

# Use of Qualitative Research Methods in Natural Resources Management Studies: Some Anthropological Experiences from the Study of Two Indigenous Irrigation Systems from Western Terai

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## 1.0 Prelude:

The objective of this paper is to share with the academic and professional community in general on the use of qualitative research methods for conducting the empirical study in the domain of natural resources management, particularly in the sector of indigenously-managed irrigation systems. These were used to generate the data on the role of embeddedness and structural and cognitive social capital and their bearing on the sustainable irrigation management in the rural communities dependent on the agrarian economy.

## 2.0 Introducing the Research Communities

The author of this paper studied *Sorah-Chhattis Mauja* indigenous irrigation systems in 2003 in Rupandehi district of western Terai. Following Gilmour and Fisher (1992), Fisher (1992) and Chhetri (1993/94) about their studies on common property resources in Nepal, he labeled both systems as the indigenous ones because they were originally developed by the "local initiatives" of autochthonous *Tharus*. Even though the present organizations have to comply with the irrigation policies/rules of the government and are occasionally supported by the government for their permanent structural development and maintenance after a long period of their initial construction by the farmers themselves under the traditional leadership of local landlords/officials of revenue collection and administration, they cannot be theoretically called "sponsored irrigation groups". Conversely, he would call those irrigation groups as "sponsored groups" which have only come into being with the support of external agencies/people. Hence, "indigenous" in this study means "local initiative" and he would label both irrigation organizations as "indigenous groups".

It has been revealed that the *Chhattis Mauja* irrigation system has been studied by a couple of non-anthropologists associated with International Irrigation Management Institute (IIMI) in the late 1980s and a couple of engineers

associated with the Department of Irrigation in the 1990s with focus on the engineering, organizational and institutional as well as agricultural aspects. The organizational and institutional aspects of the irrigation management have not been examined by the earlier studies as the cultural aspects of common property resource management with the adoption of the common property theoretical perspective. The *Sorah Mauja* irrigation system has, in fact, not been studied by any social scientist. However, one Canadian engineer has written his master's thesis in engineering with specific focus on engineering design of the canal system and its contribution to enhance the agricultural productivity. The organizational/institutional dimension has barely been touched. Despite the fact that these systems have been studied, to some extent in the past, these are non-anthropological studies and this reason helps explain the rationale of the selection of these two indigenous irrigation systems for the academic study.

As indicated in the research problem, a substantial portion of the country's irrigated area is under farmer-managed irrigation systems (FMISs) scattered across the country. FMISs account for over 70 percent of irrigation development in the country. Generally, this national level scenario of irrigation holds true in the case of Rupandehi district also. It has been revealed that of the 50,690 hectares of the irrigable land of this district, 40,693 hectares has been under any form of irrigation. It has been revealed by the key informants that more than two thirds of the irrigated land has been under the FMISs in this district.

Given this context, the command areas of *Sorah* and *Chhattis Mauja* indigenous irrigation systems located in the plains of Rupandehi district have been selected as the research sites for this ethnographic research. During the period of the study in 2003 A.D, the *Sorah* and *Chhattis Mauja* irrigation systems had the command areas of about 1,500 and 3,500 hectares of land, respectively. These were originally constructed by the *Terai* autochthonous *Tharu* people. Initially, the *Sorah Mauja* irrigation system served a total of 16 *Maujas* and *Chhattis Mauja* irrigation system served a total 36 *Maujas*. But the command areas of both the irrigation systems later expanded—a function of the population growth triggered by the Hill to *Terai* migration particularly after 1960.

During the period of fieldwork, the *Sorah Mauja* irrigation system had a total of 30 *Maujas* under its command area. It was also reported by the key informants that a couple of years back, it had a total of 33 *Maujas*. Similarly, *Chhattis Mauja* had a total of 56 *Maujas* under its command area during the period of the fieldwork. Like in *Sorah Mauja*, it had a total of 62 *Maujas* a few years back. The rationale of the increase and decrease of the number of command *Maujas* has been analyzed in relevant chapters. But it is suffice to say here that the right to use the water for irrigation as a common property by the water users of a particular *Mauja* is entirely dependent on whether or not they have contributed

labor and financial resources to the repair and maintenance as well as operation of the irrigation systems every year.

Despite the fact that both systems were originally developed in two different locations by the autochthonous *Tharu* people acquiring the water from the same source (that is, Tiana river), they had been sharing water from a single mega-canal since 1964. Since then, the mega-canal had been jointly managed up to the point of bifurcation from where water had been divided between the two systems proportionate to the size of their respective command areas. During the proposal stage, I had aimed at studying only the *Chhattis Mauja* irrigation system only because it was not known to me that they shared the water from the same canal (because no visit was made to the systems during the proposal stage). But during the fieldwork period, it came to be known that the study would be incomplete without the focus on both systems because of the share of water for irrigation. Hence, a decision was made to focus on both systems. The rationale behind this decision was that the joint management of the mega-canal up to the location of bifurcation point would be sufficiently understood and the research would also gain its completeness.

The command areas had a mosaic of cultural and caste/ethnic diversity, particularly since 1960s, when the influx of hill migrants got its momentum. Despite the heterogeneity in the social structure of the beneficiary farmers of the command areas, both irrigation systems had been effectively functioning for a relatively long period of history and had become the often-cited references of the participatory and sustainable irrigation systems in Nepal. Hence, the author selected these two systems to document the indigenous systems, knowledge, skills and practices with a view to generating the social learnings which were worth sharing for the wider academic discourse on developmentalism (i.e. external intervention vs. indigenous model or the blending of the both?) for the sustainability of irrigation systems operational in other parts of the country and world.

In addition to the above, the sampling of these two irrigation systems not only provided “what works type of uni-dimensional research perspective” about FMISs in Nepal but also “what do not work” aspects. These samples, on the one hand, provided the analyses on the “embeddedness” of the water users, organizational and institutional aspects, and social subjectivities with their implications on the sustained irrigation management (the “what works type of uni-directional model”) and on the other, they also provided brief analyses on the problems of social and gender equity in the overall organizational and institutional processes and participatory monitoring and evaluation (“what do not work”).

### 3.0 Units of Analysis

The overarching central units of analysis were the water users' organizations and institutions of both irrigation systems. The secondary units were water users' households and communities given the fact that they occupied an important place in the ethnographic or anthropological research on the management of natural resources.

### 4.0 Design, Size and Selection of Sample

Given the complexity of both irrigation systems, the sample for this ethnographic research was selected at three levels as presented below.

#### (i) Sample at the Level of Location of the Command Area

Since the command areas of the *Sorah Mauja* and *Chhattis Mauja* irrigation systems were 30 *Maujas* and 56 *Maujas*, respectively, during the period of the fieldwork, it was well-nigh impossible to study all of them. Therefore, first of all, the whole command area of both systems was divided into head, middle and tail locations in consultation with key informants. Then, one *Mauja* was randomly selected from each location of the *Sorah Mauja* irrigation system, which was a total of three *Maujas* (10% of the total 30 *Maujas*). Analogously, two *Maujas* were selected from each location of *Chhattis Maujas*, which was a total of six *Maujas* (10.7% of the 56 total *Maujas*).

#### (ii) Water User Household Census in Sample Locations

Since the study needed the household level socio-economic quantitative information, a water user household level census was conducted in the nine sample *Maujas* from both systems. A total of 461 and 567 households from the three and six sample locations of the *Sorah* and *Chhattis Mauja* irrigation systems had been covered respectively in household census. One principal reason of taking census of water user households was that no data on in-migration were available at the offices of both systems and the local government offices and it followed as a corollary that census would be the only tool yielding data on the growth trend of the in-migrant water user households.

#### (iii) Selection of Key Informants

Informants selected for garnering in the qualitative information comprised all 11 members of the joint management committee (for the mega-system), all 11 members of the *Sorah* and 15 members of the *Chhattis* independent executive committees (at the macro-level) and regional representative/

chairman of the sample pocket locations of both systems (i.e. 3 from *Sorah* out of 6 and 3 from *Chhattis* out of 9 at the meso-level) and the chairman or *Gaun Mukhiya* (village chief) of each village-level irrigation committee from the nine sample locations of both systems (i.e. 3 in *Sorah* out of 30 and 6 in *Chhattis* out of 56). Hence, the total number of these informants comes to be 52. They furnished data on the processual aspects and overall management of both irrigation systems and their functioning. Besides these functionaries and members of the nested enterprises selected for the interview, the researcher, after building the initial rapport with the study community, purposively selected 10 other informants for the interview to generate data and information on the social structure (such as kinship, caste, ethnic and class relationships) of water users and 15 participants for the well-ranking in each *Mauja* of both irrigation systems and the total of which was 90 informants for the social structure and 135 participants for well-being ranking. The criteria used for the selection of key informants comprised the possession of the specialized knowledge on research variables/issues and their willingness and cooperativeness. Utmost effort was also made to select the trustworthy, observant, reflective and articulate informants purposively from the different cross-sections of water user communities of both irrigation systems to ensure their representativeness in the sample.

### 5.0 Data Sources: Tools and Techniques Used for Data Collection

Like in other anthropological researches, the author used two types of data, namely, primary and secondary. However, it was principally based on the primary data. The secondary data had been garnered in from the office records of the executive committees of both irrigation systems, district level irrigation and agricultural development offices (of the research area), District Development Committee office and published and unpublished studies/ reports. The primary data had been garnered in by the use of ethnographic method, a traditional anthropological method, census survey, and a multitude of Participatory Rural Appraisal (PRA) tools/techniques (though initially used in the community studies designed for the developmental works) which have also been increasingly used by the academic researchers. All this is demonstrative of the fact that, following Chhetri (1990), he used the **eclectic approach** to garner in the needed information and data.

The growing emphasis has been on the combination of the qualitative and quantitative tools and techniques in the cultural anthropological studies. Showing the academic significance of the blending of these two approaches in anthropological researches by referring to a number of anthropologists, Chhetri (1990, p. 47) asserts that:

... I am... convinced that a qualitative and quantitative mix in methodology can always give a better picture of what we examine. That anthropological research should involve a blending of quantitative and qualitative methods for data collection and analysis has been receiving increased acknowledgement in recent years...

Such blending of the methods is discernible in the earlier anthropological studies of the Nepalese communities conducted by both Nepali and foreign anthropologists. Notable examples among them are Dahal (1983), Macfarlane (1976) and Fricke (1986). However, this is not the exhaustive list of the anthropologists who integrated both quantitative and qualitative methods. A brief discussion and analysis of the tools/techniques used for garnering in the data and information are tersely presented below.

### 5.1 Ethnographic Method

Substantial amount of the necessary data used in this academic research had been collected by conducting the ethnographic fieldwork, which lasted for about six months (at different seasons of the year) beginning from February, 2003 to January, 2004 to comprehend a complete agricultural cycle of water users. Ethnographic method in this research involved the **direct and participant observation and key informant interview** as the principal data-gathering tools.

Use of ethnographic method had been a long tradition in the regime of structural-functional anthropology. Elaborating the conceptual aspect and the development of the ethnographic fieldwork, Pelto and Pelto (1997, p.243) write that:

Fieldwork involves living in close contact with a research population in order to observe their daily routines, ritual and social acts, economic activities, and other aspects of cultural behavior. It has assumed the methodological prominence with the rise of interest in an ahistorical, "structural-functionalist" study of human social and cultural systems.

Discussing the approaches to the ethnographic research, Ellen (1993) also argues that ethnographic fieldwork not only provides the empirical data base of the discipline, but also of the strongly held feeling (although not always fully articulated) that the act of having done the fieldwork is a *sine qua non* for admission to full professional standing and to the recognition by one's own peers of the validity of a claim to be anthropologist.

**Key informant interview**, an important tool within the ethnographic method, was also used to garner in the necessary data for this academic research. Bernard writes that, "key informant interviewing is an integral part of the ethnographic research. Good informants are people...who understand the

information you need, and who are glad to give it you or get it for you..." (Bernard, 1994, p.166).

Through the use of key informant interview under the ethnographic method, author generated a vast amount of the qualitative data on social structure (such as kinship ties by caste and ethnic groups, existing caste, ethnic and class relationships, forms and functions of gifts, holistic approach of the study of economic behavior, implications of the kinship, caste, ethnic and class relationships on the sustained irrigation management with the focus on the notion of embeddedness), institutional arrangements for irrigation management as culture (such as background of the institutional arrangements, organizational structure of water users, organizational cultural activities vis-à-vis decision-making and planning culture, resource mobilization and management culture, water allocation and distribution, communication and co-ordination culture, conflict management culture, culture of maintaining the transparency and accountability, culture of maintaining the social equity) and social subjectivities or cognitive forms of social capital or softer aspects of software (such as social norms, values and beliefs, social solidarity, ideas, ideals, trust, aspiration and social energy, leadership, friendship, etc and their role in sustaining the irrigation system). In so doing, an elaborate checklist was used. Data collected by the use of key informant interviews were mainly presented analytically.

In addition to key informant interviews, informal discussions with the common water users also helped to understand their views about various aspects related to community-managed irrigation systems in their areas. Such discussions were held while walking in the sample *Maujas*, eating food and drinking tea at the local hotels/tea stalls, waiting for a bus/jeep, making the direct observation of the annual rehabilitation/maintenance activities, and sitting in the offices of both irrigation systems. The views generated by such informal discussions were presented in the form of quotations which reinforced the generalized abstractions.

**Field observation** is the foundation of anthropological research. Discussing about the importance of the participant observation under the ethnographic method, Bernard (1988, p.148) writes:

... It (participant observation) involves establishing the rapport with a new community; learning to act so that people go about their business as usual when you show up; and removing yourself everyday from cultural immersion so you can intellectualize what you have learned, put it into perspective and write about it convincingly...

He also shows that it is useful for gathering both qualitative and quantitative data, reducing the problem of reactivity (from the research population), formulating the sensible questions, generating the intuitive understanding of

what is going on in a culture, and allowing the researcher to speak with confidence about the meaning of the data. In fact, the participant observation, in this research, helped to garner in a substantial amount of qualitative data and information on managing water for irrigation as a 'commons' (aspects of information as identified above) and a few quantitative data such as the number of water user households in each *Mauja* of both the systems and the pattern of resource mobilization (both financial and human) over the years.

The author of this paper observed, listened to and conversed with informants in as free and natural an atmosphere as possible. The assumption was that the most important behavior of water users in groups was a dynamic process of complex interactions for irrigation management and consisted of more than a set of facts, statistics or even discrete incidents. The strength of this kind of method was in the observation of natural behavior of water users in real life settings. He participated in the meetings of water users' committee and seasonal, periodic and annual rehabilitation/maintenance activities. Another assumption was that human behavior (i.e. water use behavior) was influenced by the setting in which it occurred. He made efforts to understand the setting and the nature of social structure; its traditions, values and norms of behavior. It has been important for him to observe and interpret the collected facts using etic approach but emic perspective has also been taken into consideration (Bernard, 1988 and Best and Kahn, 1992).

There have been the opinions that participant observation, as a form of social interaction, always involves impression management. Impression management in the ethnographic research is often an exhausting, nerve-wracking effort on both sides, especially in the early phases of the contact (Berreman, 1972). Until the contact with the subjects is not established fully, the ethnographer obtains only the official view or publicly approved view on the variables under the study. And after that, he starts having access to "back-region information" or "secrets" of the community.

This happened to me very much during the initial phase. The informants shared only those facets of information that represented the official view of the organizations. Information pertaining to the conflicts were not revealed. And only after the good rapport was established, his associate and himself had to be always interested, circumspect, uncritical and meticulous to maintain the trust of water users, and win their confidence for the research endeavor. The data collected by using the field observation (participant) observation on the meetings of the water users' committees and seasonal, periodic and annual rehabilitation/maintenance activities had been presented analytically in the sections of the organizational structure of the water users and operation and maintenance cultural systems together with the data generated from key informant interviews.

**Direct observation** was instrumental in garnering in the necessary information and data on the physical location of the study area, social infrastructures, topography, hydrological systems, natural resources, settlement patterns, agricultural practices, canal maintenance practices, control structure activities vis-a-vis design, construction, water acquisition, operation, drainage, etc. This tool was enormously useful to cross-check/triangulate the informants' answers. Much of the data collected by using the direct observation method were presented analytically in sections of location of the irrigation systems, natural resources, hydrological and structural aspects of the canals, socio-economic aspects and development initiatives and operation and maintenance cultural system and drainage.

Short relevant few case studies which are termed as the "social microscopes" had also been collected on social relationships and irrigation management and had been presented in the relevant sections of the chapters to back up the generalized abstractions.

A **household census** was also conducted embedded with the objective of collecting the quantitative information on demographic composition of the households, family structure, land tenurial status, size of the operational landholdings, and year of in-migration. These data were garnered in by recruiting local field enumerators (both males and females) who had the educational background ranging from School Leaving Certificate (SLC) to Bachelor of Arts (B.A). Prior to mobilizing them for garnering in the data and information, a two-day long orientation was given to them on the general mechanics of the household census and fieldwork. Once the orientation was over, each of them was asked to rehearse a couple of interviews with the household heads using a very brief questionnaire. The filled-in questionnaires were meticulously checked to ensure the quality of the data and information sought. Having done this, the enumerators were mobilized first in the six sample locations of *Chhattis Mauja* and then in the three sample locations of *Sorah Mauja*. The whole process of conducting the household census data in the nine locations of *Sorah-Chhattis Mauja* irrigation systems took a total time of one month. During this period of the administration of the questionnaires, the enumerators were supervised in the field settings. All the filled-in questionnaires were thoroughly checked for ensuring the consistencies.

All these above tools/techniques under the ethnographic method helped for triangulating the data/information needed for the study. Besides triangulating the information, the ethnographic method was also instrumental in finding out the appropriate key informants, setting venues and dates for the interviews, and building the rapport in the community.

## 5.2 Participatory Rural Appraisal Techniques

An array of Participatory Rural Appraisal (PRA) techniques was also used to generate necessary data and information from the field. These included well-being ranking, historical time-line, focus group discussion and group interview. Thus, I transcended boundary of my traditional anthropological tools and techniques for data gathering. A brief discussion of these techniques has been presented below.

### Well-being Ranking

Since one of the objectives of the research aims at investigating the social structure by analyzing the class relations of water users, well-being ranking, a popularly practiced Participatory Rural Appraisal (PRA) tool, was used with the assumption that community members had a good sense of who among them was more or less well-off. There were inequalities and differences in wealth in the community. These differences influenced or determined people's behaviors, coping strategies, and views. Well-being ranking allowed the researcher to investigate the perceptions and inequalities in a community, discover local indicators/criteria for wealth ranking and establish the relative position of households in a community (Thesis and Grady, 1991). Once the relative position of water user households was determined, then qualitative information on class relations was gathered by using the elaborate checklist. The well-being ranking data have been used only as a basis for the analysis of class relations at water users' group level.

### Group Interview

Group interviews were primarily conducted to garner in the necessary general information of water users at the community level. These interviews generated information on the patterns of in-migration in the command area and concomitant changes in the social structure and irrigation systemic management, occupational structure of water users (such as agriculture, service, agricultural wages, businesses, etc) and local development initiatives (such as educational institutions, roles of the governmental and non-governmental institutions, farm roads, and other social infrastructures of the study locale), etc. A checklist was used for guiding the group interviews. These group interviews provided access to a larger body of knowledge, and provided the immediate cross-check on information as it was received from different people in the group (Thesis and Grady, 1991).

### Focus Group Interview

This technique was used to generate information on the specific issues on the subjective factors (such as the role of leadership personality and ideas), culture

of maintaining transparency and accountability and social equity in managing water and their bearing on the sustainability of irrigation systems. Effort was also made to arrive at a consensus on these specific issues. In so doing, a small homogeneous group of people (six to twelve) who were knowledgeable on the above-specified topics were asked for their participation. The interview was conducted with persons who had been involved in managing water resource for irrigation in the capacity of organizational leaders. A checklist was used for guiding the interviews.

### Historical Timeline

This participatory technique was used to generate data on the temporal dimension of the irrigation system under study which included the initial development of irrigation systems, people taking initiation for the development of irrigation systems, role of particular ethnic group in their development, mobilization of internal labor and other resources for their development in the different stages, organizational structures of water users and its functions at the beginning, mobilization of external resources for its development, time of major improvements/rehabilitation/expansion of the systems, etc. A checklist was used for drawing the historical timeline.

## 6.0 Maintaining the Ethnographic Notes in the Field

Following Bernard (1988) and Burgess (1984), three types of ethnographic field notes were maintained which comprised **methodological notes**, **descriptive notes** and **analytic notes**. Methodological notes contained the snippets of information on the *modus operandi* of the overall fieldwork in the selected sample locations of the command areas of both irrigation systems through the use of the multiplicity of different tools and techniques of data gathering. In addition to them, these notes also contained the information on the field problems, impressions, feelings and hunches. The principal objective of maintaining these notes was for the reflection (*vis-à-vis* the appropriateness of the fieldwork processes, procedures/methods). The **descriptive notes** mainly contained the substantial amount of information obtained from the interviews with informants and observation in an elaborate form. These notes contained the continuous record of the situations, events and conversations participated by me.

Following Burgess (1984), these **substantive descriptive notes** were also a record of the observations and interviews obtained by me and of the contents of the documents. In most cases, these notes were systematically recorded using the pre-set sections (on the basis of the contents of the checklist) and categories of a particular event. **Analytic notes** were the preparations of the preliminary analyses on the data that were garnered in the field. In this ethnographic research, these notes contained the discussion and analysis looking at the

relationships between and among a limited number of variables such as the relationship between the labor and cash contribution and creation of the property rights on the irrigation canal system, relationship between the structural social capital and social subjectivities and sustainability of the irrigation systems, etc.

## 7.0 Maintaining the Position of the Marginal Native in the Research Community

Right from the time of his graduate studies in early 1980s, the author was always thinking how he could play the role of a "native" during the relatively prolonged period of his academic research—a function of the perusal of experiences of the most prominent structural-functional anthropologists of 20<sup>th</sup> century. But his fieldwork gave him the impression that the full acceptance of an anthropologist in the status of a "native" was not feasible in the research community. He also discovered during the fieldwork process that Pelto and Pelto (1997) and Berreman (1972) had also the similar experiences. Though he had the good friendship with most of the key informants and had the unfettered access to most of the local social activities and immersion on them, (such as annual repair and maintenance cultural practices, the meetings of water users' committees, general assemblies of water users, household level social events and other important community gatherings), he could not be fully assimilated as the "real native" and hence, he had the status of a "marginal native" only during the period of his academic research. He had two reasons behind this as follows: (i) the community always felt that he was there for sometime to conduct his fieldwork to earn his Ph. D in anthropology, and (ii) he also had to intellectualize his field observations and impressions after the participation in the local social scenes (otherwise he would lose his objectivity in the analysis of his information).

In fact, as indicated above, the existing literature also supported his stance. Pelto and Pelto (1997, p. 248) assert that:

... We should understand clearly at the outset that the fieldworker does not assume a role that is fully "native" in all respects. Nor do the "natives" come to think of anthropologist as a completely assimilated member of the local social order. The fieldworker is always a "marginal person", an outsider who, if he is successful, is permitted relatively free access to the backstage area of the local social scene.

This is also corroborated by Berreman. He writes, "... few ethnographers can aspire to full acceptance into the informants' team in view of the temporary nature of their residence and their status as aliens..." (1972, p. xxxiv).

## 8.0 Data Analysis and Interpretation

Data analysis, being a continuous process of reviewing the information as it is collected, classifying it, formulating additional questions, verifying information and drawing conclusions, is crucially important in the research process (Thesis and Grady, 1991). Discussing the principle of analysis, Kerlinger (1983) writes that analysis means the categorizing, ordering, manipulating, and summarizing of data to obtain answers to research questions. The purpose of analysis is to reduce data to small-scale business intelligible and interpretable forms so that relations of the research problems can be studied.

Since the study is predominantly based on the qualitative data generated through the anthropological instruments, they have been analyzed by searching for patterns in data and for ideas that have helped to explain the existence of those patterns (Bernard, 1988). In so doing, the qualitative data on social structure, social subjectivities and organizational and institutional arrangements have been analyzed by first perusing all the original texts of the field descriptive/substantive notes and then identifying and listing all conceptual categories/patterns in data. Then, second order categories of data/patterns of data were prepared in an analogous fashion by verifying the context of original descriptions. The relationship between the categories or patterns of data was also worked out by coalescing or separating them as appropriate. Finally, third order categories were made by developing generalizations.

A few quantitative data on demographic composition of the households, family structures, land tenurial status, size of the operational landholdings, and year of in-migration generated from the field work by using the household census technique had been manually summarized in the tabular forms using frequency distributions, percentages and means.

After the analysis of the data, interpretations of the findings had been made by looking at the relationships between and among the variables under consideration. Apropos of this, Parcel, et.al. (1979) write that interpretation uses the results of data analysis for making inferences relevant to the research questions and drawing conclusions about these questions. It seeks a broader meaning of the research relations obtained, as well as their implications, thus linking them to other relevant available knowledge.

## 9.0 Field Research as a Personal Experience

Though the author had gained the field experience for the last 20 years while working in the capacity of a development consultant, the field experience gained during the period of his academic research was very unique. For him, gaining initial acceptance in the community of water users was always a matter of great

concern. This was primarily so because of two reasons: (i) the study location is increasingly being modernized and people have little or no time for interviews and discussions with the outside researchers, and (ii) the system, in the past, had been studied by a few indigenous and foreign scholars, mainly the development consultants, for the last 15 years or so with a view to demonstrating the example of sustainability of it for relatively long period of time and he was told by a couple of colleagues of consulting firms that the potential key informants, when approached for information, show a tendency to give references of a couple of consultancy studies for the information sought and thereby minimizing the possibility of the potential co-operation for the academic research.

But ever since the author had known about the system from a couple of seminars in early 1990s, with examples of the organizational strengths for sustaining the system, he had made a firm decision to study it one day. And when he began to ponder over writing the academic research proposal, he made a plan to study it. And once his adviser approved his elaborate field methodology, he started looking for the avenues to enter into the community. But he always had the recollection of a person from *Chhattis Mauja* whom he had met in a international seminar on 18-19 April 2002, organized by the Farmer-Managed Irrigation System (FMIS) Trust at Hotel De Annapurna in Kathmandu. The seminar was attended by internationally renowned scholars working in the regime of common property such as Prof. Norman Uphoff (Cornell University), Prof. Elinor Ostrom (Indiana University), Dr. Bob Yoder (Free-lance American consultant who had conducted a lot of studies on the indigenous irrigation systems in Nepal), Prof. Prachanda Pradhan (who resigned from the Tribhuvan University and is a pioneer social scientist to conduct the empirical researches on farmer-managed irrigation systems) and Dr. Upendra Gautam (who also resigned from Tribhuvan University from the position of Associate Professor and has done a lot of empirical researches on both the farmer-managed and government-managed irrigation systems). And FMIS trust had also generously provided him an opportunity to present his academic research proposal in this august gathering to get the insightful comments from the eminent scholars. So did he.

The person from *Chhattis Mauja* had also been one of the listeners to author's presentation who was the ex-chariman of *Chhattis Mauja* for two terms. After the presentation, there were a number of suggestions for the research. And during the tea break, the author approached him to be introduced and take a hint of his imminent support for the fieldwork. During the brief introduction, he told him that he was the university teacher planning to write his doctoral dissertation on their irrigation system. His teaching position in the university definitely created a space for the imminent co-operation. He was also generous to give him his residence telephone number. He agreed to support for the

initiation and implementation of the fieldwork. He suggested him that the appropriate time for the initiation of the fieldwork would be February-March.

Together with his former anthropology student who had lent his generous helping hand for the garnering in the data and information in the capacity of his field associate, the author reached Bhairahawa, the capital of Rupandehi district in western *Terai*. He then phoned the ex-chairman of the *Chhattis Mauja* (the key informant) about his arrival for the fieldwork and the following day was the beginning of the annual repair and maintenance of the main canal of *Chhattis Mauja* by dividing the portion of the canal proportionate to the size of the command area of each *Mauja*. The key informant assured him that he would inform the *Meth Mukthiyar* about the arrival to study the system. The *Meth Mukthiyar* was also informed by him that the author would start observing the annual repair and maintenance work from the following day. The following day, the author and his associate directly went to the tail-end site of the canal (instead of visiting the community first) from where the work of measuring the main canal and assigning the measured portion of it to each *Mauja* began. The *Meth Mukthiyar*, being a close friend of the ex-chairman, was very positive for the support of his research work. And he had already informed the farmers about the author's arrival for the observation to learn about the system.

By the time the author and his associate reached the site, everyone was forthcoming. They greeted all those present there and presented their introduction. He had a brief talk to the *Meth Mukthiyar* about how he maintains the records of the labor contribution and then, seeing his busy work of keeping the record of measurement of the portion of the canal and its assignment to the functionaries of each *Mauja* level committee proportionate to the size of the command area, he stopped talking to him. And he only observed the approach of canal measurement system and took the photographs of the repair and maintenance begun by the farmers of each *Mauja*.

Towards the close of the day, the *Meth Mukthiyar* came to the author where he was standing and gave him the friendly assurance for the co-operation in the fieldwork. During the daytime, he had also made friendship with a number of people from most of the *Maujas* and his associate also prepared a list of the contact persons of each *Mauja*. This was a great day for the author because the big community of farmers accepted him very easily on the very first day of his fieldwork. Needless to say, it is one of the rare opportunities an anthropologist gets for the ethnographic fieldwork. Had the ex-chairman not been so supportive right from the very beginning, it would have taken him more than 15 days to build the initial rapport with the farmers. On the very first day of the fieldwork, the secretary of the executive committee also showed the unexpected co-operative attitude. He said, "If a son of a Nepali wants to pursue Ph.D by writing about our indigenous irrigation system, it is a matter of great prestige



for us. Why not to support him in every possible way?" Thus, the positive role of the ex-chairman was very instrumental in building my rapport with the community anon. What is suggestive from my anecdote is that an anthropologist should always be effortful to enter the research community with the support of the right person of it.

After a couple days later, the *Meth Muktiyar* of *Chhattis Mauja* asked the author to come to the office for the first formal interview with the functionaries of the executive committee. On that day of the formal interview, he also presented a formal letter of the Central Department of Sociology and Anthropology with his designation and request for the assistance in his fieldwork of Ph.D at the office of the executive committee of the system. The functionaries present at the meeting looked it carefully and were convinced about his identity and fieldwork (though they had believed him when he had himself introduced with the farmers on the first day).

The teaching position of the author in the university became a symbol of respect in the research community. The letter, in fact, gave him the legitimacy to conduct his fieldwork for his academic pursuit. Had he not been able to produce the formal letter, some people might have doubted him about his real identification. Finally, the *Meth Mukthiyar* filed the letter for the future reference. And there was a positive response of co-operation from the *Meth Mukthiyar* and the functionaries of the executive committee. In this context, Berreman writes that, "the initial response to an ethnographer by his subjects is probably always an attempt to identify him in familiar terms; to identify him as the performer of a familiar role. The impression he makes will determine how he is identified" (1972: xxxvi). In fact, despite his respectful teaching position at the Tribhuvan University, he tried to give the impression to the subjects that he was a student for some time and was there to learn about their community and the irrigation systems.

After a week of the fieldwork, the author also came to know that the irrigation system that he planned to study was only one system of the mega-system. There was another system getting a fair share of water from the mega-system sharing the same source of water. Then, he wanted to learn something about the other system also. But he still did not have the intention to give similar emphasis on it in the research process.

With difficulty, the author had an appointment with the chairman of another system. He introduced himself as a university teacher and produced a copy of the identification letter to legitimize his presence. He looked at the title of his proposed dissertation and saw that only *Chhattis Mauja* was written. All this made him very furious and started to criticize the author for failing to have a fair knowledge to call the system "*Sorah- Chhattis*". He also said, "Researchers

have been discriminating against our system for long and making effort to popularize only *Chhattis Mauja*. Your present study would never get its completeness unless you also focus on our system simply because we jointly share the water through the formation of a joint committee for the operation and repair and maintenance of the mega-system from just above the location of bifurcation of the main canal for distribution of water proportionate to the size of command areas of both irrigation systems. Of course, we are also legally recognized independent organizational entities. But our collaborative contribution to the mega-system has hitherto made two systems operational. Therefore, your study has to focus on *Sorah* and *Chhattis*. If you do so, any assistance you require would be offered".

Having said this emotionally, he stared at the author and kept mum. He realized that the chairman of *Sorah Mauja* was right and he was wrong. Instantly, he also shared his realization with his associate and he had also the similar realization. Then, he made the immediate decision to focus on both *Sorah* and *Chhattis Mauja* irrigation systems to make his academic research more comprehensive. But all this had the implications on his financial and human resources and time. But he was ready to accept these challenges. Then, the chairman of *Sorah Mauja* fully supported him in garnering in the data from his system. The point the author is making is that while finalizing the selection of the study area, one should not be rigid right from the beginning. A flexible mind always helps to open the better avenues for the research to be undertaken more comprehensively and gain the trust of the larger research community.

When the bond of friendship grew stronger gradually, the chairman of *Sorah Mauja* started saying, "I am extremely glad to have the history of our system written by a university teacher during my tenure of the chairmanship. Probably, my history would also be written." His these remarks, though made naively, made the author very alert to maintain the balance on the objective and subjective realities of the system in totality by eschewing the biasness creeping in the research while focusing on the personal factor. This is primarily so because people with leadership background have a proclivity to emphasize more on the preponderant influence of the personal factor (i.e. self) and thereby minimize the complexity of the multiplicity of social forces impacting upon the function of irrigation system. But this does not mean that personal factors are less important (given the fact that the good personality of the leader as subjective factor has the potential of impacting upon the better operation of irrigation system).

The author had also a unique experience of a key informant interview. A local indigenous landed elite, despite his acceptance for the interview, did not allow his interview to be tape recorded at the outset of interviewing process. He said that the author and his associate could record it latter which made them very

puzzled. The interview continued for an hour without any jotting or recording. The author had a sense of humiliation too. Then, we (myself and my associate) were provided local food with reasonable degree of hospitality. After that, he said, "Now you can record my interview in the tape." The author was again surprised. He asked him politely, "Yes, brother! Why did you not allow us to have our conversation with you tape recorded at the beginning? You have to speak now twice for the same information." He retorted, "It is no good to allow the interview to be recorded at the beginning. A lot of people come to interview me about the indigenous *Tharu* cultural practices, even from Europe. It is always good to record the interview after the short rehearsal."

Of course, the author and his associate interviewed him and got him tape-recorded. But during the interview, the author had a full sense that the landed elite was used to a choreographed type of interview, thereby minimizing the possibility of obtaining the minute details of the information, which may be insignificant for him but vital for the research. He was always cautious to furnish the information that is worth presenting formally like in the media. For the author, such highly formalized interviews reveal only one aspect of the social reality by masking the bitter but vital aspect of it. But during the fieldwork process, the interview with the landed elite was always taken by the author as a reference point to make the fuller investigation by a meticulous probing technique. Here the author was reminded of the opinion of Berreman (1972) who had experienced his fieldwork as impression management even from the part of the informants.

I always made a scrupulous effort to eschew the inopportune intrusions in the households and community meetings. All meetings were arranged in advance as per the convenience of farmers. In some of the community level interviews, a few people, by virtue of their higher economic and social status, always tended to dominate the discussions and other informants were not in a position to disagree with them then and there. But the author had to hear the voices of the poorer and marginalized people, including the women on a particular issue of irrigation management for triangulating the information. During such circumstance, the only option left for him was the "audience segregation" which he did without hurting them by saying, "Yes, your opinion seems valid and very important. But I have to listen to other people also. Would you please allow me to talk to other people for some time? I will talk to you after a while." This method of segregation became very effective in generating the information from the different types of the informants.

In fact, the role of the author's associate was very instrumental in making his fieldwork easier to be conducted. He was a friendly, tactful and trustworthy young *Brahmin* man. With his congeniality and wit, he made the effort to trace the relationships between the migrant water users of the middle location of the

command area of *Sorah Mauja* and himself on the basis of the traditional *Jajmani* (a kind of the patron-client relationship) practiced by his grandfather in their village of origin (i.e. in the hill) where he used to reside with his family. His acceptance by the migrant community of water users as an acquaintance in the village of origin also contributed to building author's rapport because the associate introduced the author as his revered *guru* in front of the potential key informants and stated that he was there to help his *guru* in gathering the data for his academic research. The approach of introducing the author as a *guru* succeeded in winning the favor of the potential key informants and they assured him to extend their helping hand whenever necessary. This was a great support for his fieldwork. In fact, following Berreman (1972), it was also a kind of impression management to solicit the imminent co-operation in pursuit of the academic research. The author and his associate also avoided jottings in the groups with a view not to distract the attention of the informants and let the flow of dialogue continue (which was basically done immediately after arriving at the residence) but they did the jottings of key informant interviews assuming that they would not distract their attention. They got the interview tape-recorded and took the photographs only with the permission of the informants. Though the author was a social drinker at the time of the fieldwork (but traditionally I was tabooed to do so), I gave the impression to the high caste informants that he always abstained from drinking the alcoholic drinks. There was appreciation from them in this regard because for them the author was still conforming to the traditional *Brahminic* ethical values related to food and drinks. Realistically, all this was done for the impression management in the pursuit of his academic research.

## 9.0 Closing Remarks

There has been a burgeoning trend of the use of qualitative research in the contemporary world. What is written in the paper above is the not the full prescription but rather the accumulation of personal experiences which may be useful for the novice of qualitative researchers (both graduate students and young research professionals). In other words, this article may be guidepost for both graduate students and young research professionals for designing and implementing the fieldwork and writing the methodological section/chapter in the report. Indeed, qualitative research and quantitative research have to be supplementary to each other for gaining the integrated picture of the socio-cultural reality being investigated.

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