDGMENT

Studies made in recent years have indicated the reliability and validity of people's own judgment about themselves. These self-ratings agree well with the expert judgments of clinicians who have closely observed small groups of people.

A total of 1517 adults were interviewed in person in more than 300 scientifically selected localities across the nation during the period December 5-6. This question was asked:

In general, how happy would you say you are—very happy, fairly happy, or not happy?

Here are the national results and those by key groups:

	Very	Fairly	Not Happy	No Ans.
	%	%	%	%
NATIONAL	43	48	6	3
Men	42	49	6	3
Women	44	46	7	3
Whites	46	46	5	3
Non-whites	20	63	12	5
21-29 years	55	39	5	1
30-49 years	42	51	4	3
50 & over	38	50	8	4
College	51	42	4	3
High school	44	49	4	3
Grade school	35	50	11	4
$15,000 & over	56	37	4	3
$10-15,000	49	46	3	2
$7,-10,000	47	46	5	2
$5-7000	38	52	7	3
$3-5000	33	54	7	6
Under $3000	29	55	13	3
Married	47	46	4	3
Single	37	55	6	2
Divorced/ widowed	25	56	15	4

SOME DIFFICULTIES

There is a remarkable uniformity in the arguments raised against the discussion I have given so far. Academics, intellectuals, people of the left and new left, and behavioral scientists all see a common complex of difficulties in taking these ideas as serious and viable proposals. The uniformity of the reactions and the quickness with which they are offered, suggests to me that they have a deep common source. I believe that this common source is a fear of sexuality in public life.

Before going further, I want to consider the probable reactions of audiences other than those referred to above. Those who would consider themselves working class, as well as blacks and others who view themselves in under-class terms, are likely to see these prescriptions as being too long-term and insufficiently responsive to present problems. I have not tried to be responsive to the very short-term. I have looked into substantial reorderings of the social system that I believe will eventually result in a better life for thcse who are disadvantaged now.

From the other end of the spectrum, I hear criticism suggesting that I have not gone far enough. The perceptive critics of "technique," and those who are pursuing a growth-filled existence, would see this essay as being too technical as well as having the technical mystique inherent in its style. If I want to be sufficiently programmatic and responsive to large-scale problems; however, some techniques, especially economic and organizational analytic ones, are helpful. If we are to have a more humanized life we shall probably have to plan more

and have more technique than we have today. We need to carve out areas in our life which may both benefit from the richness of our technological capabilities and be shielded from their oppressive character. This requires that we design environments rather than let them happen.

I now want to return to the problems in my argument perceived by the intelligentsia. I discern four clusters of concern. The first is that we are living in a mundane world and that our everyday problems are ever present. The second, reminiscent of the fear of Nazism, sees an imminent tyranny of the emotions. The third, originating in the great successes of the natural sciences in the last hundred years, is concerned about proofs and objectivity and the survival of science. Last, there is a deep discomfort about the ethics of masterminding or manipulating others. I will deal with each of these issues in turn and then suggest how they all relate.

THE MUNDANE WORLD AND BEYOND POST-INDUSTRIAL SOCIETY

The current concerns of social policy include housing, health, welfare, education, and transportation. For the most part, social policy has focused on the provision of services and materials that could not be provided by the private sector.* At the same time, there has been a commitment to a more equitable distribution of these goods -- under the rubric of social welfare or of equal opportunity and the elimination of poverty.

More recently, policy goals have become formulated in terms of the less tangible qualities of pride, justice, opportunity, and freedom. This latter set of values has come to be taken as the primary set, while the services that were formerly considered the central interest of social policy are instrumental, overtly so, to these ends. More significantly,

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*Tentative analyses of the private sector, or even a return to using it for distribution, are currently in fashion.

it is suggested that the old concerns of social policy may only be a small part of the possible resources needed to fulfill the new demands.

It would seem that my concern with self and with shared expertise in society would be quite helpful in working on the new demands. Yet it can be said that this essay detracts from consideration of the vital questions of housing, health, etc. Why should this be so? My guess is that very few are committed to the values of the new policy. Disease and structures are more easily conceptualized than pride and justice. Were we committed to these, then the avenues of intervention, both in the lives of the "haves" and the "have-nots," would become more substantial. Rather than be well-defined and limited to the issues concerning the left-outs, social policy might actually affect the everyday lives of everybody.

It is true, as critics allege, that a beyond post-industrial society, in the future, and a concern with affect, now, may not ameliorate today's most pressing problems. Still, if we wish to sketch what the future policy issues will be and act in a planful way with respect to these issues, then we must deal with affect.

A more aggressive rejoinder would be that the redirection of interest from the everyday material concerns to those of the everyday affective, would not necessarily mean that the old concerns of social policy will be ignored. It may be that they will then become satisfied to a much greater extent than they are now. This will happen because housing, health, etc., will no longer be considered the crucial resources of the society, and could be more equitably distributed since they did not "count." Those in power would view them as being insignificant differentia among various classes. The hidden trick in this proposal is that the new resources for affect may, hopefully, be more equitably distributed in the population

compared to the more material resource capabilities. It is not likely that development of a new resource will cause a revolution, but it may be a crucial aspect of substantial societal change.

It seems foolish to freeze to death and at the same time feel good. This would be a cartoon of the society where the new resources took over from the old. More likely, the availability of a resource mix of old and new should make for a more efficient (in the economic sense) provision of quality of life.

A distinction that is frequently made between the old concerns of policy and the newer ones is that between effective action and affective action. What is most remarkable about such a distinction is that performance becomes separated from affective change. My feeling is that those who make this distinction, one that they probably do not hold to in their everyday lives, are afraid of dealing with the possibilities of affective change. They have developed conceptual tools for analyzing problems of social policy which are "value neutral" in their formulation and the introduction of affective change reduces their global formulations to very narrow ones.

TYRANNY OF THE EMOTIONS

Nazism and thought reform are viewed by many as the product of emotional tyranny. These twentieth century horrors are said not to come from some sort of reasoned commitment to knowledge and understanding, but from a diabolic take-over of the human being through his emotional self. What is suspected as a major attack on autonomy and individuality is attributed to the emotional outbursts characteristic of some totalitarian regimes.

I really do not see how this supposition can be maintained. I suspect that we make moral judgments about actions, and <u>then</u> claim that

the methods or styles of those actions are bad. At the same time, I would suggest that the way we characterize those methods that lead to acts which we judge to be bad is independent of the "real history" of the event. We automatically designate "bad acts" in terms of our favorite evils in society.

Today most would agree that the actions of the Nazis were reprehensible and also that the actions of the United States in Vietnam are similarly so. It really does not matter whether they are of the same character, or whether or not we accuse the United States of genocide. The Nazi's action is called immoral and the source for this bad behavior is ascribed to their emotionalism. This, of course, ignores the highly reasoned character of much of their action. The Vietnamese war is also called immoral, and the source for this bad behavior is ascribed to technology. This ascription ignores the influence of highly unreasoned factors in our behavior. I would want to argue that the source of both of these bad behaviors is neither emotionalism nor technology. Rather, these sources were and are the currently popular evils of their times, and they are called to service to explain undesirable occasions. History is neither cognitively logical nor affectively illogical. We reify our personal fears of feeling or technique and project them on to what are patently inhuman acts.

Except in extreme cases, a mode of acting, for example, whether emotional or cool-reasoned, is no assurance of proper or moral judgments and actions. It is important to note that this is independent of the question of whether moral actions lead to moral consequences. If we desire humaneness and a respect for individuals, we need to have a primary commitment to these values. No specific means guarantee that the consequent behavior will be desirable.

It is probably true that moral judgments are sourced in our feelings, and it may be useful to involve our selves and our own experiences explicitly in making moral judgments. I do not believe that science of itself provides much, if any, clue as to what would be moral action.

If we fear emotional tyranny, and the basis for that fear is not likely to be in a fairly sensible version of history, then I still would like to understand the source of that fear. I suspect that expressions of the danger of emotional tyranny represent fears of dealing with the sexual aspects of our lives. Sexuality is one of the strongest of our emotive modes. I think that we will have to develop a grammar and style of sexuality that is natural, expressive, and responsive to our fears. This grammar must make significant distinctions concerning freedom and sexuality.

Anyone who tries to distinguish psychoanalytic processes from thought reform, has a similar problem. Lifton offers one answer in his effort to distinguish open personal change from closed change. In open change we question identity, rather than assault it; we are accepting of our self-image, as well as critical of it; and we re-form ourselves from many alternatives, rather than accept only one image as a possible choice. Correspondingly, a grammar of sexuality will have to transform sexual expression from some of its more compulsive manifestations to a much more highly articulated quality which is critical, expressive, and growing.

A more social and political approach offers another way of developing a sense of the meaning of individual autonomy and freedom, and thereby protection from tyranny. The view of Marcuse, which suggests that total toleration can actually result in a decrease in freedom, must be integrated with our more "uncritical" and power-ignorant conceptions. If our whole societal system is organized so that our ability to express our sexual selves

is highly repressed, while our cognitive selves can actually play themselves out in a grand and possible self-destructive fashion, then we need to restructure that organization. To do so, a moral examination of what we tolerate is in order. This is not to reject wholesale, as Marcuse does, a liberal ideal of tolerance. The consequences of our political beliefs, the quality of their actual performance, needs to inform the beliefs we hold.

OBJECTIVITY AND PROOFS

> Gouldner is certainly right that the belief of many sociologists in detachment and objectivity may be a way of evading their moral responsibilities or of making their peace with the status quo. But it is also true that Gouldner's proposed alternatives of "self-knowledge" and "value-commitment" may be a way of encouraging the the indulgence of prejudice and polemic. When a social scientist's discoveries threaten Establishments, detachment and objectivity certainly function, as Gouldner says, to insulate him against his sense of political impotence to implement those discoveries.
>
> But this does not exhaust the significance of objectivity for sociologists. Much of the modern history of sociology has been a history of research that threatens not Establishments, but the liberal sociologists' own Romantic image of a noble but fettered human nature which, liberated from the false consciousness created by exploitive institutions, could create the Heavenly city in the here and now. Where, in short, the sociologists's disillusion is with "people" rather than with the benevolence of Establishments, objectivity functions to insulate him against the pain of his own discoveries.
>
> On balance, then, it seems to me that a sociologist's interest in the truth (although certainly not his interest in power) is better served by a norm of objectivity which, when distorted by any of the Baconian Idols, can be invoked by a critic to expose those distortions (that is what criticism is for, and no sociologist has been better at it than Gouldner) than by a norm of "commitment" or emotionally whole authenticity, which can easily lead to a veritable orgy of self-congratulatory moralizing and counter-moralizing from which there is no escape at all.
>
> Part of my skepticism regarding Gouldner's rejection of objectivity as "repression" and his affirmation of moral feeling as "liberation," then, is founded in precisely the same concern for the consequences of ideas that distinguishes Gouldner's own book.
>
> Bennett Berger, 1970, reviewing Alvin Gouldner, The Coming Crisis in Western Sociology.

Bennett Berger's anxiety over one view of a subjective social studies is a good sample of the conflict felt by many who are sympathetic to the view that persons have a big effect on social science understanding, but who are not convinced that the solution offered in terms of acknowledging that fact are adequate or even in the right direction. I want to explore these fears.

The image of objective knowledge, paradigmatically represented by the natural sciences, has been a powerful influence on social studies. Science has been remarkably successful in avoiding deception, at least when observed from the outside, of forcing the confrontation of opposing ideas, and of eliminating the idiosyncratic from its bosom. It would seem that if we are concerned with public action that is effective, all of these characteristics would be desirable in related studies. Yet, the proposal that I present here seems to bring in all the problems associated with the idiosyncratic qualities of individuals and their personal lives. A science of public action would be invaded constantly by the peculiarities of those who are involved in its investigation and it would have little respectability to the outside world. Say for the moment that the kind of science I am talking about could actually remain elitist and separated from the world -- which I really do not believe. Then I still would argue that it cannot use the natural science model, in its crudest form, as a paradigm.

The one-dimensional character of most scientific investigations, having narrowly-defined (precisely defined!) problems which do not admit of malleable reformulation, is unsuited to social "problems." Public action problems have a political quality and need to be amenable to redefinition so that bargaining can occur. This may be called deception, but problem malleability suits political environments. The natural sciences

have succeeded in avoiding deception by defining their problems rather narrowly. This is fine, if the making and taking of problems is independent of anyone other than those who are doing so. Public action does not have this freedom.

Though highly touted, the confrontation of ideas is rather rare in the natural sciences. Most of the time systematic building-up of science is taking place. On the other hand, in the sphere of public action these confrontations are frequent since this is the nature of politics.

Finally, one's evaluation of the dangers of idiosyncracies in public action depends on whether one views such idiosyncracies as the products of geniuses or madmen. I would think that it would be appropriate to develop and use societal and organizational models that can filter out madmen and transform their perceptions into socially useful knowledge. Some similar process will be needed for geniuses.

The model of objective knowledge cannot be responsive to questions of one-dimensionality, political confrontation, or idiosyncratic behavior. Still, public action does require consensus. If the so-called scientific approach is not about to yield consensus mechanisms, how will we achieve it? Our discussion in chapter 6 has emphasized the value of self-consensus.

There are advantages to a positive self-involvement in public action studies, in contrast to the objective knowledge position.* By avoiding the pretense of de-personalized study, we can deal more directly

*Note that this is not meant to necessarily advocate the extreme position of the engagé researcher pushing his political beliefs overtly and all the time. Though I might want to take such a position myself, I think that one may separate, perhaps only conceptually, political self and personal self.

with biases and problems that they induce. If we eliminate the tension involved in denying their presence and creating an air that they do not exist, we might release energy that could be used for systematic understanding of the influence of self in public policy making.

The polemics and prejudice that most fear as being attendent to a return to a more self-aware social studies come mostly from our ignorance of our selves in the world and our relationship with others. The fear that a self-indulgent, rather than critical, stance will result from a commitment to self is similarly sourced. A critical stance based on a sexual understanding of the world and one's own relationship to the data that are experienced, is not only a realistic possibility but a present reality for many. For some, there may be a reasonable fear that if they were to become more self-centered, they would not be able to be critical. This may represent one of the major failings of our educational efforts. There is reason to believe, however, that an education that trains one to use the self in exploring the world will result in a most critical understanding of what goes on.

The fear that if we get our selves involved in social studies, we will become subject to the vagaries of political and social pressures, while we supposedly remain free of them if we are scientific, is illusory. Rather, I suspect that we will gain freedom from our self-involvement, since we may be able to transcend, at times, some of the political and social role prescriptions that dominate a scientific model.

I see in the self and a commitment to subjectivity the possibility of avoiding the greatest fears of those advocating objective science. It may not be possible for persons educated in the old style to fulfill the possibilities, but this does not preclude the possibility for others.

CONTROLLING OTHERS

The fear of controlling others' lives and being controlled by them is pervasive today. Still, we have become used to manipulating the more overt aspects of emotional life through accepted political and social controls. All planful activities and coercive activities have this character. In part, the fear of emotional control is related to a fear of sex. Our only modality for controlling sex is repression, and we have not learned how to (explicitly) use sexuality in a broad spectrum of relationships. When we do use it, it is often considered unacceptable if it is overt, and unfair if covert. Our fear of controlling others' emotional lives is, partially, a reflection of our inability to develop an articulated language of using our sexuality and affect.

We cannot avoid the source of this fear. The complexity of our lives has technique as a basis for its viability, and demands for decentralization and smaller spans of control are likely to be effected best by greater planning and even more sophisticated technique. I would expect that explicit interventions into our emotional lives will have to replace the covert and unexamined interventions that we use now. What we need to have is not "less" control, but a greater variety of controls and de-controls and a more developed sensibility for using them.*

A more sophisticated perspective sees control as a reciprocal and changing process. Assent to be controlled does imply consent, and the roles of controller and controllee do change depending on the situation. Power inequities force us to reconsider the value of these concepts, though. To

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*Though I do not believe that we can educate ethical sense by scientific investigations, I am not too hopeful that we can do so by affectual ones either. Still, if our feelings are better educated, and if ethical sense is related to how we feel, ultimately it just may help.

be in a controlled position may imply consent, but the degree of voluntariness of assent depends on relative power. So we might want to make sure that the techniques for emotional interventions are better distributed than they might be if those in power distributed these goods right now.

The powerful are not likely to readily give up their power (even if the source of power lies in the future) without getting something in return. Or, as is more likely, the changes in emotional interventions will be done outside of the ordinary channels at first, and substantial options will be retained by the originators of the interventions. This is not a revolution, but a pessimist might be satisfied with this much change.

BEYOND SEXUALITY

I have suggested throughout this discussion that a fear of sexuality and our inability to be sexually articulate are fundamental sources of a fear of an affectively oriented world. Loss of control is intrinsic to sexual activity in its "ideal" form, and the fear of this loss is pervasive. Sexual fears become expressed as doubts about emotion and feeling, rather than affectivity. I believe that we might fear pure emotion and feeling, were they not informed by a sophisticated grammar of expression. This grammar permits us to use our resources in a planful way.

What I have been talking about throughout this essay is not raw emotions and feelings, however. I have been concerned about the knowledge of our selves and our feelings which is an amalgam of affection and cognition. This kind of knowledge can also be feared. It would increase our responsible action since we should know about what we are acting even on the affective level. Yet, I think that we should be able to develop social means of growing so that we are strong enough to deal with these fears.

They will remain with us for some time. Our alienation from our own selves and our own bodies will not disappear soon. Only if we return to our selves and our bodies will we have a sense of our selves in the world and have some sense about where peace may yet lie.

Even if you were to become sexually articulate, a problem remains (as one always must). In examining your self, and in being an aware and questioning actor in the world, you must constantly "break face." The roles that you fulfill, the expectations you have of yourselves and others, and the reciprocal expectations others have of themselves and you, require some uniformity and predictability. If you are constantly examining, then the future is always tentative.

At the same time, action may be precluded by constant examination. The existence of a world out there may seem to create "objective" events which require action. We may not always be self examining. Nonetheless, the self examining planful actors advocated here really have to conquer the necessity of understanding.

My concern with predictability and action reveals how poorly worked out these ideas still are for me. The projected social scene, in which actors know that others are self-examining like themselves, would create a different kind of expectation of predictability and a different source for action than we now experience. I can only make rough guesses as to what this context will be like.

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Gouldner's book is a Marxist version of engagé social science. Berger's review is powerful just because it is at the right level of sympathy.

Jack Seeley's writings have been quite influential in forming what I am trying to say here. Benjamin DeMott says some good things about sex and culture. There is just not enough about "sex" in most discussions of social science.

POLICY

Policy chapters are usually added on to works of social inquiry, or works of social inquiry are added on to policy recommendations. Rarely are they coordinated. A reason for this is that it is difficult to develop a study that integrates findings with actions proposed to remediate or alter the situation that has been studied.* To avoid this consequence, even in a philosophically oriented work such as this, I wrote my policy ideas in the middle of figuring out what I was going to say, and tried to make sure that there was a connection between policy recommendations and the arguments in the rest of the text.

Like all planned conclusions for any study, whether philosophic and theoretic or experimental and empirical, where you end up may not be where you planned to end up. That is how I feel now. On the next page is a transcription of my original ideas. If I were to alter them at this stage, I would want to put greater emphasis on power, sex, the mechanism of operation of experts, truth and science, and problems related to reliability and verifiability. I have dealt with these questions in some detail in the text but, in some sense, they were not on my mind when I drafted my "action" recommendations.

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*One difficulty is that social studiers usually maintain an apolitical stance. If they are to recommend actions, these recommendations must come from some conception of why the studied situation is problematic. This usually requires some political values.

SOME ANSWERS TO UN-ASKED QUESTIONS: LIKELY POLICY RECOMMENDATIONS

1. Expertise will have to decline. Status is no guarantee that a man will be able to be instrumentally useful in solving your problem. (Is "solving your problem" the correct formulation?)

2. Others should be able to understand the expert. In explaining what you are doing, deceit is not acceptable.

3. Self examination is a useful way of deriving hypotheses. Nowadays, we know this but it is not considered central.

4. If anybody is to be able to put his ideas to work and thereby fight the expert system, we need ways of separating the sub-systems so that experiments can take place in a suitably realistic but disentangled setting.

5. "Wise men" will need a new role so that they don't compete directly with other knowers.

6. Self-knowledge will be vital so that people will be able to deal with epistemological questions at that level. Ad hominem explanations are equal to abstract arguments.

7. New truth-finding procedures will need to be tried out. If we don't "toss dice" or do controlled experiments, then what should we do?

8. A large infusion of cultural styles from indigenous but ignored cultures should take place. "Soul" for everybody.

9. The nature of certainty needs to be better defined. Ethnographic or participant observer types of studies need to be part of education.

10. Organization theory provides the way of dealing with big systems?

This essay has been about a philosophy of social action. In that sense, policy recommendations cannot have the force of testable predictions, as might be the case for national economic policy. Rather, such a framework tries to isolate and emphasize important factors for action. What is needed now is a predictive model of the actors that I describe. This model would be testable. If it is faithful to the intents of the theory of social action, then its successes and failures will inform the theory.

Still, some predictions and choices for action are implicit in the theory. These relate especially to conflicts about values. Predictions may be tested as organizing ideas by evaluating the explanatory power of history written using them. They also relate to resource conflicts, especially those related to the kinds of work that men do.

What is a suitable future context in which to ask these questions about conflicts of resources and values? Futures are chosen in a political fashion. Even the methods that seem "scientific" will lead to different futures. More significantly, the futures that are predicted by different methods differ in their emphasis and in which events they select as being relevant.*

The conflicts may be fruitfully viewed in terms of a culture/counter-culture split. The split is most tellingly revealed in resource limitations. For if time or people's attention is limited, as it seems to be, then differing needs for either will have to be resolved concretely in terms of them.

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* Writing about the future is not much different than writing history. These critical views would be standard for historiographers.

Ordinary views of the future emphasize politics as it is. International conflicts are taken for granted and substantial resources must be devoted to maintaining psychological and material readiness. Given the productivity of material technology, the demand on psychological resources is perhaps most important. But the counter-culture "wants" to transform the psyche's sensibilities. The abstract conflict of values is played out on people's concrete attention spans.

Another point of conflict will be most revealed in the world of work. The counter-culture talks of fulfilling work; the culture talks of post-industrial knowledge work. These are not necessarily congruent in any obvious way, not only because people have different cognitive styles, but also because knowledge work can be as dehumanizing as industrial work. Brains can be used for their sheer brawn as well as their sensitivity.

Conflicts over resources are resolved by bidding up their prices or by finding substitutions for them. Both phenomena take place today. It is difficult to attract much attention with the announcement of international conflict without having that attention becoming hostile. The dehumanizing character of think work (such as programming) has forced the conditions of employment of some knowledge workers to be extraordinarily generous toward their idiosyncrasies.

Another way out is to form a synthesis of resource needs and pursue a multiple use strategy. This is what I am proposing here. I am searching for roles that meet large scale technical needs of society and personal needs at the same time. The usual arguments against multiple-use strategies apply. It is said that they are really a hodge-podge

of uses put together to get a more palatable package, but nothing is really better. The corresponding argument in the social theory field talks of false consciousness, incremental and one-dimensional change, and "only revolution can cause real structural alterations." The only good thing about multiple-use strategies is that they are political; they satisfy a sufficiently large number of special interests that they are viable. And short of some revolution, I guess that is what I am trying to do here.

Given these conflicts and a "multiple-use" strategy, a variety of social responses are available. We might just ignore them socially and let individual choices resolve conflict at the personal resource levels. This is conventional economics. We might let people go to war over the issues. We might assume that change would be so slow as to permit new resource resolving organizations to evolve in a gentle fashion.

None of these seem satisfactory to me. The conflicts represent choices of political merit and not only of personal whim. Public action that is thought out, that is planned, seems appropriate and perhaps necessary.

Such a societal response is a policy oriented one. Explicit choices (distinguished from pure covert power politics) of actions and alternatives influence other actions. Contingencies are not ignored but given overt attention. Policy-run societies can change rapidly since they can make choices and act on them. Surely there will be explicit reaction to choices, but there is some hope for mediating these actions.

What haunts me in this vision is that, as in other visions that have any sense, I do not see how an erotic sensibility will be able to function in it. This is the major problem that needs further exploration. The current system of educating knowers, elevating them to expert roles at a suitable point, and isolating experts in a scientific environment (which then trains new experts) is anti-erotic. It is too isolated. If good performance of experts were to matter, the current system isolates them from the reactions and evaluation of others. So this system of expertise just cannot work.

What will?

Though easy to talk about, an erotic sensibility is quite difficult to describe in an operational way. We know that it has something to do with including, with taking what is and dealing with it and investing it with love and sexuality.

But all of this says very little about how such a system is viable. Viability implies an ability to survive bad times. The assaults against an erotic vision will be real. There will be losers if it comes to pass; those with high status now might lose such status and they are likely to protest. Also, it is only a matter of faith that men can maintain in an erotic sensibility and not go off the deep end, becoming incapable of doing the daily work needed to maintain life.

Even if we were to have a suitable image of the expert erotic world, we need some ways of connecting it with real action. And that means that we must be able to ask questions about what is, which actions (and interventions) work, and where the future evolves from. And that is where I started.

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