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RAPID RECONNAISSANCE APPROACHES TO ORGANIZATIONAL ANALYSIS FOR DEVELOPMENT ADMINISTRATION

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RAPID RECONNAISSANCE APPROACHES TO ORGANIZATIONAL ANALYSIS FOR DEVELOPMENT ADMINISTRATION

BACKGROUND

Administrators often make decisions that are based on incomplete, inaccurate or false information. Such decisions commonly result from political or organizational pressures for quick choices among alternatives, reflecting José Ortega y Gasset's statement that "Life cannot wait until the sciences have explained the universe scientifically; we cannot put off living until we are ready."

Normal remedies to a poor data base stress the need for rigorous data collection and formal analysis. Although they may support more informed choice, such remedies are more likely either to prolong the decision period or to produce results after decisions have been made. These remedies ignore the fact that it is the desire for scientific rigor on the one hand, and the need for timely information, on the other hand, which often tug academic social scientists and practical public administrators in opposite directions. Useful prescriptions, then, must place a high priority on timely information.

This paper accepts that priority. It organizes, examines, and suggests ways to improve quick, impressionistic data collection procedures. This background section specifies the nature

of rapid reconnaissance exercises and presents the perspective of the paper.

Rapid Reconnaissance

Rapid reconnaissance surveys have two distinguishing characteristics. First, they are short-term. Although the exact definition of short-term may vary, an outer limit of three months might arbitrarily be set. Shorter periods ranging from a few days to a month are often appropriate, depending upon the nature and magnitude of the survey objective and the investigator's familiarity with the area. Whether a team or an individual undertakes the investigation determines the number of person-days used. This choice depends upon the range of substantive backgrounds necessary to address the situation.

The second characteristic of a rapid reconnaissance survey is its semi-structured nature. That is, a standardized, rigid, pre-set close-ended questionnaire, followed by formal quantitative analysis of the response data, is not used. Instead, reconnaissance practitioners use proxies for complex dynamics and perform spot checks of those proxies. Thus, although this approach does not use analytical statistics, it is empirical -- it is based on observation and investigation rather than on conclusions deduced from theoretical statements. Additionally, although such surveys may produce descriptive numerical measures, many of the data are qualitative and subjective.

The major advantages of rapid reconnaissance strategies are timeliness, low cost, flexibility, and the ability to tap the perceptions and conceptual frameworks contained in the minds of a wide variety of people while simultaneously supporting their participation in problem definition.

The major disadvantages of these methods are the difficulty of estimating the degree of confidence that can be placed in the data, and -- due to lack of standardization -- the difficulty of judging the quality of an investigator's performance. Moreover, to many social scientists and decisionmakers, the conclusions emerging from a reconnaissance do not have the credibility that accompanies voluminous tables or tests of statistical significance. Given the inaccuracy of many hard data, however, it is obvious that this third disadvantage is not a weakness inherent in rapid reconnaissance methods so much as it is a mismatch between field realities and professional preferences for manipulating quantitative data.

Nevertheless, there is an increasing recognition among academics that reconnaissance methods in the hands of skilled practitioners can be valuable tools for organizational analysis. For example, a favorable review of a reconnaissance-based study of bureaucracy in Chile made the following point:

> To get at the concrete political behaviors and organizational linkages... no amount of aggregative analysis of questionable published statistics or survey-research questionnaires directed to defensive respondents will

> produce a "harder" data base. This is particularly true in a third-world country. One must simply enter a research setting, make contacts, use them as windows to that setting, and check responses against plausibility and what others say.[1]

Moreover, the workshop on rapid rural appraisal held at the Institute for Development Studies, University of Sussex, in October 1978, attests both to the perceived need for good reconnaissance methods and to the view that they should be examined as a legitimate form of applied social science data collection.

Perspective of the Paper

This paper accepts the need for good reconnaissance techniques and sees them as legitimate social science tools. Nevertheless, they are not viewed either as an excuse for sloppy field work or as a panacea for budget constraints and deadlines, but rather as a potential supplement to orthodox data collection methods. For this potential to be fully realized, however, both the strengths and the weaknesses of reconnaissance methods and practices must be examined.

Since a common characteristic of impressionistic methods is the use of indicators (either articulated or unarticulated) the second section of this paper discusses indicators for rapid

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[1] Charles T. Goodsell, (in a review of Peter Cleaves' Bureaucratic Politics and Administration in Chile, Berkeley: University of California Press, 1974) Administrative Science Quarterly, Vol. 20, No. 4, December 1975, p. 652.

rural appraisal. Although this discussion delays the examination of organizational analysis methods, the introduction of the contextual nature of indicators, examples of ones found useful, and suggestions for improved selection offset that delay. The third section presents a general model of a development project, identifies the role of organization within that model, and discusses the nature of organizational analysis exercises. Although the second and third sections are somewhat independent, both provide a necessary backdrop for the fourth section. In that section, alternative reconnaissance methods are introduced and previous discussions are synthesized in the light of those methods.

This working paper thus addresses a wide audience composed of professionals interested in indicators used for rural appraisal, approaches to organizational analysis and methods for rapid reconnaissance.

INDICATORS FOR RAPID APPRAISAL

There have been quick and dirty procedures around for many years, but the first formal treatment of such measures for applied research may have occurred with a focus on unobtrusive measures in the 1960s. Although these measures were seen as a way of avoiding the threat to validity which can occur as a result of interactions between researcher and subject, they may also be depicted as examples of low cost reconnaissance surveys.[2]

For example, one discussion presented a low-cost way of judging the popularity of museum exhibits -- the replacement rate of floor tiles in front of displays was used to estimate relative popularity. In another case, radio settings in cars brought in for servicing were used to see if the drivers of expensive versus inexpensive automobiles tended to listen to different stations.[3]

This section presents indicators for rapid rural appraisal and then examines the need to extract appropriate measures from each different rural setting.

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[2] For the classic list of threats to validity, see Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research, Chicago: Rand McNally, 1963.

[3] Eugene J. Webb, et al, Unobtrusive Measures: Nonreactive Research in the Social Sciences, Chicago: Rand McNally, 1966.

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Experience With Rural Development Proxies

In the 1960s, a campaign was conducted against illegal lumbering in an Asian country, but evaluating the success of the campaign posed problems. For various reasons related to the local situation, reported encounter rates, arrest rates, conviction rates, and confiscated lumber could not be expected to serve as reliable indicators for the level of interference with illegal activities. Thus, another low-cost data point was called for. The one which was developed was based on two assumptions: (1) that a major use of domesticated elephants was lumbering; and (2) that illegal lumbering constituted an important percentage of local activity. Given these assumptions and controlling for inflation, unobtrusive monitoring of the price of elephants in the local market might reveal the effectiveness of the campaign, since a successful campaign would lower the going rate for a trained elephant.

Other development administration examples also come to mind: Caiden and Wildavsky, for instance, generated an indicator of the relative strength of different government ministries. The indicator is the relationship between the ministry's annual budget and its budget request. The higher the percentage obtained, the stronger the organization since a declining or insecure agency will feel a need to request large increases in order to obtain small ones.[4] Examining this relationship through

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[4] See, Naomi Caiden and Aaron Wildavsky, Planning and Budgeting in Poor Countries, New York: Wiley-Interscience, 1974.

time allows the tracing of ascendancy and descendancy in ministerial power and can uncover bureaucratic dynamics which help to predict the probability of interagency conflict and the chance that project performance will be twisted away from designer intentions.

One responsibility of project designers is to determine the sensitivity of project technologies to management behavior. The more sensitive the technology, the lower the probability that the predictions of economic analysts will be fulfilled. One indicator of sensitivity might be the ratio of variable to fixed costs in the operational budget -- the higher the variable costs, the higher the level of management skills and information system accuracy necessary to achieve the same level of performance.[5] For example, a pump-fed irrigation system has a higher percentage of variable costs than a gravity-fed system. The need to maintain the pump, obtain a regular energy supply, and turn it on and off at optimal times increases the sensitivity of the pump technology to management behavior. If the pump runs too much, operational costs can go up; if it runs too little or at the wrong times, yields can go down.[6] Thus a simple ratio might

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[5] This assumes that the scale of the investment and effort are comparable. For example, the variable costs for generating electricity from atomic energy would be a lower percentage of the fixed costs than would the variable to fixed cost ratios for a water wheel or windmill. However, the latter two electricity sources exhibit much lower levels of investment.

[6] Large-scale western industrial technology has used designs which assume constant pump operation. However, such designs were rooted in times when energy costs were minimal and supplies were both abundant and reliable. Their future appropriateness is questionable. In fact, many operational systems in developing countries do not use such a wasteful approach because farmer

sometimes provide an indication of the appropriateness of a technical design in a particular environment as well as help to estimate the degree of uncertainty in the calculation of costs and benefits.

Examples of other impressionistic indicators have been reported: the provincial governor of Aceh, Indonesia, has noted that observation of the type and amount of laundry drying in the sun is a way to detect both improvement in village well-being and the disparity of wealth within the village. Similar observations of orderliness have been used as indicators of village cohesion and welfare in Thailand.[7] In the sixties, the late Henry Ord used two proxies to identify the degree to which Malawi Government projects were trickling down and spreading their benefits.[8] The proxies were soap inventories in the shops of village merchants within the project area, and the appearance of new bicycles and sewing machines in areas adjacent to project activities.

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water fees have risen rapidly and collection is a delicate problem. For related discussion, see Jaw-Kai Wang and Ross E. Hagan, "Manageability considerations in irrigated rice production system design" in George Honadle and Rudi Klauss, eds., International Development Administration: Implementation Analysis for Development Projects, New York: Praeger Publishers, 1979, pp. 112-126.

[7] See the work of the American Institutes for Research and Charles Murray, A Behavioral Study of Rural Modernization: Social and Economic Change in Thai Villages, New York: Praeger Publishers, 1977.

[8] At that time he was an economic advisor to the Malawi Government. At the time of his death in late 1977 he was lecturer in economic development at the Centre of African Studies, University of Edinburgh.

Ann Soetoro, the rural industries advisor to the Provincial Area Development Program in Central Java, Indonesia, has compiled two sets of indicators for determining the relative prosperity of the beneficiaries of that program.[9] The first set focuses on items of material wealth that can be observed in and about the household compound. The second list focuses on the perceptions of a particular group of villagers about who is and who is not prosperous. Table 1 displays the first set and Figure 1 presents the second. Although the first set is most amenable to rapid appraisal by an outsider, the second draws more heavily on the knowledge and values of local people. The latter approach has two advantages: first, it has a higher probability of being continued as a yardstick after external project assistance is withdrawn because it is rooted in the local context; and second, it improves the likelihood that locally-defined social categories will not be overlooked by technical staff.[10]

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[9] Ann Soetoro, "Prosperity Indicators for Java," Washington: Development Alternatives, Inc., March 1979.

[10] Locally defined categories such as Moslem/Christian/Pagan or Merchant/Farmer/Fisherman may be very important for understanding beneficiary views of the distribution of project benefits. See George Honadle and Marcus Ingle, Project Management for Rural Equality, Washington, D. C.: Agency for International Development, 1976. For discussions of the value of indigenous technical knowledge, see "Rural Development: Whose Knowledge Counts?" in the IDS Bulletin, Vol. 10, No. 2, January 1979.

TABLE 1

MEASURES OF PROSPERITY IN RURAL JAVA*

INDICATOR	PROSPERITY LEVEL		
	LOW	MEDIUM	HIGH
House	Bamboo	Combination	Brick and Plaster; Teak
Rooms	1-2; small	--	Many, large
Floor	Dirt	Bricks covered with cement; limestone blocks	Polished cement blocks
Roof	Straw; fronds	--	Tiles
Windows	None	Wooden with slats	Wooden frames with glass panels
Bedding	Mats on floor	Bamboo slat beds with mats	Wooden or iron beds with mattresses and mosquito nets
Lighting	Small oil lamps	Hanging kerosene lamps	Home generator
Water Source	Neighbor's well; river; spring	--	Own well
Toilet	Outdoor not enclosed	Outdoor enclosed	Indoor
Transportation	None	Bicycle; draft cart	Motorcycle; scooter; truck; minivan
Entertainment Equipment	None	Radio, Tape recorder	Battery TV
Refreshment served to interviewer	None; tea without sugar	Tea with sugar; other sweet drink	Tea or coffee with sugar plus snacks

*Source: Adapted from Ann Soetoro, "Prosperity Indicators for Java," Washington, D. C.,: Development Alternatives, Inc., March 1979.

FIGURE 1

A LIST OF POVERTY INDICATORS
SUGGESTED DURING A MEETING AT KECAMATAN WONO SALAM*

1.	A man is poor if he has no land, or if he has to rent out his land.
2.	A man is poor if his house costs less than 10,000 rupiah (± $16) to build and nobody would want to buy it, and if anybody bought the land the house is on they would rather burn the house than use it; an exception is persons who are poor themselves but who have inherited old teak houses.
3.	A man is poor if he has to work as a buruh (paid laborer). (A man is rich if he can hire buruh).
4.	A man is poor if he has to make handcrafts, i.e., if he cannot live by farming alone.
5.	A man is poor if he has to borrow a bicycle when he wants to go someplace.
6.	A man is poor if he has to mix his rice with cassava or corn.

*Source: Ann Soetoro, "Prosperity Indicators for Java," Washington, D. C.: Development Alternatives, Inc., March 1979.

Indicators such as the above are sometimes useful for rapid diagnosis of local situations. Two important questions, however, must be addressed: "How reliable are such indicators in different contexts?" and "How accurate are they in an appropriate context?" Let us briefly deal with both questions.

The Contextual Nature of Proxies

An indicator or proxie is a substitute for a concept. For example, the height of a column of mercury in a glass tube is a substitute for direct measurement of heat (molecular motion). Similarly, personal property represents the concept of wealth. The indicator is not as complex as the concept itself -- it merely represents one of its dimensions. Since the importance of different dimensions of a concept can vary with context, an indicator can lose its meaning in different times and places, just as atmospheric pressure affects the volume of mercury and culture defines measures of wealth (e.g., in some cultures, numbers of children are a primary measure of wealth and material possessions receive less emphasis). This subsection first presents the need to examine context as it affects the relationship between a phenomenon and its proxie, and then suggests ways to improve indicator selection for rapid reconnaissance exercises.

An indicator of relative village wealth is the per capita number of tin roofs in the village. This is an unobtrusive, easily observable data point, However, it can be quickly confounded by the visit of the Prime Minister's wife -- resources

normally used for other purposes are often diverted to upgrade village appearance before the visit of an important dignitary. Thus, knowledge of recent historical occurrences may be necessary to assess the usefulness of a particular indicator.

Additionally, the level of poverty and cultural preferences can block the universality of an indicator. For example, the Maasai herders of Kenya and Tanzania measure their wealth in cattle. They live in cow-dung houses and place no value on tin roofs. However, one Maasai -- a civil servant working at a rural training center -- uses a parallel proxie during his village visits. Instead of observing tin roofs, he counts tin cans. The cans are valued as containers or vessels and they are compatible with a nomadic lifestyle.

Numerous examples exist of the effects of time and place on the ability of an indicator to represent a concept.

> Divorce rates as an indicator of family stability may be valid in a country where divorce is a normal concomitant of family break-up but invalid where there are religious or legal sanctions against it.... Infant mortality was a valid indicator of the health of the population when communicable disease was the dominant health problem and life expectancy was low. Today in developed countries it is almost meaningless as a health index since the majority of health problems are non-fatal or are diseases of old age.[11]

Similar factors also affect proxies of organizational attributes. For example, an index of organizational capability might

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[11] Judith Innes de Neufville, "Validating Policy Indicators," Policy Sciences, Vol. 10, No. 2/3, December 1978, p. 183.

be composed of such items as: (1) physical facilities; (2) average years of experience among personnel; (3) educational level of personnel; (4) average pay scale; and (5) turnover rate. The inclusion of turnover rate is based on the assumption that an organization capable of holding on to its talented personnel is stronger than one that cannot. Thus, for the first four indicators, "more is better," whereas, for the fifth one, "less is better."

High staff turnover is usually depicted as a negative characteristic -- it suggests a lack of operational continuity and a work climate incapable of attracting and holding qualified people. Sometimes this is accurate; however, turnover is more complex than this. For example, although staff changes do cause disruption by creating new socialization and training needs, turnover is positive when it removes dissatisfied personnel or brings new knowledge into an organization.[12] Furthermore, low turnover may be related more to high unemployment rates than to organizational attractiveness.

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[12] Dan R. Dalton and William D. Todor, "Turnover Turned Over: An Expanded and Positive Perspective," Academy of Management Review, Vol. 4, No. 2, 1979, pp. 225-235.

Proxies used by other professional disciplines also exhibit weaknesses. For example, agricultural engineers and economists have used the upland versus bottomland locations of homesteads to indicate relative poverty of project beneficiaries, yet it has been shown that, in the Bicol River Basin Area of the Philippines, there is no correlation between the two. See David Heesen, "Relationships Between Economic Land Classification Categories and Palay Farm Productivity and Incomes in the Philippines," MS thesis in agricultural economics, University of Hawaii, 1977.

There is also the danger of missing the distinction between specific task needs and general capability. For example, a spit-and-polish Department of Agriculture packed with highly paid Ph.Ds may be very unlikely to deliver extension services to the most rural and most needy farmers.[13] In fact, some of the best results have been obtained in run-down facilities with minimally qualified agents using bicycle transportation.[14]

Thus, simple proxies can be misleading if their contextual fitness is not examined. This suggests that multiple indicators should be used to minimize incorrect inferences wherever possible.

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[13] Recruitment of personnel who identify with small farmers, rather than rich farmers or abstract professions, is important for delivering benefits to them. For example, Leonard has identified a "squawk factor." That is, rich farmers are more prone to complain about poor services; and extension agents recruited from large farm backgrounds prefer to serve, and listen to, the wealthier farmers. Thus the circle is closed and small farmers are outside. See David K. Leonard, Reaching the Peasant Farmer: Organization Theory and Practice in Kenya, Chicago: University of Chicago Press, 1977. Cross-national studies also suggest that more formal education for those people with beneficiary contact roles tends to reinforce benefit concentration in better off groups. See, George Honadle and Marcus Ingle, "Project Management for Rural Equality," Vol. II, U.S. Agency for International Development, Washington, D.C., 1976.

[14] For example, on a trip to a rural extension center the writer observed a decrepit building with nearly no supplies. Yet this area was successful in raising farmer yields. After walking through wooded paths and along the bunds of rice fields a farmer was found weeding his crop. Before leaving, the extension worker insisted the visitor give encouragement and praise to the farmer. This was in direct contrast with many similar situations where more qualified and equipped agents were occupied with impressing farmers with their own importance.

Furthermore, a cross-check or pretest should be conducted -- informants should be questioned about local factors that might distort an indicator's validity.

It is important, then, to articulate the assumptions that tie the proxies to the phenomena and to test these assumptions against local perceptions. This permits inappropriate indicators to be discarded and valid indicators to be generated from local useage and knowledge. Since "It is in use that indicators acquire meaning ... [this] suggests that common sense views and nonexperts are appropriate judges of validity." [15]

Examples of articulated assumptions appear in Table 2, where four of the indicators discussed are presented along with the phenomena they represent as well as some assumptions necessary for valid use of those particular indicators.

The discussion above has presented a small inventory of indicators that have been used for rapid rural appraisal; it has identified the sensitivity of "objective" indicators to contextual variation; and it has suggested that the use of proxies can be improved by openly articulating and collaboratively testing the linkages between indicators and conceptual phenomena. It should be recognized, however, that in the right context, crude indicators can be very cost-effective. In the United

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[15] de Neufville, op cit, p. 172. Also see Paulo Freire, Education For Critical Consciousness, New York: Seabury Press, 1973, and Peter Berger Pyramids of Sacrifice, New York: Basic Books, 1974.

TABLE 2

TESTING INDICATOR VALIDITY:
EXAMPLES OF ASSUMPTIONS LINKING PROXIES TO PHENOMENA*

PHENOMENON	PROXIE	ASSUMPTIONS
1. Illegal logging.	1. Price of elephants in local market.	1a. Trained elephants used mainly for logging. 1b. Major percent of local logging is illegal. 1c. Other influences on elephant prices constant.
2. Project benefits reaching poor villagers	2. Soap inventories in village shops.	2a. Soap consumption more likely to increase among poorer beneficiaries than among richer ones. 2b. Merchants respond to demand. 2c. Supply constraint not a major obstacle.
3. Village welfare.	3. Tin roofs	3a. Material available. 3b. Values and lifestyle support tin roofs. 3c. No recent dignitary visit. 3d. Development level high enough to allow investment in roofs.
4. Organizational capability	4. Turnover rate.	4a. Alternative employment available. 4b. Best people leaving.

* Source: Compiled by author.

States, for example, street-corner surveys of the incidence of baby carriages have accurately reflected relative birth rates throughout an urban area and per capita fire hydrants have been used as proxies for neighborhood service delivery.[16] When such rough measures are compared with detailed statistics they are often fuzzy around the edges but differences between core areas are readily identifiable. In fact, this has been documented in a development context where rough estimates by a skilled practitioner were corroborated by more comprehensive data. Two examples cited deal with the impact of the green revolution and patterns of landholding and landlessness.[17]

This has also been supported by extensive project design experience in Africa, Asia, and Latin America. Summarizing the utility of different data collection methods, Mickelwait has observed:

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[16] The fire hydrant example was developed by the lawyers committee for civil rights under law. See Astrid Merget, "Municipal Service Equalization: What the Federal Courts Decide, the Public Administrator Must Carry Out," in James D. Carroll and Richard W. Campbell, eds., Intergovernmental Administration: 1976, Syracuse: the Maxwell School of Citizenship and Public Affairs, 1976, pp. 60-72, passim. For creative use of street-corner surveys and census data, see Ian McHarg, Design with Nature, New York: American History Press, 1972.

[17] This was reported in a paper presented to the workshop on rapid rural appraisal held at the Institute for Development Studies, University of Susses, in October 1978. The cited observations include: Wolf Ladejinsky, "The Green Revolution in Punjab: A Field Trip," Economic and Political Weekly, Vol. 4, No. 39, 1969 (AD/C Reprint No. 28, June 1976), and Keith Griffin, Political Economy of Agrarian Change, London: MacMillan, 1974 for the green revolution; see also Directorate of Agriculture, "Incidence of Landlessness and Major Holding and Cultivation Group in Rural Bangladesh," Dacca: Bangladesh Agricultural Research Council, 1978, and F. T. Januzzi and J. T. Peach, "Report on the Hierarchy of Interests on Land in Bangladesh," Dacca: USAID, 1977 for landholding.

> When rigor and precision are valued highly, the appeal of statistical surveys is likely to be strong; where a premium is placed on timely, qualitative analysis (which also indicates orders of magnitude for quantifiable features of a rural environment), the reconnaisance survey offers obvious advantages.

He goes on to say:

> Whichever data collection model is used, a better project will generally emerge if project designers have learned for themselves the complexities of relationships among project beneficiaries, between target population and government, and among government agencies responsible for development. This generally means that a reconnaissance survey should be used in virtually every project design even if a statistical survey has already been completed. Reconnaissance surveys are cost-effective and fast -- from contract to completed design documents in two months. Furthermore, the knowledge gained in design can be continued into implementation: Host country officials who have been part of the process are more likely to commit their time and resources to making the project work. Thus reconnaissance surveys provide an appropriate and flexible information strategy for design.[18]

The purpose here is not to exhume controversies about the advantages of quantitative versus qualitative research strategies.[19] Instead, we accept the need for some combination of the two that is capable of delivering adequate data in a timely fashion. As previous discussion has shown, there is room for

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[18] Donald R. Mickelwait, "Information Strategies for Implementing Rural Development" in George Honadle and Rudi Klauss, eds., International Development Administration: Implementation Analysis for Development Projects, New York: Praeger Publishers, 1979, pp. 189-190, 196.

[19] For good discussions of the need for both, see Thomas D. Cook and Charles S. Reichardt, eds., Qualitative and Quantitative Methods in Evaluation Research, Beverly Hills: Sage Publications, 1979.

improvement. Keeping this in mind, the next step is to articulate the roles of organization and organizational diagnosis in project implementation.

THE ROLE OF ORGANIZATION

The major vehicle for administering economic development is what has been described as "the cutting edge," the development project.[20] Our focus, then, will be on those discrete sets of activities which appear in ministry budgets as projects.

Since we are concerned with organizational analysis as analytically distinct from economic or technical analysis, our next task is to conceptualize the effect of organization on project impact. This will allow a more structured examination of the place of rapid reconnaissance methods in the organizational analysis of development projects.

Sequential Objectives

Projects are responses to perceived situations where human well-being does not meet desirable or acceptable standards. For example, infant mortality rates may be extremely high or income levels may not meet even basic needs. Alleviating inadequate welfare is the ultimate reason for a development project.

Once a welfare deficiency has been identified, an observer can stand back and explore the behavior obstructing welfare improvements. For example, lack of sanitary practices or improper feeding of infants may contribute to the mortality

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[20] J. Price Gittinger, Economic Analysis of Agricultural Projects, Baltimore: Johns Hopkins University Press, 1972.

rate while primitive cultivation practices may be largely responsible for low farmer income. Of course, the link between behavior and welfare may be complex and many actors may be involved. Nevertheless, each set of actors provides a potential target group for a project. Sometimes the target group will be those whose welfare is at stake, e.g., the farmers. In other cases it will not be, e.g., the mothers of infants.

After significant behavior of relevant target groups has been identified, the next step is to specify what goods or services could be provided to help those people change their behavior. For example, training in improved cultivation practices and the provision of fertilizer might help farmers use better farming methods.

Once a set of appropriate goods and services has been chosen, the required magnitude, timing and means of delivering them can then be used as a basis for budgeting the resources to implement the proposed project.

During implementation, the most immediate objective is to apply resources; the next objective is to deliver goods and services to target groups. This is expected to induce new behavior patterns, which, in turn, should contribute to improved welfare. (Note the way this scheme identifies the place in the sequence held by proxies noted earlier. For example, fire hydrants indicate goods/services. Fire Department response time and other behavior and conditions are necessary for these

services to lead to improved welfare. Measures of welfare would include such items as number of lives and percentage of property value lost to fire.) However, this is only the designers' rational view of the project's means-ends linkages. What actually happens is often quite different.

Managing the Linkages

There are two major reasons why the resource-services-behavior-welfare linkages are tenuous. The first is the uncertainty associated with social change. The second reason why these linkages are difficult to make is that some people do not wish them to be made. Consequently, project activities are constantly under attack by predator organizations and individuals attempting to divert resources to other uses. Other actors not directly antagonistic may give project efforts a lower priority than designers expect. Project managers, therefore, often must contend with hostile or apathetic behavior. This becomes especially important when projects are aimed at disadvantaged target groups such as the rural poor.

Managing the linkages is not easy. In fact, management is not a rational, deliberate, analytical, contemplative activity. Rather, it is a short attention span, crisis to crisis, constant bombardment of problems.[21] Thus, the channeling of information

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[21] Henry Mintzberg, The Nature of Managerial Work, New York: Harper and Row, 1973.

about events, non-events and new developments is an important aspect of a manager's environment. Another important aspect is access to the resources to deal with the problems that are identified. Since this combination of resource access and information access is an indicator of a manager's organizational position, organization can be seen as a factor influencing the establishment of the resource-to-welfare linkages.

Two dimensions of linkage were noted. The first is performance capability. Since there is great uncertainty attached to objective achievement, one aspect of project organization is the support of existing programs or entities which appear capable of doing the job. Although estimating task performance capability can be a formidable undertaking, some proxies have already been noted. The second dimension is benefit diversion. Since predator organizations abound, an aspect of project management is controlling predator access to project resources and exploitation of the target group. Although this can be a sensitive matter, operational procedures, budget levels, and autonomy of organizational units or subprojects are often used to limit penetration.[22] Additionally, since projects are usually embedded

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[22] For both a theoretical background and a field application, see George Holmes Honadle, "Organization Design for Development Administration: A Liberian Case Study of Implementation Analysis for Project Benefit Distribution," Ph.D. Dissertation in Public Administration, Syracuse University, 1978.

in host organizations, the choice of implementing agency can affect predator penetration and the subsequent degree and direction of resource diversion.[23]

Given the significance of organization, practical reconnaissance exercises will be concerned not only with establishing linkage constraints but also with structuring management responsibility, information flows, resources, and decision criteria so that operational responses support project objectives. These are elements of design and redesign.

Design Orientation

A design orientation is not characterized by the quest for reliable global explanations of phenomena. Rather, the problem is one of discovering the nature of a particular situation, and then producing an appropriate response. Thus, design is a contextual exercise.

Christopher Alexander describes a design problem from an architectural perspective. He says that:

> Every design problem begins with an effort to achieve fitness between two entities: the form in question and its context. The form is the solution to the problem; the context defines the problem. In other

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[23] See George Honadle, "Implementation Analysis: The case for an early dose of realism in development administration" in George Honadle and Rudi Klauss, eds., International Development Administration: Implementation Analysis for Development Projects, New York: Praeger Publishers, 1979, pp. 3-20.

> words, when we speak of design, the real object of discussion is not the form alone, but the ensemble comprising the form and its context.[24]

Development project design is also a contextual exercise. Projects are not tests of the universality of general theories; instead, they embody a set of activities consistent with specific hypotheses about how to achieve identifiable results in a particular environment.[25] Thus they are contextual -- they emphasize situational diagnosis and intervention rather than inferential explanation.

However, projects present a design dilemma. Since, in order to succeed, the project intervention must fit into its environment and since the objective of that intervention is to alter the environment, the question is one of "trait-taking versus trait-making."[26] If the project does not fit, it will not have any significant impact; if it fits too well, it will only perpetuate the status quo. Determining a satisfactory balance is part of the art of design.

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[24] Christopher Alexander, Notes on the Synthesis of Form, Cambridge, Mass.: Harvard University Press, 1964, pp. 15-16.

[25] This has implications for the idea of replicability. It suggests that reproducing the same project in different contexts can be disastrous. In fact, such an approach to replication can be depicted as an automobile "assembly line mentality" which concentrates on the "Model T" but ignores family size, fuel cost, availability of parts, road conditions, alternative uses and the many other factors contributing to contextual fit.

[26] See Albert Hirschman, Development Projects Observed, Washington: Brookings Institution, 1967.

Even so, the situational view should not obliterate all other vistas. There is some general scientific knowledge that can be applied. For example, one factor commonly associated with successful rural development projects in Africa and Latin America is beneficiary involvement in decisionmaking.[27] A factor associated with success in Asia is a division of responsibilities among more than one level of local government.[28] Such knowledge does provide insights for designers. Nevertheless, it does not tell how to achieve beneficiary involvement or how to divide responsibility in a situationally approriate manner. What works one place may be disastrous in another. The design prolem, then, is creating something workable in a specific place at a particular time.[29]

A middle ground between particularistic and universalistic approaches is occupied by a contingency perspective. This view accepts the general knowledge, but focuses on contextual factors that determine more or less effective ways of using the knowledge.

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[27] Elliot Morss, John Hatch, Donald Mickelwait and Charles Sweet, Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects, Boulder: Westview Press, 1976.

[28] Norman T. Uphoff and Milton J. Esman, Local Organization for Rural Development: Analysis of Asian Experience, Ithaca: Cornell University Rural Development Committee, 1974.

[29] George Honadle, "Beneficiary Involvement in Project Implementation: The Bicol Experience," Rural Development Participation Review, Vol. 1, No. 1, Summer 1979, pp. 12-13.

It parallels an examination of environmental stresses before choosing building materials or creating an architectural form. In fact, a contingency perspective is the essence of a design orientation.

Since organizational analysis aims to discover contextual constraints to project linkages and then to develop effective interventions to strengthen those linkages, it must be considered a design exercise.

Organizational Reconnaissance

Proxies can be developed for linkage processes. For example, an indicator of interdepartmental coordination might be whether a department head, a lowly substitute, or anyone at all, generally attends scheduled meetings. Quantification, although sometimes possible, is seldom necessary because those conducting such meetings usually know the response they can expect from different departments.

Other indicators suggest whether organizational dynamics do or do not accommodate to target group characteristics. For example, extension material prepared in a colonial language rather than the community dialect implies a barrier between the thinking of organizational staff and the target group.

Simply establishing the existence or absence of organizational conditions supporting the resource-to-welfare linkages is not the only task of organizational reconnaissance. Due to the

design orientation, it is also necessary to project the probable impact of alternative courses of corrective action. This need affects investigation procedures.

During development project design and implementation, organizational investigators do not require randomized responses to inquiries because they are not attempting to explain the distribution of satisfaction, efficiency or other traditional concerns of organizational researchers.[30] Rather, development specialists focus on the responses that will result from alternative interventions. The trick, then, is to estimate the probable reactions of those critical actors who can make or break an intervention. The probability of success is linked more to their reactions and resource mobilization than to the preferences of the general membership. Thus, data collection strategies must isolate the coalitions, antagonisms and likely behavior of those persons exercising various forms of power. Moreover, this must be accomplished without polarizing or antagonizing them.

Such estimates are not based on attitude surveys. The gap between attitude and behavior is too great. Since the best

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[30] Traditional concerns and methods are presented in Elmer Burack, Organizational Analysis: Theory and Application, Homewood, Ill.: The Dryden Press, 1975. A more useful, but still formalistic, perspective is presented in Harry Levinson, Organizational Diagnosis, Cambridge, Mass.: Harvard University Press, 1972. Also, for appropriate use of formal surveys for design, see Robert Bechtel, Enclosing Behavior, Scranton, Pa.: Dowd, Hutchinson and Ross, 1978.

predictor of future behavior is past behavior, organizational reconnaissance stresses the need to understand previous uses of power by significant persons. Thus, data quality is largely determined by access to key informants. Potential informants include organization members, long-term researchers working in the area, beneficiary groups, policy makers, local leaders, merchants and expatriates. Any of them may possess critical knowledge. Gaining access and extracting good data, however, remain intuitive and unarticulated processes.

There is also another difficulty. Since there is no way to formally estimate the sampling error of reconnaissance exercises, it is extremely difficult to know when the job is done. Consequently, it is hard to achieve closure. And, since key insights may not appear until near the end of the exercise, much of the collected data is usually discarded.

These characteristics have helped to relegate the practice of organizational reconnaissance to the murky world of art, intuition, personality and subjectivity. It is clear, however, that a more rigorous design approach must be developed if the practice is to be improved. Furthermore, that approach cannot ignore those constraints which have caused formal survey methods to be rejected as inadequate, inappropriate and impractical.

ORGANIZATIONAL DIAGNOSIS

For organizational analysis to be useful it must penetrate the bureaucratic ether and identify actual human behavior. Thus, the focus must go beyond formal organization charts to the control and use of resources. When successfully done, the results can be extremely valuable but sometimes they are also embarrassingly revealing and simple.

For example, a Peace Corps volunteer was asked by the District Agricultural Officer to see if the deployment of Landrovers might be improved. Examination of mileage and vehicle location certain times of the day seemed at variance with activity in the district. Upon further examination, however, only two bits of information were required to predict where a Landrover was most likely to be in the early evening -- the name of the driver and the location of his girlfriend.

Practical organizational diagnosis, then, must deal directly with the hidden agendas that make organizations act as they do. This section concentrates on types of data required to do this, ways for rapidly eliciting those data, and the relationship between these methods and preceding sections of this paper.

Structural-Behavioral Focus

A development administration perspective tends to seek certain kinds of explanations for organizational behavior. For

example, differences in performance may tend to be associated with access to resources -- if per diem is provided for trips to urban locations, agricultural extension officers may devise justifications for town visits. Other organizational policies or procedures can also divert effort from job responsibilities and duties. For example, preaudit requirements combined with a lack of local authority for purchases and low inventories can cause great delays in such things as vehicle repairs. Still other factors, such as organizational loyalty combined with inter-agency conflict, can lead to behavior which blocks the achievement of project objectives.

An underlying assumption is that bureaucrats and other organizational members act rationally, based on their view of the behavior options.[31] Thus, although a treasurer's refusal to disburse authorized funds may seem irrational from a project perspective, from the individual's view it may be very sensible. Sometimes management procedures actually provide disincentives for performance. In Indonesia, for example, responsibility for a vehicle is often given to one person. This identifies the person accountable for the vehicle and simplifies management. However, when the responsible staff member receives, in cash, a standard monthly allotment to cover the cost of gasoline and routine maintenance, there is an incentive *not* to make frequent

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[31] See Robert Chambers, Managing Rural Development: Ideas and Experience from East Africa, Uppsala: Scandinavian Institute of African Studies, 1974.

visits to isolated rural areas because this increases gasoline costs and raises the probability of minor repairs. Since anything over the allotment must come from the civil servant's own pocket, such a procedure can be an effective deterrent to delivering services to rural areas, monitoring field activities, or incorporating villagers into project decisionmaking. Organizational appraisal, then, must also identify both individual perceptions and formal procedures which support unanticipated behavior.

Two major types of data requirements can thus be specified. They are:

- *Formal* structural factors such as promotion criteria, power to commit resources, privileges attendant to positions, personnel payment systems, reporting channels, check-off procedures, file systems, channels, check-off procedures, file systems, budgetary processes, recruitment policies, etc.; and
- *Informal* factors such as how promotions are really made, friendship networks and antagonisms, motivational variables, informal communication channels, ideological biases, ethnic alliances, how organizational resources are diverted to other uses, etc.

Although gaining access to the documents may require considerable skill, the first type of data is usually available in written form. For example, civil service regulations and the co-existence of dual personnel systems (e.g., national/district or GS/FS) are structural factors that affect behavior and there is documentary evidence of their existence. In other cases a combination of record examination, key informant interviews, and sight surveys can yield needed information. For

example, using a map and payment records to establish a pattern of extension agent deployment and then observing local settlement patterns and bus routes, bicycles, and motorcycles used by the agents can help to identify the appropriateness of a staffing pattern or extension strategy. (West African villages and East African homesteads having similar extensionist-to-population ratios would suggest very different performance levels since the distance between homesteads will require more extension agents to produce the same level of farmer contacts in a given period.)

The second type of data is much more difficult to get, however, and a high level of creativity may be necessary to even surmise the existence of significant factors. For example, in rural areas of some of the poorest nations, copying machines are practically non-existent, mimeograph stencils are rare, carbon paper is difficult to obtain, and even paper itself is very scarce. In fact, memos may be written on the back of outdated bureaucratic forms. When this scarcity of communication materials is combined with cultural factors, management capability is affected. In one country, intra-departmental memos often have only one original copy. The memo is routed to all those concerned, in order of status, and then it is placed in the file. If five officials are to see it and the third one is on safari it will not be passed to the last two until he returns and initials it. Thus, a rigid adherence to formal process combined with a shortage of resources can significantly alter the time required for administrative action. Knowledge

of such practices is important, but their existence is seldom obvious and is sometimes hidden.

One way of identifying seemingly peripheral factors, such as values, models of conduct, or cultural changes, is to examine folktales and modern novels. For example, in a very creative study, Kenneth Little used the role models and situations presented in contemporary African novels as a sociological data base.[32] Thus, even the definition of data may have great variability when investigating informal factors that affect organizational behavior. This implies that an unstructured approach will be necessary, since the collection process is also an identification process seeking unorthodox types of important information.

Given the structural-behavioral focus and the artistic nature of data needs definition, some dangers of data collection may be outlined.

Informal data is usually highly biased. In fact, most informants will have ulterior motives, or hidden agendas, which selectively present and actively interpret the information they possess. Determining the existence and degree of these biases is one of the challenges facing the investigator. Moreover,

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[32] Kenneth Little, African Women in Towns, London: Cambridge University Press, 1973.

recent events can affect that bias. For example, attempts to collect data in one rural setting were thwarted by a recent death -- local people were unwilling to provide information because they thought the researchers were police officers in disguise.[33]

All interviews, then, begin with the assumption of biased responses and the need to uncover the bias. This requires crosschecks of multiple sources. Additionally, the informant and the data must be matched. That is, rather than relying on heresay, eyewitness accounts must be obtained and the questions must be geared to the competence of the person providing the information. For example, past income estimates cannot be based on memory and bank policy cannot be identified by talking with engineers. As commonsensical as these caveats might be, situations have been observed where they were not followed and where, in the haste to make a quick fix, misleading conclusions were drawn.

Effective data collection approaches must take these constraints into account. This paper notes four data collection strategies and then presents examples that demonstrate how each can be used both to reinforce the others and to improve the result of the investigation.

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[33] T.B. Kabwegyere, "Community Mood Affects Climate for Interviews," in Bryant Kearl, ed., Field Data Collection in the Social Sciences: Experiences in Africa and the Middle East, New York: Agricultural Development Council, 1976, p. 163.

Data Collection Approaches

The first approach is *observation of written records*. This method is self-explanatory and it is used by virtually all professionals. Feasibility studies, design documents, evaluations, administrative reports, organizational by-laws and academic studies all may provide potentially useful data. Such documents, however, also often contain little information about actual behavior.

The second approach might be called an *informal delphi* technique. It is a group discussion approach to consensus-building which engages informed persons in a dialogue that exposes variations in the interpretation of events, policies or objectives. An example of this appears as part of an investigation into the tribal land law of the Nyakyusa people of Tanzania. By pursuing a gradually narrowing series of "What if?" questions, disparate responses were refined into a more coherent and more accurate picture of actual practices. For example, the rights of returned villagers were identified by beginning with a question about whether or not they would be able to resume planting their former fields or living in their former houses. The initial responses ranged from "yes" to "no". Gradually, contingencies were identified (other occupants, time away, action of village headman, tree crops versus other crops, upland versus swampland plots, and so on, and a consensus

was developed about when the answer would be yes and when it would be no.[34]

Skill is required for successful use of this approach. The investigator must be equipped with, or able to develop, a logical sequence of questions that focus participant attention on contingencies and refine perceptions of decision criteria. If the exercise begins with a hypothetical situation it can usually be transformed into an examination of real cases that reveal actual past behavior. Moreover, the exercise itself may disclose much about the interactions among those who participate in it.

The third approach, *confidential interviews with key informants*, is also self-explanatory. It can be used as a result of networking. That is, as one informant identifies someone who is deemed to be particularly knowledgeable on a certain subject, that person can be contacted and interviewed.[35] Such interviews can provide crosschecks. In fact, they may be necessary in order to have all significant informal data verified by at least

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[34] Godfrey Wilson and Monica Wilson, The Analysis of Social Change, London: Cambridge University Press, 1945, pp. 55-56.

[35] For discussion of network approaches, see: Jeremy Boissevain and J. Clyde Mitchell, Network Analysis: Theory and Applications, The Hague: Mouton, 1973, and Jeremy Boissevain, Friends of Friends: Networks, Manipulators, and Coalitions, New York: St. Martin's Press, 1974.

two independent sources. Such data is most reliable when two people who disagree about the desirability of an occurrence agree on its existence.[36]

The potential use of confidential interviews is high and the value of information produced is also often high. Confidentiality, however, is not always possible. Even though the substance discussed is private, the visit may be well known. For example, an interview in a rice field may be overheard by no one, yet its occurrence is in public view. In other cases, being surrounded by children may not disrupt the private nature of a conversation in English. In still other situations, confidentiality may be shared because the informant may not be the actual information source. For example, in many African and Asian societies much communication occurs through intermediaries. Such customs can be utilized for reconnaissance purposes by making the investigator available to third persons. In fact, very valuable insights often spring from informal chats lubricated by local liquor.

The fourth approach is *direct observation of behavior*. This method is also self-explanatory. Although it seems to be

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[36] Not only is independent verification desirable, but it is also good to increase the *range* of views. Often those who interact intensely tend to share misconceptions that become basic assumptions underlying surface variations in their perspectives. See, Irving Janis, Victims of Groupthink, Boston: Houghton, Mifflin Co., 1972.

the most natural way to collect data, observational skills must be developed and refined. Untrained observers often impute false meanings to people's actions, but trained researchers describe only what people do. Skilled observations can expose behavior that the actors themselves were unaware of exhibiting.[37]

Distinctions between these four data collection methods may sometimes be more analytical than real. For example, an exercise that begins as an informal delphi may end as direct observation of interactions between participants, or a confidential interview may suddenly turn into an informal delphi. Nevertheless, specifying the alternatives does help to identify those strategies most useful for different situations. It is preferable, of course, to use all four in combination. This minimizes the weaknesses of each while simultaneously promoting the two-way communication so valuable during project design and implementation.[38]

The advantages and disadvantages of each approach are summarized in Table 3. Some examples of organizational reconnaissance using these investigation strategies may now be examined.

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[37] See Chris Argyris and Donald Schon, Theory in Action: Increasing Professional Effectiveness, San Francisco: Jossey-Bass, 1974.

[38] See Charles F. Sweet and Peter F. Weisel, "Process versus Blueprint Models for Designing Rural Development Projects," in George Honadle and Rudi Klauss, eds., International Development Administration: Implementation Analysis for Development Projects, New York: Praeger Publishers.

TABLE 3

DATA COLLECTION BY RAPID RECONNAISSANCE*

DATA COLLECTION APPROACH	ADVANTAGES	DISADVANTAGES
Record Examination	1. Can provide "hard" data. 2. Demonstrates formal access to stored information. 3. Language barrier is lessened. 4. Low cost.	1. Dependence on records which are often incomplete, inaccurate, and inappropriate. 2. Difficult to estimate sample bias. 3. Literacy limits variables.
Informal Delphi	1. Facilitates participation and exposes interpersonal dynamics. 2. Increases accuracy of meanings imputed by researcher. 3. Increases sample representativeness. 4. Generates data beyond interview design. 5. Low cost.	1. Minimizes extremes and range of perspectives by inducing consensus. 2. Emotionally taxing. 3. May require interpreter. 4. Exposes views of informers. 5. Susceptible to domination by a strong personality.
Confidential Interview	1. Protects informer. 2. Allows access to examples of actual dynamics. 3. Increases extremes and range of perspectives. 4. Low cost.	1. Usually highly biased. 2. Emotionally taxing. 3. Requires leads from other informants. 4. If interpreter required, protection lost. 5. Sample may be limited or confidentiality impossible in some settings.
Direct Observation	1. Provides primary data. 2. Does not disrupt routine. 3. Can avoid much informer bias. 4. Can expose data not anticipated by investigator. 5. Low cost.	1. May be confounded by investigator's presence. 2. Susceptible to misinterpretation by investigator. 3. May contain seasonal bias.

*Source: Compiled by author.

Field Experiences

Two cases of organizational investigations will be briefly noted. The first example deals with an irrigator association and the second focuses on the implementing organization of an integrated rural development project. Thus, the applications encompass both beneficiary-level and project-level organizations.

The first investigation occurred when a consultant was asked to assess the operations of an irrigation association and determine whether it would or would not be desirable for the association to be changed from a single-purpose organization into a multi-purpose cooperative. Since this particular association was commonly presented as the most successful farmer-run irrigation group, some local planners hoped that an examination could provide some insights useful for developing a model structure for replication within the region.

The exercise began with an analysis of records, including the organization chart and bylaws, irrigation system operations manual, irrigator fee payment records, etc. These documents provided basic information about the design of the association.

An informal delphi exercise was then conducted with the officers of the association. Questions focused on the use of organizational resources. For example, if a problem arises and it must be reported to the engineer in the nearest town, how is it done? Who must approve spending the bus fare? Is it

approved before or after the trip? and so on. The hypothetical situations quickly produced actual examples of how leaders were chosen, how resources were controlled, and how conflicts were managed. It also became obvious that the bylaws and organization chart were not accurate representations of organizational behavior.

Given the natual biases of the association officers it was deemed necessary to enlarge the range of perceptions of organizational dynamics. Confidential interviews were used to do this. Those to be interviewed were identified by the officers in response to a question similar to the following: In all organizations there is at least one pain-in-the-neck, there is always someone who disagrees with all decisions and promotes trouble. Can you tell me the names of those people in your association? Answers were immediate and enthusiastic.[39] The persons named were then interviewed individually. Their responses provided valuable cross-checks and revealed useful insights that did not result from the informal delphi. Additional people knowledgeable about the historical development of the association were also visited at their homes.

After an investment of less than one man-week of effort, it was possible to make a convincing case that this association

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[39] It should be noted that in many Asian cultures this question would be disastrous. In the case noted in the text, however, it was culturally acceptable.

was not yet an effective single-purpose organization and a transition to a multi-purpose role might cause its collapse. Furthermore, it was serving only a small percentage of its members. Although some local bureaucrats were not happy with this conclusion, they were unable to provide a stronger argument to the contrary. Thus, with all its weaknesses, a rapid reconnaissance produced stronger behavioral data than had previously been available.

The second investigation occured in response to a request for assistance during project implementation. The institutional/agricultural division of an integrated rural development project was experiencing performance problems and both the donor agency and the regional planning agency wanted an assessment of the situation.

This exercise consumed approximately one man-month. The process began with an examination of design documents and then proceeded to attendance at staff meetings and individual interviews. It included a staff workshop that identified organizational conflicts and it ended with a report which presented the different perspectives of the various actors and identified issues to be resolved.

A major function of this reconnaissance was to establish the credibility of the investigator so that a follow-up visit could be used to facilitate behavioral changes. Thus, unless

the consultant was able to convincingly portray the complexity of the organizational dynamics, client (project staff) attitudes could quickly turn the reconnaissance report into another dust collector.

The report stressed the idea of mutation. That is, actual staff interaction during implementation was quite different from that anticipated in the organization design. Correspondence was used to document both the changes in formal structure and the nature of individual behavior. For example, memos showed that the project was moved out of a regional office and placed under a national office and they also showed that cooperating agencies did not deploy personnel as expected. Extension agent report flows were used to document the nature of organizational relationships. In this case, actual behavior followed an agency-specific reporting pattern rather than the integrated team approach depicted in the design documents and organization chart. In fact, the geographic distribution of services (training farmers) was linked to individual agency priorities rather than project priorities.

The consultant's report downplayed personalities and emphasized structural interpretations for deviation from plan and lack of coordination. Moreover, it demonstrated that, although the overall picture showed a withdrawal from the project strategy, each actor was behaving rationally and acting consistent with the competing demands that were placed upon him or her.

During this investigation, personal interviews, direct observation and informal delphi exercises were used both to identify actual organizational behavior and to determine what records might be used to document that behavior. Thus, the process of collecting informal data led to the specification of the necessary formal data. Furthermore, low cost rapid reconnaissance methods were able to isolate the performance problems which lay hideen behind routine administrative reports and idealized planning documents.

Diagnosing the Organizational Dimension

The experiences and approaches noted above can be better appreciated if they are placed in the context of the organizational dimension of implementation.

Organizational diagnosis concentrates on the linkage between resources and services and on the jump from services to behavior change. Also of concern are organizational factors limiting the behavior-welfare link. The first set of linkage relationships entails the organization of interactions among project staff and between the project and support institutions. The second set of relationships also includes beneficiary organizations, such as cooperatives, irrigator associations, secret societies and the like. The third set does not involve the implementing organization so much as it encompasses beneficiary, predator and policymaking organizations.

Factors that affect the linkages between objectives are much more elusive than the objectives themselves and, consequently, linkage dimensions are far more difficult to measure. For example, record examination or direct observation are adequate methods for determining objective achievement: funds released identify committed resources; numbers of farmers trained, fire hydrants installed or canals built indicate levels of goods and services provided; the price of elephants or tile replacement rates suggest target group behavior; and tin roofs, infant mortality and income levels show welfare. However, measuring cooperation, unstated policies, or participation in decisions may also require confidential interviews and informal delphis because interpreting the significance of organizational forms and decision processes is a highly contextual exercise that requires informed data which are not nearly as easy to obtain or interpret as are levels of target achievement.

Nevertheless, it is in the diagnosis of these dimensions that rapid reconnaissance methods have the greatest contribution to make. The major strength of organizational reconnaissance is its sensitivity to contextural nuance. Thus, what first appears as a major weakness becomes a basis for optimism.

Table 4 presents this discussion in a more concise and complete manner. It displays the proxies noted in this essay as representative of the sequential objectives and linkages contained in the logic of project implementation. Additionally,

TABLE 4

SAMPLE PROXIES FOR PROJECT OBJECTIVES AND LINKAGES*

	RESOURCES	RESOURCES-SERVICES LINKAGE	GOODS/SERVICES	SERVICES-BEHAVIOR LINKAGE	BEHAVIOR	BEHAVIOR-WELFARE LINKAGE	WELFARE
INDICATORS NOTED IN TEXT	•Project budget •Extension center facilities •Deposit in bank	•Budget/Request Ratio •Organizational capability index - Personnel - Facilities - Education - Experience - Turnover - Pay •Fiscal management procedures •Driver interests •Report flows •Settlement-staffing congruity •Organizational structure and resources •Information system •Organizational incentives •Meeting attendance •Decisionmaking in host ministry and local government level •Memo distribution	•Fire hydrants •Farmers trained •Irrigation canals built •Roads built •Mothers trained •Fertilizer delivered	•Variable cost/fixed cost ratio •Values expressed in novels and folktales •Memory of target group •Values of target group •Extension agent background •Decisionmaking (participation) in project •Autonomy-control relationships •Language •Extension agent behavior	•Price of elephants •Child care practice •Farming practice •Radio setting •Tile replacement	•Decisionmaking in irrigator association •Taxation/price policy •Land tenure •Interorganizational relations •Weather	•Income •Infant mortality •Disease incidence •Tin roofs •Laundry •Soap inventory •Sewing machines •Number of lives and percent of property value lost to fire •Baby carriages •Bicycles •Cattle •Tin cans •Divorce rate •Prosperity indicators •Children
APPROPRIATE RECONNAISSANCE METHODS	•Record examination •Direct observation	•Record examination •Informal delphi •Confidential interview •Direct observation	•Record examination •Direct observation	•Record examination •Informal delphi •Confidential interview •Direct observation	•Record examination •Direct observation	•Record examination •Informal delphi •Confidential interview •Direct observation	•Record examination •Direct observation
COMMENTS	•Relatively objective •Direct concern of organizational diagnosis	•Extremely sensitive to context •*Major* concern of organizational diagnosis -- focus on project and support organizations and linkages	•Relatively objective •Direct concern of organizational diagnosis	•Extremely sensitive to context •*Major* concern of organizational diagnosis -- focus on project support and beneficiary organizations and linkages	•Relatively objective •*Important* concern because it identifies target group	•Moderately sensitive to context •*Important* concern of organizational diagnosis -- focus on beneficiary, predator and policymaking organizations	•Relatively objective but moderately contextual •Indirect concern of organizational diagnosis but can suggest problem with previous linkages

*Source: Compiled by author.

each stage is related to the appropriate data collection methods, the major interests of organizational analysis are noted, and the relative situational sensitivity of the indicators and stages is identified.

This display synthesizes the content of this paper. Although the paper is an attempt to build on current practices and develop "less crude methods for the examination of institutional and distributional factors,"[40] much more remains to be done.

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[40] Uma Lele, Design for Rural Development: Lessons from Africa, Baltimore: Johns Hopkins University Press, 1975. Such examinations should be conducted in a way that supports indigenous capability to conduct and use them. See, Thomas Armor, George Honadle, Craig Olson and Peter Weisel, "Organizing and Supporting Integrated Rural Development Projects: A Twofold Approach to Administrative Development," Journal of Administration Overseas, October 1979.

CONCLUSION

The general observations resulting from this discussion are that rapid reconnaissance methods do provide public administrators with a useful tool for information gathering and that social scientists should give serious attention to the study and improvement of existing methods. More specifically, a number of conclusions and recommendations flow from these observations.

The first conclusion is that the practice of reconnaissance often occurs in an intuitive and unarticulated way. This is not desirable because it leads to assumptions not being scrutinized, experience not being shared and methods not being improved. To alleviate this situation, two suggestions seem appropriate. First, when using reconnaissance methods, practitioners should pre-test the situation by examining the problem context and stating the assumptions linking proxies to phenomena. This could also strengthen the ability to judge the quality of an investigation. Secondly, academics should study the contingencies that tend to invalidate different types of indicators. Such studies might improve data collection methods by identifying warning signals or producing guidelines for indicator selection.

The second conclusion is that reconnaissance strategies should not be presented as inherently inferior or second-rate

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alternatives. In some cases (such as organizational diagnosis) they may be preferred because of the type of data required for management decisions, because of their potential for collaborative problem-solving and decisionmaking, and because of budgetary and scheduling constraints. Moreover, when conducted by a skilled practitioner, a rapid reconnaissance study can stand on the shoulders of those involved in long-term, in-depth research. Thus, by comparing and synthesizing traditional studies and adding more immediate considerations, impressionistic techniques can often produce superior data for decisionmaking and administrative development.

Two recommendations flow from this second conclusion. The first is that academic social scientists should study the tradeoffs between reconnaissance approaches and in-depth methods. Questions to be addressed might include: What are the tradeoffs in time, cost and accuracy and under what circumstances and for what purposes is each alternative preferable? What combinations can capture the strengths and avoid the weaknesses of each? Such studies would include the value of using comprehensive longitudinal studies to verify impressionistic surveys as well as the use of the latter to check the appropriateness of the measures used in the former. The second recommendation is that practitioners should try different combinations and that they should view the promotion of reconnaissance skills both as an element of administrative development and as an objective of in-service management training.

The third conclusion is that this exploratory discussion has been based on a small sample of the practice of rapid reconnaissance. Certainly there are many more approaches in use. They should be documented, codified and critically examined. This suggests that scholarly studies should focus upon the full range of experience with reconnaissance methods to identify their strengths and weaknesses, as well as the contingencies affecting the choice of approach. The joint task for scholars and practitioners would then be to improve the substance and application of these methods.

In summary, rapid reconnaissance methods are not a panacea for budget constraints or deadlines. Nevertheless, they do sometimes provide a practical alternative to costly orthodox approaches to social science data collection. Observer arrogance, however, must be avoided. That is, the perceptions and insights resulting from clever reconnaissance should not be allowed to create an illusion that the visiting expert has discovered the Truth. Although quick methods require an understanding of historical factors preceding the moment of analysis, they nevertheless provide only a momentary snapshot of an evolving situation.

When giving rapid reconnaissance its due recognition as a legitimate form of social science data collection, the imperative is not to make a virtue out of necessity, but to make the necessity more virtuous. Since rapid reconnaissance, like

development administration, blends art with science, the challenge is to make the science more practical and the art more disciplined.