Cocta News

At the two consecutive social science world conferences this summer – the IPSA meeting in Rio de Janeiro and the ISA meeting in Mexico City – COCTA sponsored several panels. At these panels some fifteen papers were presented. It was decided during these meetings that abstracts of the papers presented should be circulated. Below follows a short description of some of the papers presented at the COCTA panels. The remaining ones will be covered in the next issue of COCTA NEWS. In addition a complete address of the authors will be given in order that the original papers may be acquired and communication facilitated.

The Rio panels on technology

1. *Technology in political philosphy and theory: conceptual analysis and normative and empirical consequences* by George J. Graham, Jr., Dept. of Political Science at Vanderbilt University in Nashville, Tennessee, 37235, USA.

When classical political philosophers introduced the critical assessment of the social and political consequences of *techné,* they introduced concern over problems of technology at the beginning of the Western political tradition. Their recognition that *techné* was neutral in the sense that it must be guided by human ends, but that advances in technique introduce new potential ends, led them to worry about the control of technological innovations in society. From the beginning, then, Western political thought has recognized the potential conflict between the desire for the fruits of improved technology and the possible costs of unthinking adoption of new techniques. It is important to recognize that technology assessment ultimately is a political issue, to be decided by the political process. The standards for evaluating technology are set politically. Social science research, at best, can improve the knowledge base for the decisions. The insights of the classical philosophers remain valid today. Technology can only be controlled when political choice predominates over unthinking acceptance of technology. The leaders of society bear the responsibility for the choices. Our responsibility as social scientists is to provide the most precise and least uncertain knowledge possible, knowledge not prefigured by building what we must demonstrate into our definitions.

2. *Technology: A development perspective* by Fred W. Riggs, Political Science Department, University of Hawaii in Honolulu, Hawaii, 96822 USA.

The semantic perspective, for present purposes, is best illustrated by a typical dictionary entry. The ana-semantic format, by contrast – as it has been developed by COCTA, in association with UNESCO – first identifies a concept by a defining text, and then lists whatever terms may be used to designate it. The two approaches are, of course, complementary. Their use in conjunction with each other is illustrated in this analysis of the meanings of "technology" – with special reference to the situation in Third World countries.

Five senses of "development" as used in ordinary English are first identified, on the basis of an entry in Webster's unabridged dictionary. The quest for terms to name each of these concepts unequivocally illustrates the ana-semantic methodology. More specialized senses of "technology" as found in the social science literature require further elaboration of terms, building on two of the concepts found in the dictionary definition. The data illustrate both how one meaning of "technology" has broadened since its introduction in the 18th and 19th centuries, and also how another sense of the word has acquired, in recent years, several narrower connotations. The value of this approach is illustrated by means of some texts taken from the literature – and the need for a COCTA-type glossary in this field is mentioned.

3. *Political theory, ideology and technology* by Ruth A. Bevan, Yeshiva University in New York, N.Y., USA.

The paper deals with the contribution of political theory to the conceptualization of the technical function. Mainly they are propositions related to socio-political control of the technical. But we also find that some of the dreams of political theorists have depended upon technical advancement. Plato's idea of the just state in which each person does that which he can do best is a dream yet to be actualized. It is a dream that requires a complex state, not only organizationally but technically. It assumes that each person knows what he can do best (which necessitates, obviously, his discovering his talents by being exposed to a wide variety of skills and endeavors) and that the state can *accomodate* this functional diversity. Similarly, Marx's communist society is to be accomplished at the highest technical level affording affluence and leisure. Those theorists who have believed in developing the dynamic potentials of the human personality, of moving from the incomplete to the more complete, as Aristotle's theory of choice has it, have looked favorably, if not even enthusiastically, upon the possibilities of technology-technique. Those who have preferred the sweet innocence of "natural man" have, by contrast, despised technology and thus have posited man's rational capacity, of which his ability to build and to follow technique is a part, as inimical to human well-being. They truly believe that the best form of life can be created only if the human being denies himself by suppressing his natural capacity to reason for the purposes of complex development. To deny the destructive potential in that capacity would be ridiculous. To confuse this destructive potential with the capacity itself is, however, disastrous. The mainstream of Western political thought opts for the complex development of man in the anticipation of achieving a more complete human personality and humanistic environment.

4. *Are contemporary decision-making theories suited for high-technology issues? The Case of U.S. policy toward toxic chemicals* by Edward J. Woodhouse, Division of Polytechnic Science and Technology, Studies at Rensseláer Institute, Troy, N.Y. 12181, USA.

In short, although there are some aspects of the toxic chemical problem that make it a difficult one to tackle through trial-and-error, there are other features that

make it an ideal political issue. From this preliminary analysis, and from what (little) we know theoretically about trial-and-error political learning, there is a good chance that the real worry lies not in the tangible technological problems that have gotten so much attention by the press and government but in the less tangible, social ones such as alienation, loneliness, organizational giantism and rigidity. On this terrain scientists do not tread, the concepts are fuzzy and controversial, measurement therefore is inherently suspect, negative effects are even less visible and comprehensible, the associated symbols are not potent, and power relations and fundamental social patterns would be the prime "errors" in need of correction. For all of these reasons, an error-correction research outlook would predict rampant misperception, severe institutional obstacles to action, and errors that are highly resistant to correction.

Whether or not any of the particular substantive points raised above withstand further scrutiny, the analysis perhaps suggests a concluding methodological note. We know so little about how technological societies have handled technical tasks in the policy arena that there is a need for additional empirical research. Many recent analysis of technology give evidence of suffering from this deficiency. While data will never be a substitute for appropriate concepts, an absence of it seems likely to hold back further conceptual refinements on the theoretical issues of interest to social analysts of technology.

5. *The problem of technology: Some conceptual therapy* by Thomas Landon Thorson at Indiana University, South Bend in Indiana, USA.

Few would even attempt to deny that "technology" has been a recurrent, if not a constant, theme of Western serious writing (literary, philosophical, scholarly) for at least the last century. It would be equally difficult to deny that in contrast with previous reflections on technology, writing for the last hundred years or so has been marked by a pervasive tone of foreboding, if not of downright lamentation. Where Condorcet, Comte, and even Marx in his way looked forward to the wonders of freedom and prosperity, of "truly human history", which technology broadly understood would create; Kafka and Commoner, Riesman and Rilke, Solzhenitsyn and Strauss – to mention only a few – have in one way or another called attention to man's diminution under the impact of technology.

Scores of acute observers over two – perhaps three or four – centuries have nevertheless reacted with profound interest to perceived changes in man-tool relationships. To what were they reacting and how can we usefully assess those reactions? Is Western civilization sick with a disease called technology and, if so, is it a matter of physical malady or mental illness? It is to these questions and others like them that I propose here to offer the beginnings of a sort of conceptual therapy.

The sort of therapy that I propose might be said to take its cue from what is sometimes called holistic medicine. Holistic medicine, as I understand it, begins with a consideration of the species in its evolutionary context and includes therefore – in the case of the human species – matters of the mind and indeed, in the hands of some practioners at least, of the soul. Thus, Linus Pauling whether he turns out to be right or wrong about Vitamin C forwards his recommendations on the basis of evolutionary explanations of man's inability to produce his own Vitamin C. If man was evolutionarily adapted to a particular environment and diet – so the argument goes – then rapid alterations may produce disease that may be impeded or eliminated by appropriate environmental or dietary prophylaxis.

6. *The logic of means-ends analysis* by Jan-Erik Lane, Dept. of Political Science at Umeå University, Umeå, 901 87 Sweden.

Means-end analysis is a good tool for the understanding of public policy; even if it is an exaggeration that it is *the* tool for the understanding of all kinds of purposive human behavior as Max Weber would have it, it still seems to be the case that the means-end scheme may be employed for a few different but vital tasks in relation to the analysis of political technologies. However, the means-end scheme is a complex conceptual structure that in its richness covers several fine distinctions, which if not respected spell confusion. If these nuances in the means-end approach are pinned down and applied consistently, then the argument of Herbert Simon that the means-end analysis has inherent limitations, the argument of Gunnar Myrdal that means-end analysis cannot be value neutral and the argument of Aaron Wildavsky that means-end implementation is impossible cannot withstand a serious critique. Means-end analysis is a most powerful social science approach.

The Mexico panels on concepts and methodology

1. *Measurement and other types of operationlization* by Alberto Marradi, Istituto Politico-Amministrativo, Università de Bologna, I-40126 Bologna Via G Petroni 33.

The over-extensive and sloppy use of the term "measurement" is criticized, and ascribed to a form of imitation of "hard sciences". The recent stress on 'scales', i.e. the results of operationalizing procedures, rather than on the procedures themselves, is also criticized. Stevens' classification of scale types (nominal/ordinal/interval/ratio) is shown to be defective on logical as well as practical grounds. As a substitute, a threefold typology is proposed, considering the type of property being operationalized, the type of procedure, and the logical-mathematical properties of the resulting scale.

2. *Social ontology and criteria of definitions in sociology* by Joseph B. Gittler at the Department of Sociology, George Mason University in Fairfax, Virginia 22030, USA.

It is the contention of this paper that sociologists need to consider the nature of social reality (social ontology) in defining the concepts of their discipline; that the failure to take into account the ontological aspects of social reality in the formulation of sociological definitions leads to spurious empirical research pursuits.

3. *Theoretical concepts, tradition, and Applicatio: Some post-foundationlists remarks on the case of organizational theory* by Stephen P. Turner at the University of South Florida in St. Petersburg, Florida 33701, USA.

The attempt to give general methodological reasons for choices rests on more general philosophical reasons which are themselves unsettled or unsettlable – hence relativ-

ism. Yet if we consider the problem of the use of particular descriptions, and how new usages are adopted, it becomes evident that improvement in description is recognizable and not dramatically problematic. Examples from organizational practice suggests that "theoretical concept development" is better thought of as a matter of ongoing "tradition".

4. *On the level: measurement scales and sociological theory* by Ray Pawson at the Dep. of Sociology, University of Leeds in England.

This paper examines the variety of interpretions of how conceptualization is taken to shape sociological measurement. The current orthodoxy limits conceptual input to the level of guess-work and intuition and the paper argues that progress in measurement depends on the development of more formal and structured sociological theory.

5. *The concept of development* by Günter Endruweit at the Institut für Sozialforschung at the University of Stuttgart in West Germany.

Definitions of development, progress, social change, and evolution are compared. On the basis of these definitions it is outlined what research procedures might be necessary in order to show development, change etc. From these procedures one can see that not only definitions are different but also the objects of research according to the definition.

6. *Sociological aspects of studying the political culture* by Vladimir Sandrigailo, 220600, Institute of Philosophy & Law, Akademitscheskaya 25, Minsk, USSR.

The main aspects of studying political culture (PC) are given. In this respect PC is a kind of practical realisation of politically active (or passive) role of a social subject (individuum, microgroup, society) through its feelings, knowledge and evaluative attitudes. The point of view of G. Almond and S. Verba is limited by psychological aspects of analysis of PC and it should be broadened to the socioeconomical study of such politological notions as power, opposition, authority etc. The sociological view of looking at the PC is closely connected with the analysis of psychological aspects of PC, but is not limited by them.

7. *Centralization: An exercise in concept clarification and specification* by Robert A. Hannemann at the University of California in Riverside, California, 92529, USA and J. Rogers Hollingsworth at the University of Wisconsin in Madison, Wisconsin 53706, USA.

Four alternative definitions of political centralization are identified, and particular emphasis is placed on differentiating "centralization" from "participation" at the conceptual level. Centralization is defined as the degree of concentration in the distribution of formal authority to make six key types of decisions in production systems. A measurement and operationalization approach is presented with examples from American health care and the notion of "linkage" among the dimensions of centralization is discussed.

8. *The concept of decentralization: implications for measurement* by Henry Teune, Dept. of Political Science at the University of Pennsylvania in Philadelphia, PA 19104, USA.

A distinction is made between quantitatively and qualitatively decentralized political systems. In the former the political components have varying degrees of freedom to act but can do so only at the suffrance of the "system". In the latter, labeled "federal" political systems, the components have "true" autonomy to change their internal organization and to achieve goals independent of other political components, higher level political components, and the system (feedback).

Quantitatively decentralization is defined as freedom from hierarchical control. Hence, the "pure" market is a "perfectly" decentralized system, but lacking hierarchical control such systems are not political systems structurally.

The concept of decentralization is elaborated with a number of concepts in which it is embedded: political system, hierarchy, control and purposeful control, levels, the "center", infonnation, surveillance, autonomy, and integration. A distinction is also made between political and administrative decentralization.

A set of referents and their indicators are suggested for measuring the level of decentralization of political systems in quantitative terms: variations in the structure and behavior of the political components both territorial and non-territorial; variation in the behavior of units within regions and sectors; openness to penetration from the outside; and exclusivity of information.

9. *Indicators and operational definitions: the case of social class* by Maria C. Pitrone at the Dept. of Political Science at the University of Catania in Catania, C.A.P. 95124, Italy.

The intention of the essay is to make a point about the level of awareness with which social researchers appear to have reached with regard to the epistemological problems connected with the relationship between concepts, indicators and operational definitions. It is done by means of a summary of publications which illustrate the results of empirical researches that include the fundamental sociological concepts of class and status. In an earlier empirical study which analyzed the relationship between social position and the class with which the interviewers identified themselves, I came to realize that, while in the literature the behavior of an individual is attributed to the variables "class" or "status", neither the lexicon nor the operational definition of the two concepts are very clear. It is not the concepts of class in themselves that are of interest, nor their relationships with other fundamental sociological variables; instead, it is the indicators and the operational definitions that researches have chosen for these concepts that are of interest. We are going to examine the reasons they give for these choices, the amount of information on essential points they feel it necessary to give the reader, and therefore the degree to which they are aware of the importance of the possibility of an intersubjective check of their empirical results.

Future planning

At both the IPSA and the ISA conferences plans were made for COCTA activities in the near future as well as for the forthcoming IPSA meeting in Paris in 1985 and the ISA meeting in Amsterdam in 1986. These future programs will be reported on in the next issue which will also cover the remaining papers.

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