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American Save the Children/Yemen
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COMMUNICATING HYGIENE/SANITATION MESSAGES TO VILLAGERS:
AN EXPERIMENT IN WADI AYYAN

by

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Sincere thanks also to Ali Brā'id and Shoo'ee Abdullah, leaders of the beneficiary villages in the project area.

Finally, warmest thanks and best wishes to the women who served as local assistants in each of the beneficiary villages.

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(~~Wadi Ayyan~~)
(Mahweit province)



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1. Introduction

This paper reports on a modest hygiene/sanitation campaign which was executed simultaneously with the construction of an improved water supply system in a rural and isolated area of the Yemen Arab Republic (YAR). This attempt to communicate hygiene/sanitation messages to illiterate villagers made use of simple audio and visual materials and sought to use the occasion of the water project activities to facilitate this instructional effort.

American Save the Children/Yemen (ASTC/Yemen) has previously reported on the teaching of elementary hygiene/sanitation principles and practices to literate young males as part of a Water Technician Training Course.¹ However, the instruction of literate persons in hygiene/sanitation is a very different exercise than the transmission of the same information to illiterate villagers. Attempts to do the latter have not been documented to any great extent in the YAR.² This creates a serious gap in the knowledge of health educators charged with the task of training health workers and others to instruct illiterate villagers. Since the recently-initiated Primary Health Care Worker Program of the Ministry of Health is targeted to the village level, there would seem to be a pressing need to conduct and to report on pilot efforts to instruct villagers.

Similarly, there are no reports of attempts in the YAR to combine hygiene/sanitation instruction with rural water project activities. In light of the stated intentions of UNICEF and other organizations to link these related activities, this is another gap in knowledge that ought to be filled as quickly as possible.

These gaps are only partially filled in this report on an attempt to transfer basic concepts of personal and domestic hygiene/sanitation to the illiterate village beneficiaries of a small water project. It is

¹Robert Burrowes, Preliminary Report on the December 1980 Small Non-pump Water Project Training Course (Sanaa: American Save the Children/Yemen, January 1981).

²The British Organization for Community Development (formerly CIIR) has documented its efforts on Jabal Rayma to transmit health information to illiterate traditional midwives and injectionists.



probably more impressionistic and less conclusive than many readers trained in the social sciences would like. Nevertheless, future studies and pilot projects should be able to build upon the facts and impressions derived from this initial effort at village-level health instruction.

2. The Setting of the Hygiene/Sanitation Campaign

The hygiene/sanitation campaign was carried out in a particular place and with villagers who have their own way of life and a set of traditional attitudes and practices regarding hygiene and sanitation. As already indicated, the campaign took place in the context of construction activities on an improved water system for these villagers. The following subsections describe these aspects of the setting of the campaign.

2.1 The Water Project and Al-Bāghari Spring

The water project consisted of the protection of a major spring and the creation of a storage facility and an improved distribution system. (See Figure 1). The spring was completely enclosed and its water was piped to existing irrigation ditches, to a small pool for storing water for washing prior to prayers and to a covered, sixty-cubic-meter ferrocement storage tank. (See Figure 2). Pipes were run from the ferrocement tank to an area with a concrete slab and spigots designed for the collection of household water, to a loading area for water trucks, to a clothes-washing area and to a trough for watering animals.

The water project was designed and its construction was supervised by the technical staff of ASTC/Yemen with the sponsorship and assistance of the Local Development Association (LDA) of District Khabt in Mahweit Province. ASTC/Yemen purchased equipment and most of the materials, and the villagers in the area contributed most of the labor and some local construction materials. Construction began in late January 1981 and was completed in early April.

Al-Bāghari Spring is a perennial water source with a relatively constant flow of approximately 225 cubic meters per day. Al-Bāghari is located at an altitude

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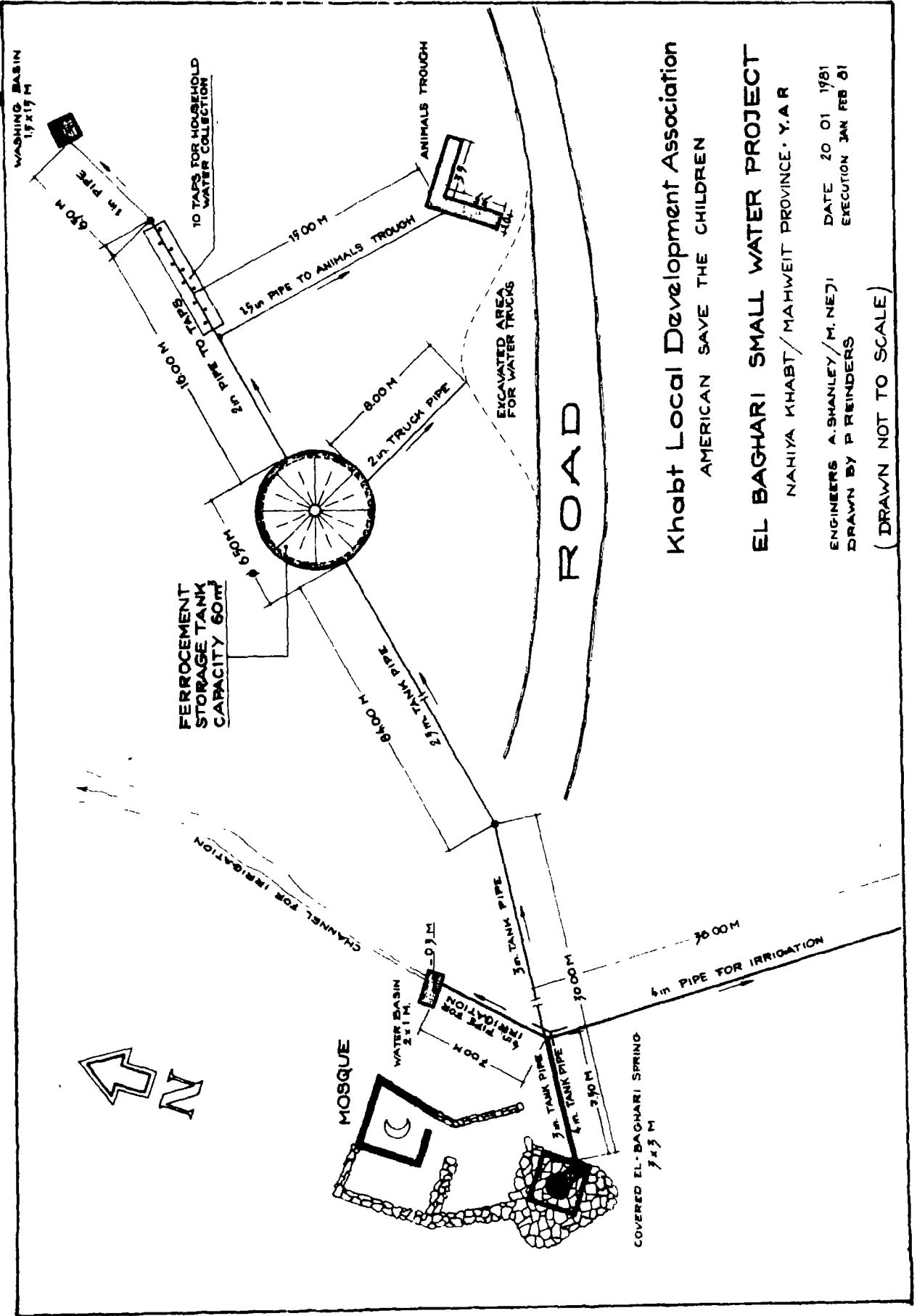
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Fig. 1



Khabt Local Development Association
 AMERICAN SAVE THE CHILDREN

EL BAGHARI SMALL WATER PROJECT
 NAHIYA KHABT / MAHWEIT PROVINCE · Y.A.R

ENGINEERS A. SHANLEY / M. NEZI DATE 20 01 1981
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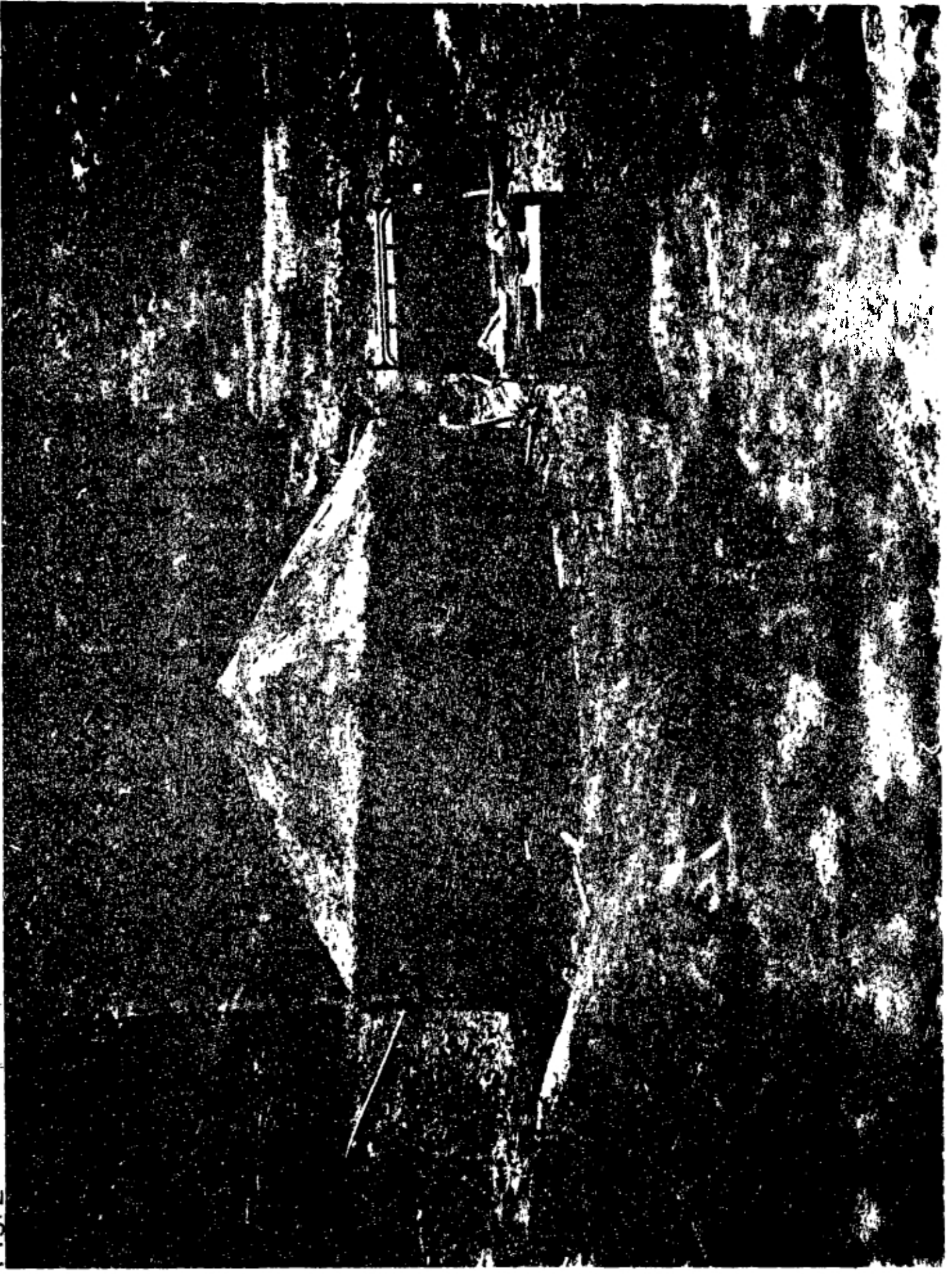
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of approximately 500 meters at the head of Wadi Ayyān in the foothills to the east of the Tihāma coastal plain. The spring is one of the major sources of household water in water-poor District Khabt. It is used at one time or another, and especially during the long dry season, by the inhabitants of several neighboring sub-districts of District Khabt. It constitutes the major source of water for eight adjacent villages and hamlets with a total population of approximately three hundred persons. (See Figure 3).

2.2 The Villagers and Their Way of Life

The eight-week hygiene/sanitation campaign took place in the eight settlements in Wadi Ayyān closest to and most dependent upon al-Baghari Spring.³ The population of these settlements is composed entirely of "tribalists" (gabayl) and⁴ the "servant caste" (akhdam). As people of the wadi, these two social groups have both been dominated through the centuries by the stronger gabayl living in the nearby highlands. Although there are important differences between these two groups of wadi dwellers, many of the differences are more conceptual than practical at the present time. The conditions under which they live and their life styles are not very different; indeed, for the women, they are surprisingly similar.

Wadi Ayyān is oppressively hot and humid most of the year. The slow pace of life in the wadi, with most activity concentrated in the early morning and the early evening, is a concession to the heat of the day.

³The villages and hamlets are:

1. Hamadha Gadīm
2. Hamadh Jadīd (Al-Madhbah)
3. Al-Ma'sal
4. Al-Hannaka
5. Bayt Hamran
6. Bayt Al-'Annāba
7. Bayt Shoo'ee Kalfoun
8. Bayt Shoo'ee Kabīr

⁴A wadi is a riverbed valley which, except during and just after the rainy season, is completely dry or almost completely dry.

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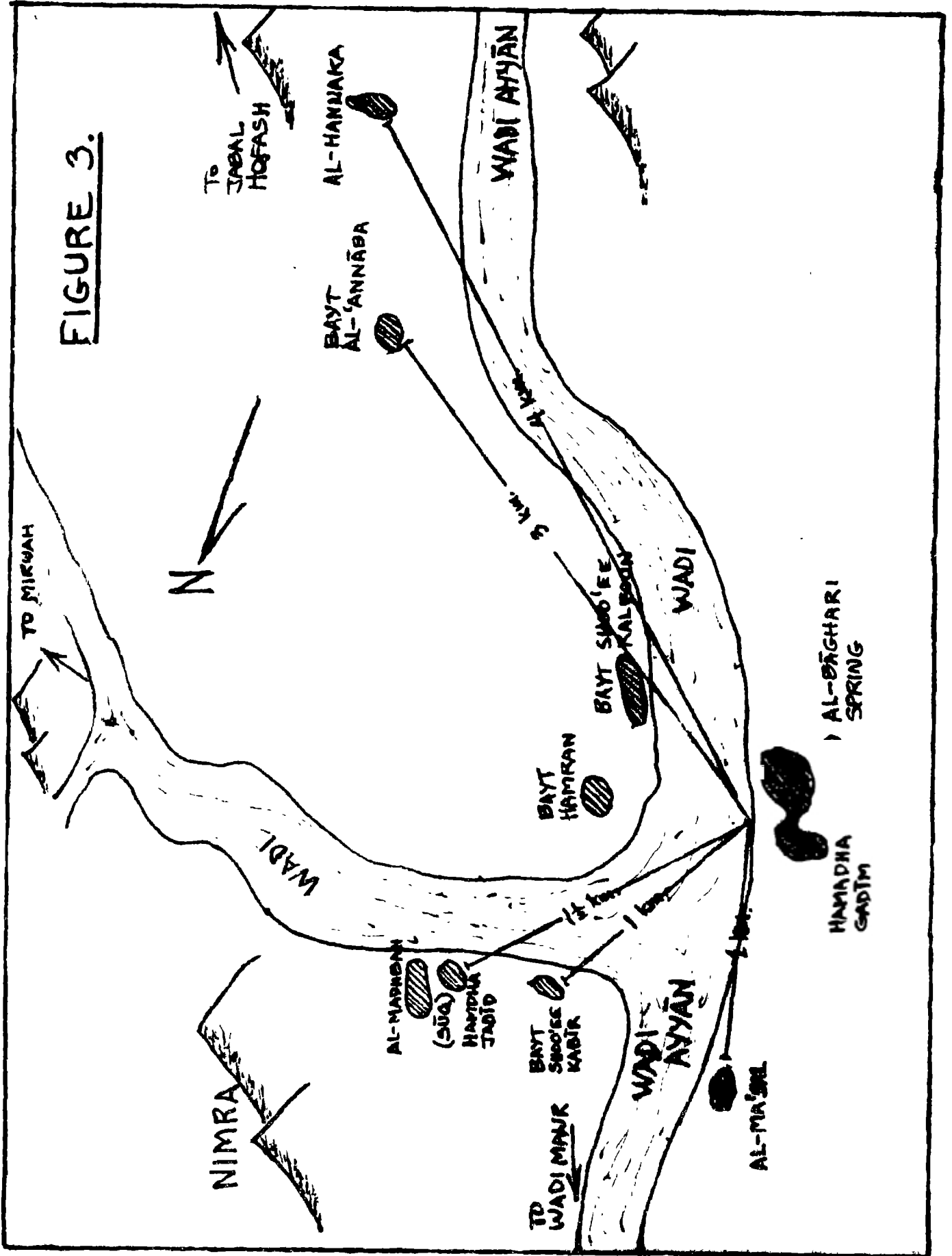
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The typical dwelling - more hut than house - is also a concession to the hot and almost rainless climate. The dwelling is "open air" in design and the main living area is outside the one- or two-room stone structure which is used only for storing possessions and preparing food. It is under a shady lean-to in this outside area where the residents sit, eat and sleep.

Life in Wadi Ayyān traditionally was, and to a considerable degree still is, dependent upon subsistence agriculture, much of it quite marginal. Only the gabayl have the right to own or to sharecrop land; the akhdam, if they work the land at all, do so as wage laborers. The main subsistence crops are sorghum and millet; the former is often intercropped with a legume. Cash crops, grown on irrigated plots and sold in the local market (sūq), include tobacco, white horseradishes, chives, basil and marigolds.

Animal husbandry is also a very important occupation in Wadi Ayyān, and is mostly in the hands of both gabayl and akhdam women. Some of the more affluent mountain people will leave their cows, goats and sheep in the care of wadi dwellers for fattening up prior to sale in the sūq. Although the owners receive all the proceeds from the sale of the animals, the villagers receive the valuable milk and manure in return for feeding and tending the animals.

A small number of gabayl males earn their livelihood as merchants, shopkeepers or drivers. Some of the akhdam males work as casual laborers, as weavers of wool mats or as gatherers of firewood which they transport to Bajil on their own camels or in shared taxis.

Particularly in the last decade, the temporary emigration of working-age males has been an important fact of economic and social life in Wadi Ayyān. At any given time, a large percentage of the males, both gabayl and akhdam, are working outside the area, mostly in Saudi Arabia. The remittances sent or brought back are a major means of support for most of those who remain in these several villages; most of the few modern luxuries found in the dwellings, such as radio-cassette

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players and painted tin chests, have been bought with money earned outside the area.

Although many of the younger men have worked outside the area, most of the older men and nearly all of the women have spent their entire lives within the narrow spatial confines defined by the three mountains that enclose and tower over the villages at the head of Wadi Ayyān. The outsider has the sense of being physically isolated, and this was and largely still is the condition of the permanent dwellers of the wadi.

Nevertheless, the women are often very mobile within these boundaries. Protected from the sun by tall sun hats, various local cosmetics and ankle-length overdresses, they wander long distances searching for firewood, grazing animals or simply doing agricultural tasks. They also visit friends and relatives in different villages, especially at times of birth, death or marriage.

The Tuesday sūq at Hamadha Jadīd is the major event of the week for all the akhdam and the older gabayl women. Best clothes are donned, long black and red pieces of cloth are tied around the head to cover the hair and, for some, sun hats decorated with colored plastic and beads are removed from storage and worn. This sūq is not a totally male-dominated institution. Women come from a neighboring subdistrict to sell baskets and henna leaves. Some gabayl women tend the family shops when necessary; others sell vegetables or Tihāma sweets. Although the akhdam women of Wadi Ayyān do not sell in the suq, they spend a large proportion of Tuesday morning there, sometimes begging, but usually using the sūq to meet friends and relatives, keep up with the news and peruse the goods and articles on display.

A few akhdam women who live near the sūq or along the main track to the sūq provide tea, broth (marag) and pancake-like bread (lohoh) to the many passers-by. Some of the young, unmarried akhdam women serve as travelling tradeswomen and specialize in the very

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fragile clay skillets on which the lohoh is cooked. Two or three times a week they walk halfway up Hūfash Mountain to the place where the skillets are made by local craftsmen. They buy two or three, carry them down on their heads to their village, store them safely overnight and then set off the next morning before dawn to resell them at a slight profit to the inhabitants of the nearby mountain towns.

The Tuesday sūq provides the local villagers with meat, fresh and smoked/salted fish, green onion tops, horseradish, fruit, biscuits and local sweets as well as the usual tins of tomato paste, beans and mackerel. All but a very few of the families own or otherwise have access to animals for milking. Soured milk (ra'ib) is consumed daily by most people.

The locally-grown sorghum and millet are ground by hand with water on a small pounding stone into the thick base of the lohoh batter. Sorghum, millet and the newly-imported wheat are also ground and prepared into thick, round loaves of bread.

Modern health facilities and services are nonexistent in the area of Wadi Ayyān. The closest government health worker is nearly three hours walking distance away in al-Mirwah, the administrative center of District Khabt, although more services are planned and a hospital is now being built in al-Mirwah. The only other government health facilities that are used to any extent at all by the people of Wadi Ayyān are in the quite distant town of Hajja.

In fact, the people of Wadi Ayyān, and especially the women, rarely make use of any of these health facilities. At the same time, disease and ill health are very common occurrences in the lives of the wadi dwellers. The gap is bridged by an extensive use of the abundant flora of the area for medicinal purposes,

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by recourse to "faith" healers and to protections against evil spirits and by an acceptance of disease and death as God's will.⁵

Nothing characterizes life in the wadi as much as its austerity, and this austerity is reflected in the complete and effective use of all products of the natural environment. A few of the many examples that could be given are the green wild plants that are cooked and eaten as "greens" with the staple dish of lohoh and ra'ib, the sweet-smelling plants collected locally and used as perfumes and the stray porcupine quills that are gathered up and used to make the central parting in a woman's hair.

2.3 Present Attitudes and Practices Related to Hygiene and Sanitation

The inhabitants of Wadi Ayyān have traditional attitudes and beliefs regarding personal hygiene and domestic hygiene/sanitation. Some more explicit than others, these attitudes and beliefs are reflected in current practices. These ideas and practices have as yet been barely affected by modern health ideas and practices or by modern products and "conveniences."

There are some proverbs known to all the dwellers of the wadi which potentially could assist the work of the health worker. Among them are "an-nadhafa min al-'iman" and "an-nadhafah min ad-deen," both of which are roughly equivalent to "cleanliness is next to Godliness." Nevertheless, the attitude of the villagers toward health and cleanliness is essentially passive, and these proverbs are no match in an encounter with the deeply-held belief of most villagers in divine will and fatalism.

⁵The most common protection is against witches (bedāt), and consists of a plastic bag filled with myrr, asafetida (hiltit) and caraway seeds and worn around the arm.

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A factor unique to Wadi Ayyān that works against the efforts of the health educator is the existence of a popular myth about al-Bāghari Spring. It is said that long ago the Prophet and his army arrived at the spot that was to become al-Bāghari Spring in the course of their effort to drive the unbelievers from Yemen. Almost dead from thirst, the Prophet struck the spot with his sword and the water rose to the surface and began to flow. He then exclaimed: "Mahmoul insha'allah." The significance of the tale lies in this remark. "Mahmoul" to the people of the wadi means "capable of carrying away its own dirt and keeping clean." Accordingly, the people believe that the water of al-Bāghari has the ability to cleanse itself, and that the water can never be dirty no matter how many donkeys, cows or goats stand in it, or how many people wash in it.

2.3.1 Personal Hygiene

The adults of Wadi Ayyān wash their whole bodies at least once every two weeks with water and a homemade powder produced from the dried leaves of the arj tree (zizyphus spine-criste). Washing powder, usually Tide, is sometimes used for the same purpose. The use of bars of soap is still rare.

Women of child-bearing age are obliged to wash their bodies more often than this in order to maintain health. More specifically, they are expected to wash after their menstrual period and after having sex. In addition, women of all ages rinse their hands and lower arms quite frequently in a bowl of standing water during a morning's cooking activities. Washing of the hands and arms is also a byproduct of the washing of clothes.

In accordance with custom in the Middle East, all adult members of a family rinse their hands in a bowl of clear water before eating together. Adults also wash after evacuating their bowels or bladder, and a small tin of water is usually available for this purpose. Finally, various parts of the body, including the private parts, are washed prior to daily prayers whenever this is possible.

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However, not all practices are positive in terms of hygiene and health. Although children are told to wash their hands when eating with the whole family, they are often not forced to do so if they object. Being "ignorant" (jāhal), they are not considered ready to act responsibly, and their human and social errors are overlooked. As children are eating nearly all the time, or should be, not to teach them such simple practices as washing hands before eating constitutes a serious threat to their health.

The women tend to bathe healthy babies and young children quite frequently. However, the cleanliness of young children suffers from the pervading belief of women that clean, healthy-looking children are prime targets for the "evil eye." Many believe that it is tempting fate too much to display such good fortune and to expose a child to the glance of jealous neighbors or strangers. This belief contributes to, and certainly provides some justification for the tendency to allow for the dirtiness of the faces, hands, arms and legs of young children.

More serious is the belief that babies and children should not be bathed during times of sickness and ill health. Particularly in the case of the very common disease called hasba - which usually but not always is measles - the traditional cure explicitly prescribes any washing of the ill child until the appearance of red spots on the skin, the accepted sign that the disease has "come out" and recovery is assured. Only then is the child given a good bath with henna and water, and decorated with ground turmeric (herud). Although more explicit and more widely accepted in the case of hasba, the prescription against bathing also applies to other illnesses in children.

The people of Wadi Ayyān do not wash cuts or wounds. Instead, they often treat them with a variety of local plants. Probably the most effective medically is the juice of a local cactus (anshār).⁶

⁶ According to David Warner, "cactus juice can be beneficially used to clean wounds when there is no water and may also help stop a wound from bleeding because the juice makes the blood vessels squeeze shut." David Warner, Where There is no Doctor. (Palo Alto, California: Hesperian Foundation, 1977).

The use of soap, especially bars of soap, has figured hardly at all in the foregoing discussion. The introduction of soap as an aid to hygiene has its own special problems in that a place has to be found for it among the countless "decorations" that already exist for the wadi women. Soap is inevitably classified this way by the women. To so classify soap should not come as a surprise when one considers that such traditional washing aids as arj leaves and henna are also used as decorations; it is also worth remembering how soap and related products are often promoted in the West more for their perfume, oils and rich suds than for their ability to remove dirt. Whereas we derive a certain "pride of appearance" and a sense of "feeling good" from using soap products, the women of the wadi place the same value on their many natural decorations. Most of the women do decorate their faces, hands, hair and bodies with a combination of natural products.⁷ These cosmetics also serve as a protection against the sun and the wind, and the use of them is not limited to formal occasions or to any special part of the day.

Consequently, it was very difficult to get women to see soap as something to do with cleanliness and not with beauty. They used to refer to me as "the woman who just decorates with soap," and were horrified that, through the use of all this soap, my hair had turned yellow. Many were, and remain, convinced that if only I would stop using soap and use a decent amount of their hair preparations, my hair would resume its "natural" blackness.

⁷In addition to the natural cosmetics used in the highlands - henna, kohl, tumeric and basil - the wadi women collect and make much use of perfumed plants, aromatic tree barks and soft stones which are ground and combined into various preparations. One of these cosmetics is hissān, a bright red powder which is prepared by grinding together a certain kind of stone, seashells, cinnamon and cloves; this powder is applied dry to the front portion of the hair. Another, teeb - literally, "goodness" or "perfume" - is a brown paste made from certain brown and white seeds, cinnamon, cloves and aromatic barks; it is patted on the top of the head to enhance hair growth and to prevent swooning in the sun. Other scented plants and aromatic barks are worn in the hair next to the face for their pleasant smells.

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2.3.2 Domestic Hygiene/Sanitation

The open-air design of the houses in Wadi Ayyān means that the floor of the living area is of dirt and often very dusty. The women recognize that this open-air living is a problem for personal and domestic cleanliness. "I wash my children," said one woman. "And after ten minutes of playing in the compound, they are dirtier than before. What am I supposed to do - keep them in bed all day?" The residents compensate somewhat for this feature of their houses by doing as little as possible directly on the floor of the living area. Meals are often taken while sitting on the high Tihāma beds; if they are taken on the ground, the food is placed in a large, shallow basket. Tea and coffee cups are placed on an upturned, empty ghee can and large pliable straw mats are placed on the ground prior to using the small pounding stone to prepare flour.

Some dwellings have shelves for storage, whereas in others stacked boxes of possessions are used to keep food off the floor. With the exception of unground grain, which is stored in tin trunks and ghee cans, foodstuffs are not usually kept in the house for more than a day or two. The lohoh batter is kept in a stone jar or in an aluminum pot covered with a basket. The prepared lohoh pancakes are stored between two slightly-curved straw baskets as are the loaves of bread. The soured milk is stored in the gourd in which it is prepared, and the gourd has a tight-fitting top to prevent flies and dirt from entering it. Most other foods, including local sweets, fruit, vegetables and fish, are bought on Tuesday at the sūq and kept between two baskets until they are consumed in the next day or two. Meat is consumed on the day of the sūq and is stored in the cooking pot.

Water for drinking is stored in round clay containers with narrow necks. Water intended for other purposes is kept in a variety of pans, large and small, and often without covers. Used rinse water and other dirty

water is dumped on the ground in the living area, and quickly evaporates in the sun. Very few of the water conservation techniques practiced by the women in the nearby mountains are evident in the wadi.

The presence of animals in the living compound contributes to the health dangers of the haphazard way of storing and using water. Thirsty chickens often perch on the rims of water pans, and goats and sheep will wander under the lean-to in the compound and begin to drink from the pans. A parched camel was even seen stretching his long neck down to a pan of water originally set aside for rinsing clothes.

Indeed, one is struck by the number of animals that share the open living space with the human inhabitants. The women spend a great deal of time feeding and caring for the animals in the compound, and the latter are a major source of interest if not enjoyment for the women. Although cows, sheep and goats have their own shaded enclosure, the young lambs and kids stay in and around the house when the adult animals go off to forage. Older sheep kept in for fattening also share this living space, as do chickens, cats and pigeons. Needless to say, these animals all relieve themselves on the ground in the living area.

Sanitation facilities are very rudimentary in the wadi villages. There are no toilets or latrines as such. However, many houses do have a special secluded place in the compound to defecate and urinate. These places are usually behind the house and variously consist of an area fenced off with dried branches, a wigwam structure made of sorghum stalks or a small round stone structure open to the sky. If no place such as this exists in the compound, then a special private spot is allotted for the same purpose near the compound. The women also relieve themselves in the animal enclosure and along the edge of the wadi on their way to and from the spring.

Given the high temperature and the abundance of sun, the human and animal excreta dries out very quickly. When dried out, it is collected and used as fertilizer. The excreta on the ground in the wadi villages is probably less of a health hazard than it is in the always-wet open street sewers of Mahweit Town and the other towns in the nearby mountains.

3. The Hygiene/Sanitation Campaign

Although preceded by considerable thought and planning, the hygiene/sanitation campaign took on a life and logic of its own in the field. The following subsections describe the form and general content of the campaign, the factors that shaped its evolution and the roles played by the key participants.

3.1 The Role of the Khabt LDA

The Khabt Local Development Association (LDA) played an important role, both practical and symbolic, in the successful launching of the campaign. The idea and justification for linking this effort at instruction to water-project activities had been presented to the leaders of the LDA several weeks before ASTC/Yemen moved into its base of operations in al-Mirwah, the administrative center of District Khabt. Although more interested in new water projects than in health instruction, these leaders responded positively to the proposed linkage of the two activities. They were well aware of the need for health instruction and they agreed that the occasion of construction activities at al-Bāghari Spring would provide a good opportunity to focus the attention of villagers on these matters.

As the "health expert" and woman on the ASTC/Yemen staff, I was accepted by the LDA leaders in my role as the person responsible for the planning and the execution of the campaign. It is worth noting that

these leaders understood and agreed that effective hygiene/sanitation instruction must be addressed to the village women and that this condition ~~made~~ ^{was} necessary the use of a woman instructor. On the basis of my presentation, they approved both the content of the campaign and the use of a tape cassette and visual materials as instructional tools.

Accordingly, the LDA leaders agreed both to assist and to endorse publicly the hygiene/sanitation campaign. More specifically, they agreed to announce the occasion of the campaign to the residents of the area, to select and identify the villages in which the campaign would take place, to arrange introductions to the village leaders and to help in the recruitment of local village assistants.

3.2 The Launching of the Campaign

The hygiene/sanitation campaign began on the same day that the ASTC/Yemen technical staff started construction at al-Bāghari Spring. The LDA arranged an informal meeting between me and the "responsible men" (mas'ūlīn) of the nearby villages for the purpose of giving me an opportunity to explain the need and goals of the campaign. Although they raised no objections, most of the village leaders felt that the campaign would be a waste of time because of the people's illiteracy and "the conditions in which people live." Amid peals of laughter, one very old man, a retired village headman (ma'amoun), admitted that he "didn't know what we were talking about." This kind and friendly man, who stopped and chatted with me often during the following weeks, never ceased to be perplexed throughout the entire campaign.

Despite this skepticism and lack of enthusiasm, the participation of the villagers in the campaign and its planning began at this first meeting. The list of the eight target villages was prepared and a tentative schedule was set for the first visits to four of the villages during this initial week.

As it turned out, the village of Hamadha Gadīm assumed a special status during the initial week and, indeed, throughout the rest of the campaign. Located beside the site of al-Bāghari Spring, it was the place where I alighted each morning from the Toyota driven by a member of the ASTC/Yemen water project team; it was also the place from which I departed each afternoon by the same means for the forty-five minute drive back to al-Mirwah. A good part of the first week was spent in this village meeting residents, getting informal introductions to their relatives and friends in the other villages, finding out where those villages are located and becoming accustomed to both the dialect and the much slower pace of life in Wadi Ayyān. The extra hours in Hamadha Gadīm during this initial week proved to have been well spent. By the time I made my first visits to the other villages in this and the following week, the residents had heard by word of mouth of me and my strange mission. Indeed, word-of-mouth communication about me and my work, some of it humorous, was to play a beneficial role throughout the campaign.

Travel along the wadi from Hamadha Gadīm to the villages was usually by foot and sometimes by donkey. I would travel to the village that I was visiting on a particular day with women from that village. The women were met at al-Bāghari Spring while they were collecting their first donkey-loads of water in jerrycans. Usually shortly after the noon call to prayer, I would travel back to the spring with the women on their way for the day's second donkey-loads of water.

The first visit to each village was crucial to gaining its real consent for the instructional activities. Until I actually made my appearance in the village and started my "act," neither the elders nor the younger men of the village had a clear idea of what I was going to do. For this reason, I made a point of playing the tape cassette, passing around the visual materials and explaining my mission soon after I arrived and while the men were still gathered around.

As important as this presentation was, my presence and work seems to have been initially most easily understood and accepted as simply being sponsored by the LDA and "under the order and protection of the government." Since most of the men were off working in Saudi Arabia, it was not difficult to reach all of the interested males during the first visit to a village. Indeed, I spent a lot of time during my first visit to one village simply trying to locate a "responsible man" (mas'ūl) in order to follow my adopted entry protocol.

Visiting from house to house was usually unnecessary on the first trip to a village. Word spread quickly, and the simple fact of a newcomer in the village was enough to draw the curious to whichever house was my starting point. This initial gathering often turned into a presentation of the materials and a group discussion.

3.3 The Local Assistants

In most cases, it quickly became apparent which woman was going to be my "local assistant" in each of the eight villages. If the headman had an energetic wife, she was chosen; if his wife was ill or otherwise unavailable, then the woman who showed the most interest in me and my work and had the time to pursue that interest, became my assistant. In fact, I had little to do with the choosing of most of the assistants. They chose themselves or just emerged - with, I presume, the implicit agreement of the other villagers who counted. This ad hoc process of selection usually resulted in the choice of a good assistant. In one case, however, an old blind man who had nothing else to do was suggested. Fortunately, I was able to convince the villager who made the suggestion that the use of visual materials in the campaign made his choice most inappropriate.

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As anticipated, the local assistants proved to be crucial to the conduct of the campaign. Since each of them spent a very considerable amount of time with me, they learned and came to understand my hygiene/sanitation messages and my supporting arguments and examples more thoroughly than did the other women. Some of them became quite interested in the subject, and all of them learned to rephrase for the other women some of the things that I had to say in better local dialect than I could muster.

The local assistants also made helpful introductions, guided me around the village and saw me off at the end of the morning. It was important for me always to go straight to the local assistant's house upon arrival in the village in order to have us identified together in the minds of the other villagers. We would often spend as much as an hour together discussing the materials and deciding which houses to visit during the rest of the morning. If any women came to the local assistant's house, and they often did, we would begin our work there.

All but one of the local assistants willingly came to consider that guiding me around the village was part of their responsibilities and they seemed to enjoy these "house calls." Although some of them expressed reservations about using the visual materials, all of the local assistants were pleased and comfortable with using the tape cassette. By the third or fourth visit to a village, the local assistant was in charge of the tape cassette and discussion, and I "assisted" her. On the last visit to a village, I gave the assistant a copy of the tape cassette both to play for people who had been out of the village during the campaign and to remind herself of what the eight weeks had been about. As a result, the local assistants became a potential means of some continuation and reinforcement in the hygiene/sanitation instruction.

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3.4 The Form and Tempo of the Campaign

As should now be apparent, the daily form and tempo of the hygiene/sanitation campaign was largely determined by the daily routines of both the ASTC/Yemen water project and the wadi women at whom the campaign was directed. Fortunately, the two determinants fit together quite nicely. The campaign was a long morning affair. It began early each day with my arrival at al-Bāghari and with the collection of water and its transport by the women to the village; it ended in the early afternoon with the call to prayer and the trip back to al-Bāghari with the women for another load of water. The four to five hours of intermittent hygiene/sanitation instruction each day was just about all that I - and, I suspect, the women of the wadi - could handle.

Since it was my arrival and departure point, the village of Hamadha Gadīm was visited daily. The seven other villages near al-Bāghari Spring were visited in more-or-less regular rotation. Each village was visited approximately six times over the eight weeks of the campaign.

The campaign focused on a small number of relatively simple hygiene/sanitation principles and practices. Although some new content was introduced over the course of the several visits, the main emphasis was on the reiteration and elaboration of the messages presented early in the campaign. From the outset, the campaign was conceived to be cumulative more in terms of the learning and understanding of these messages than in terms of an increasing volume of information.

The function and use of the tape cassette and the visual materials evolved over the series of visits. During the earlier visits to a village, these instructional

tools were used primarily to capture the attention and interest of the villagers and to introduce the campaign. During the later visits, they served increasingly as reminders and reference points for longer, more open-ended discussions.

The water project activities at al-Baghari Spring did help to direct the attention of the villagers toward the hygiene/sanitation campaign. Most certainly, these activities provided a convincing excuse and a reason for the campaign.

In the end, however, the hygiene/sanitation campaign was not as functionally linked to the water project activities as was originally intended. Although the two activities did proceed simultaneously, the latter did not provide much in the way of dramatic focus for the former. In part, the potential drama and excitement were dissipated because the tempo of work on the project was slowed by unavoidable delays in the procurement of some materials and by the failure of local workers to appear for work. Perhaps more important in limiting the impact of the water project on the campaign was the use pattern of al-Baghari Spring. Since the spring was used by all the nearby villages - and other, more remote villages as well - the inhabitants of no one village thought of it and the unfolding project as "theirs." Had the spring "belonged" to one village, then a stronger proprietary sense might have more closely linked the project and the campaign to the advantage of the latter activity.

Each of the villages had its own characteristics, and the campaign in each village unfolded in its own way and at its own momentum. Although the details in the following description are not identical for all of the villages, the sequence of events described do generally represent the manner in which the campaign was carried out.

The village of al-Ma'sal is located in Wadi Ayyān approximately one kilometer from al-Bāghari Spring. On my first visit, I rode unaccompanied on a donkey who knew his way to al-Ma'sal. I met by chance the village headman in the wadi, and he then escorted me the rest of the way to the village and to his house. His wife and daughters welcomed me with tea and asked me many of the usual questions about myself, my family and my country. When they had satisfied their curiosity about these personal matters, they asked about the large colored pictures that I was carrying.

This question allowed me to begin my initial presentation to the headman and his family. When I explained at one point the need to have someone in the village help me in my work, he suggested his wife - a suggestion to which she readily agreed. Within forty-five minutes, and after she and I carefully reviewed the pictures together, she had placed a small Tihāma bed in front of the hut, piled up some large stones on which she and I were to sit and arranged the several pictures face up on the bed. She then called all the women of the village to "come and have a look;" when they did, she proceeded to quiz them all about the content and meaning of the pictures. We continued in this manner with a short break for tea until noon. The long session had its hilarious moments as well as its serious ones; it drew a large number of villagers, men as well as women, although on this particular occasion the few men remained in the background and merely observed. Many of the women stayed for the entire morning, pleased to have a chance to show any newcomers that they understood the pictures. The short tea break gave us a chance to have a serious discussion about how, in spite of all the environmental constraints, the people in the village could improve personal and domestic hygiene. This discussion was attended by the village headman and he played a prominent role in it.

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The second visit followed more or less the same routine as the first. My assistant and I met at her house with most of the same women as well as a few newcomers. I had hoped that the group which had previously been exposed to the pictures might, on this second exposure, go beyond interest in the color, line and form of the pictures and begin to derive some meaning from them. This did not occur to any considerable degree. However, many of the women did remember, almost in spite of the pictures, some of the concepts and messages discussed during the previous week's tea break.

On the third visit to al-Ma'sal, I introduced the tape cassette and the morning proceeded as on the two previous visits with the informal discussions and some questioning and answering. The third visit was the last one spent entirely in or outside the home of the local assistant. I tried on this occasion to persuade her to visit some other houses in the village with me; she was not receptive to this idea and clearly preferred having the meetings on her own ground. Concerned that I was making contact with only a small percentage of the population, I began making house calls on my own during the fourth visit. These calls were abbreviated versions of, but similar to, the sessions in the home of the assistant. As it turned out, the visits to the other houses indicated that most of the villagers had been to one or more of the previous sessions at the assistant's home.

The last two visits to al-Ma'sal followed closely the pattern of the fourth visit. I continued to start each morning with a meeting and discussion with my local assistant. Although she did not want to accompany me formally on my calls on other homes, she inevitably would come looking for me half way through the morning, take a cup of tea in the house in which I happened to be and inquire as to how I was getting on. Because the local assistant preferred to

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do her teaching in her own house, I informed the other villagers that I was going to leave the tape cassette with the assistant at the end of the campaign and that she would be glad to play it for anyone who dropped by her house.

4. The Hygiene/Sanitation Materials and Their Evaluation

As previously indicated, the hygiene/sanitation campaign made extensive use of a tape cassette and various visual materials. The visual materials consisted of a set of drawn pictures and two sets of photographs.

4.1 The Materials Described

The tape cassette and the visual materials are described in the following subsections.

4.1.1 The Tape Cassette

The tape cassette was prepared in Sana'a after initial planning for the water project at al-Bāghari had been completed. Consequently, it was possible to include specific references to al-Bāghari and to certain particulars of the place and the project.

The tape is divided into three sections, the first lasting one and one-half minutes, the second three minutes, and the third two minutes. Between each spoken section there is a short interlude of Yemeni music. The total length of the tape is seven minutes. The first section consists of a dialogue between a man and a woman concerning the health implications of the water project at al-Bāghari. The second section features a different couple talking about improvements in personal and domestic hygiene that could help people's health in conjunction with the improvements expected from the project. They talk about washing hands after having a bowel movement, washing hands before cooking and eating, washing the whole body to prevent skin problems and the beneficial use of water for sick

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children. This second section does not strictly follow my original script, and the Yemeni couple introduced and made good use of humorous passages and examples to illustrate the messages in a very natural way.

The third section summarizes these points into a coherent list. The voice represents, in a way, a person of authority beseeching his fellow countrymen and countrywomen to follow these rules for the sake of their children and for the future of Yemen. It is delivered in a rather traditional way of speech-making, one common among the tribal people.

The translated text of the tape is as follows:

Part 1

Tagiyya: What is the LDA doing at al-Bāghari Spring?

Mhed: They're building a tank to store the water people drink. Didn't you know that the water at al-Bāghari was dirty and people were drinking the same water the donkeys and other animals walked in and sometimes urinated in. And sometimes the people used to wash in the water - even with soap.

Tagiyya: OK - after they've built the tank where will the donkeys and other animals drink and where will the people wash?

Mhed: They'll make a pool for the animals to drink from and a small tank to store the water for washing in, next to the mosque.

Tagiyya: After the drinking water's stored in the big tank, will it be cleaner?

Mhed: Yes, because no one can dirty it then. And because the water is stored in the tank, the dirt in the water will fall to the bottom of the tank.

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Tagiyya: Maybe if the water's cleaner we won't get ill all the time like we do now?

Mhed: That's right - but there are other things to help that you could do at home - so that the water is clean and so that your house is clean and healthy.

Tagiyya: Like what?

-Music-

Part 2

Woman A: Yesterday Tagiyya and Mhed were talking about hygiene and the prevention of disease by keeping the house clean. How people ought to wash their hands when they come away from the toilet with soap and water. And how a woman ought to wash her hands before cooking and eating - this sort of prevention is essential for her own, her children's and her husband's health.

Man: You know, there's no bigger priority than water in a person's life. First of all, general body hygiene is very important. Why? Because if we don't wash our bodies every day, or every other day at least - or even every week for people who live in cold areas - we fall ill with many illnesses. It's all got to do with hygiene.

The other thing, when some people sit down to eat they don't think washing their hands is important before eating - or after eating. And others, if they've washed their hands before eating, they don't wash them when they've finished

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eating. They say, "There, I've eaten - what have I got to wash my hands again for?" And they wipe their hands on the piece of cloth wrapped round their head - like country people do - yet washing is very important.

There's no bigger need than water. Nobody can live without it, big or small - especially children. It is our duty to wash our children. But not with polluted water - let's try and wash them with clean water - not from any old water just because it's water. It has to be clean water - and everybody's got water.

Woman A: And there are some people, you know, when a child gets ill from fever, measles or anything really, who say: "Right, we musn't give that child water anymore." They don't wash the child. He has to stay under a blanket and they won't open the window to let any fresh air in. And if someone comes to see that child, they go into the room and the milk is all over the front of him and the days of dirt have dried over him - and this only makes the illness worse. The point is when he gets better, if he gets better, he won't be "right" for another year.

Woman B: Why? Is it necessary to wash children when they're ill like that?

Woman A: Of course it is! Also that the mother opens the window to let the fresh air in, that she washes the child and combs his hair, that she give him a bit of sunlight and she gives him water to drink - don't leave the kids thirsty!

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Woman B: Insha'Allah the water in al-Bāghari will be clean and healthy - and the people will listen and understand all the things we've been saying about hygiene. They will be attentive and careful about hygiene. They will understand this demonstration and they'll try and do the things on it. Water is available and now the people understand all about hygiene.

-Music-

Part 3

Man: My brother countryman, my sister countrywomen, being careful about hygiene is for our children's sakes. Hygiene is the best prevention against disease in order to keep us all healthy.

1. Wash your hands with soap and water after urinating or defecating. And, for the women, wash your hands before cooking, as well as before eating. And it's our duty to teach children to wash their hands before eating and after eating - and we must be sure and see that they are doing this, as we are.

2. Wash your body with soap and water, often. This rule is for all of us, big and small alike. Because washing with soap and water prevents a lot of skin infections and internal diseases.

3. And we ought to think about sick children and adults - who always need clean water to drink, especially if they have a fever or diarrhea. And sometimes perhaps we could give them weak coffee or weak tea to help them get better.

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Now, brothers and sisters, look at the pictures that go with this tape. They are for health education and are about the same things we've talked to you about on the tape. And we all really ought to listen to what has been said because it will help our children's health and it will help sick people too.

4.1.2 The Drawn Pictures

The set of six 12 X 18 inch (30 X 45 centimetre) colored drawings was done by an artist in the Department of Health Education especially for us from slides taken a few years ago by the West German aid organization (GTZ). Each of the drawings portrays a beneficial use of water. Although the women using the water are attired in a distinctly Yemeni style, most of them are not attired in a manner at all common among the women of Wadi Ayyān. The drawings portray the following:

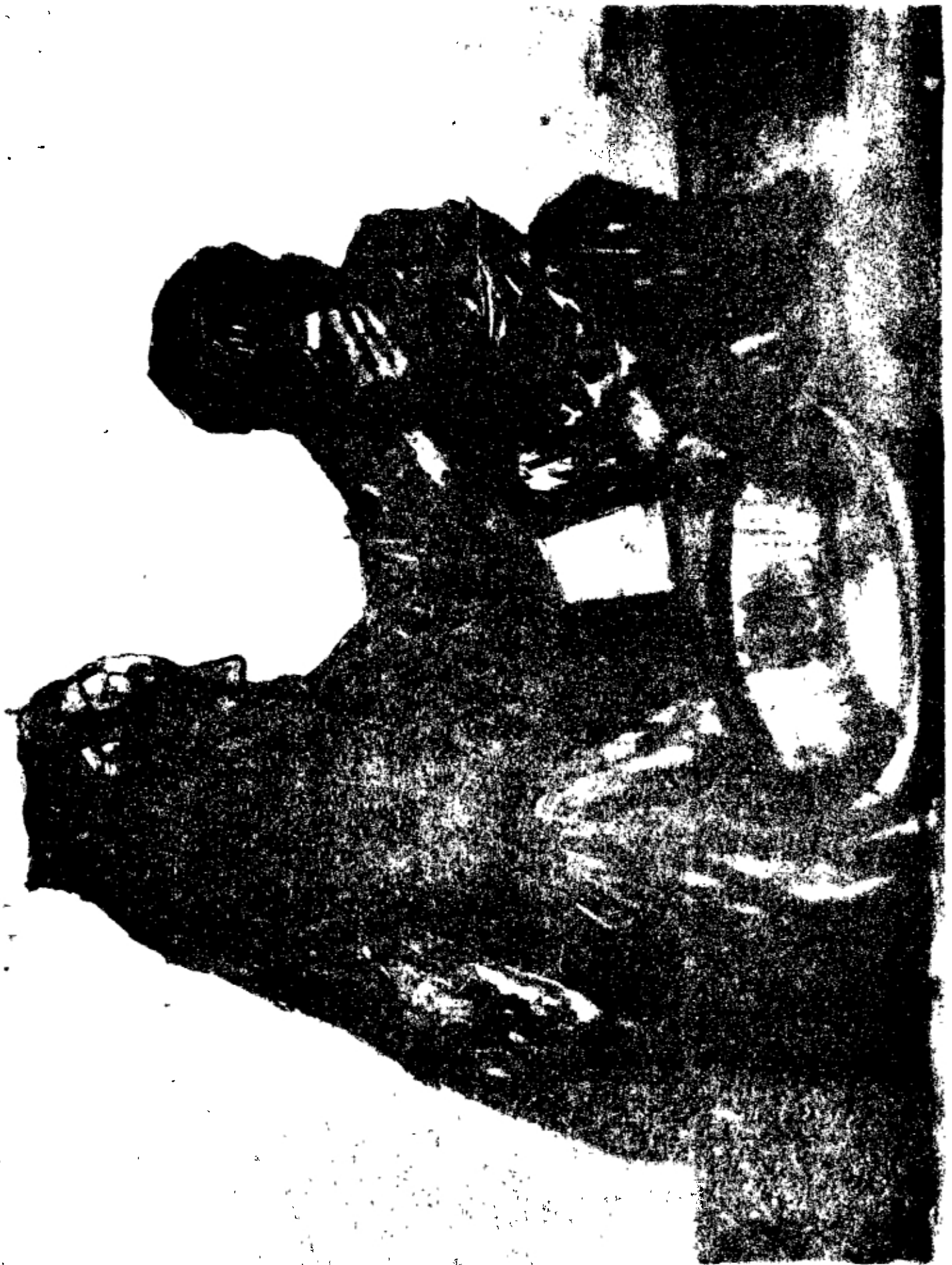
1. A woman washing the hands and face of a young boy.
2. A woman pouring boiled water into a thermos.
3. A woman giving water to a small baby from a glass.
4. A woman washing tomatoes and washing and scraping horseradishes.
5. A woman washing plates and dishes after eating.
6. A woman washing a baby in the common tin tray.

Unfortunately, only five of the six colored drawings are still in our possession. Reduced black and white photographs of these five drawings appear on the following pages.

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4.1.3 The Photographs

Two sets of 9 X 12 inch (23 X 30 centimetre) black and white photographs were prepared for use in the campaign. The first set of three photographs was taken at al-Bāghari Spring prior to the beginning of work on the project. These pictures portray the following health hazards at the unenclosed spring:

1. A man standing in the pool from which he is collecting water.
2. A donkey standing in the water at the spring.
3. A camel standing next to the spring flow.

The second set of five photographs portrays some aspects of domestic hygiene. They were taken deliberately so as to show no face and as little as possible of the human body; instead, they concentrate entirely on the task being performed and the hands performing it. They portray:

1. The washing of vegetables before cooking or eating.
2. A kettle boiling water.
3. Clean hands beating fenugreek broth (hilba).
4. Washing and rinsing clothes.
5. Washing and rinsing kitchen utensils.

Reduced reproductions of the two sets of photographs appear on the following pages.

4.2 The Evaluation of the Hygiene/Sanitation Materials

The various hygiene/sanitation materials differed in terms of both their acceptance by the villagers of Wadi Ayyān and their effectiveness as means for transmitting and



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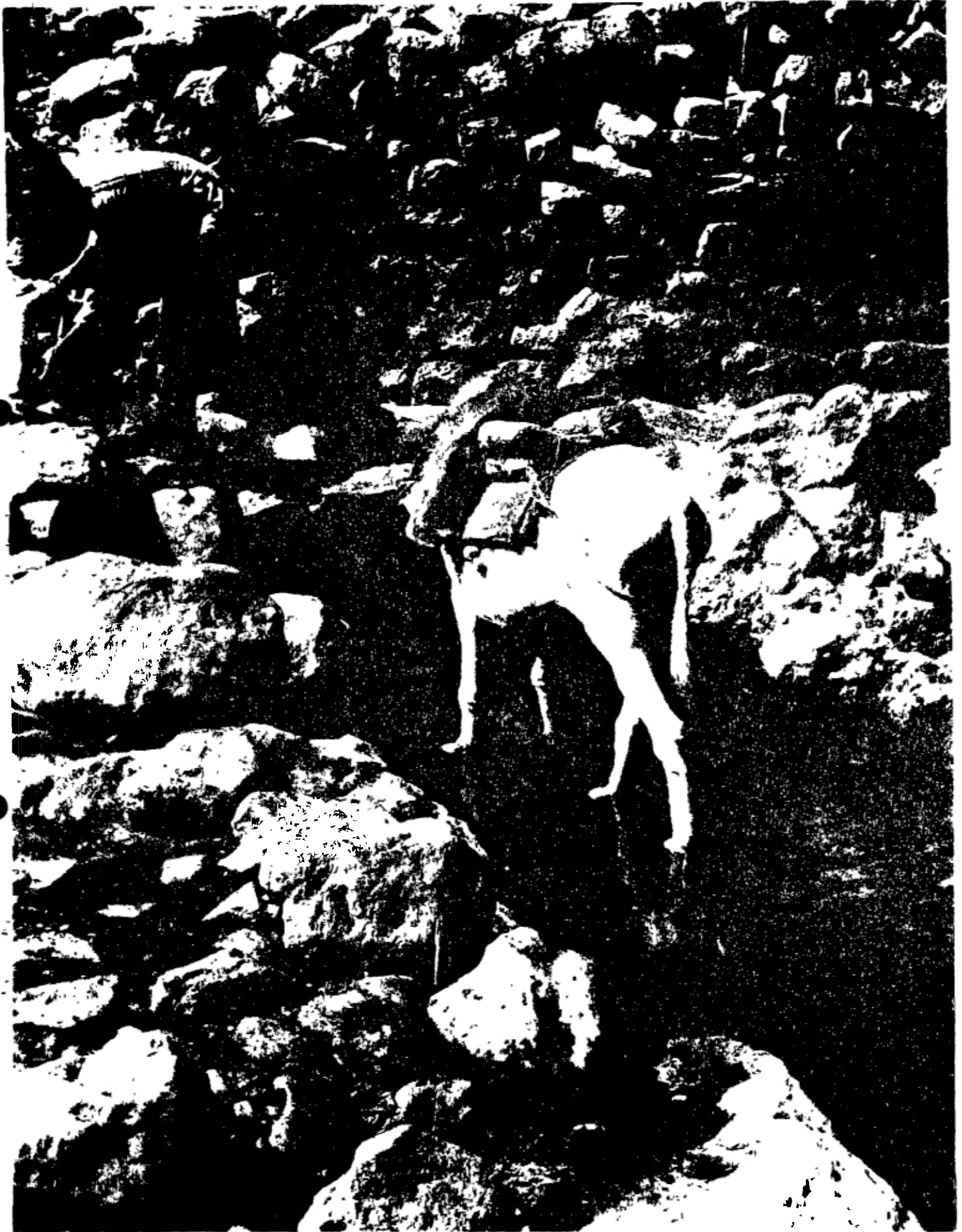


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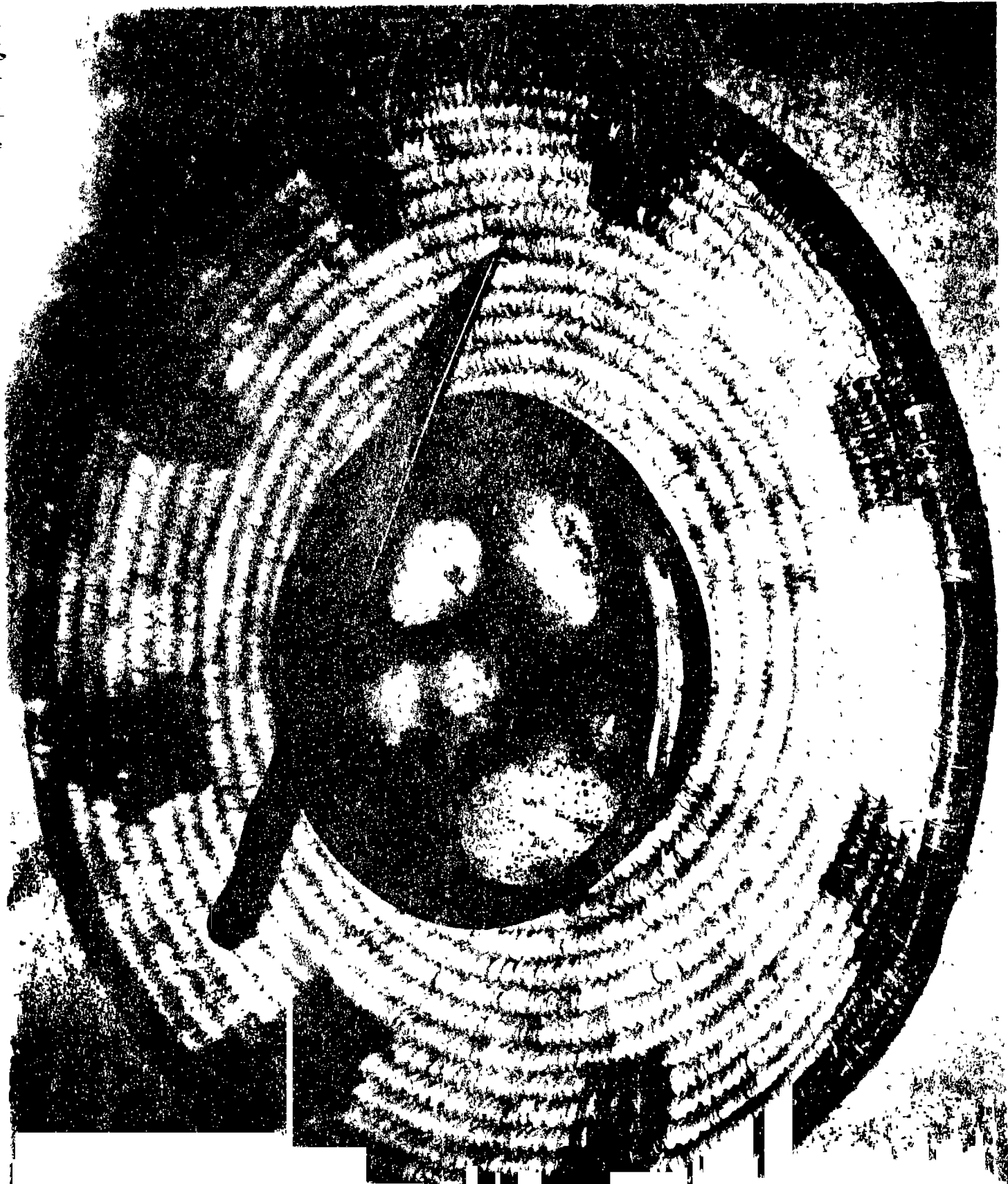
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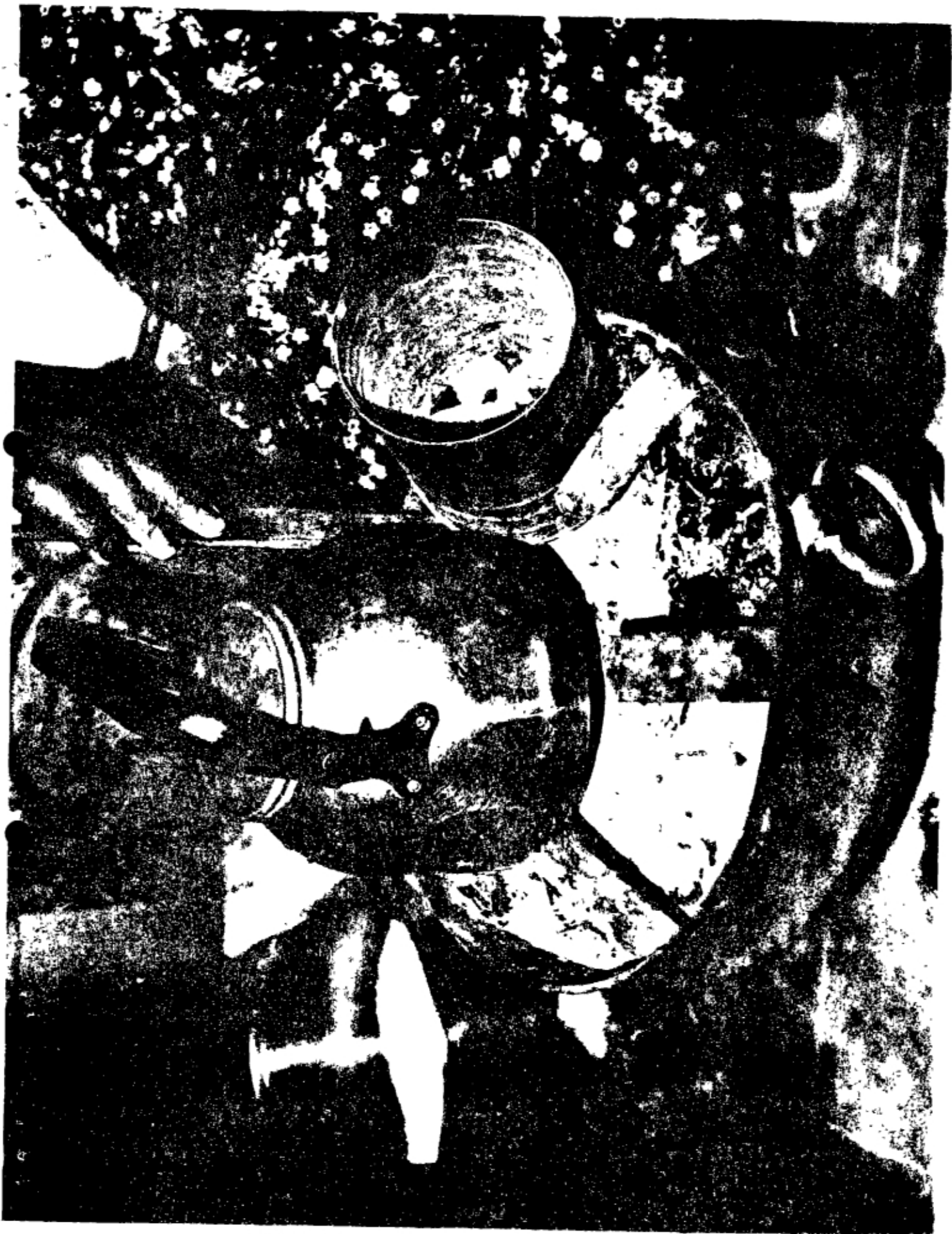
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learning principles and practices of hygiene and sanitation. Certain of the materials had clear advantages; each had one or more disadvantages. The following subsections evaluate the materials in these terms.

4.2.1 The Tape Cassette

The tape cassette was the instructional tool that was most readily accepted and most effective. Once the responsible men in a village had listened to the tape, they had no qualms about allowing me to use it on house-to-house calls. As mentioned earlier, all of the local assistants accepted and were comfortable with using the tape. None of the other women in the villages objected to the tape as a medium of communications.

The tape cassette was more effective than the other materials in keeping people's attention, conveying information and providing easily-remembered reference points for subsequent discussions. Undoubtedly, the more times people heard the tape, the more they understood, not just the words, but the message content as well. This was particularly true of the local assistants who, by the end of the campaign, were beginning to think seriously about what the tape said, and why. On the other hand, due to the shortness of the tape, there was something of a problem of boredom with the other village women by the end of the campaign.

Generally, the recording was loud and clear enough to get and to keep the attention of the listeners. At one point where a softly-spoken woman says her lines, people began to chatter among themselves and sometimes did not realize that anyone was speaking until I pointed it out to them. Except for this woman, all of the speakers on the recording had strong, clear voices and were able to command attention.

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The dialect spoken on the tape was unmistakably that of urban Sana'a but with the clear, slow delivery of most of the speakers it was well understood. The fact that the dialect was not their own did not seem to distract or disturb the people of the wadi.

Different sections of the recording captured the attention of different groups of listeners. It perhaps should not be surprising that women listeners were more attentive to women speakers and that men were more attentive to men. The men, particularly the younger ones, were especially attentive to what sounded like "the voice of the government (sawt al-hukuma)" at the end of the tape. By contrast, the women almost entirely disregarded this portion unless there were men listening with them, in which case they would sit quietly and nod their heads.

The middle section of the tape was the most successful in holding attention and as a reference point for subsequent discussions. When asked what they recalled from the tape, the people almost invariably repeated phrases and ideas from this section. In particular, they referred to the humorous passages and to one specific point where the woman speaker drew attention to the practice of not washing sick children in order to hasten their recovery. She described what one experiences when one goes into the sick child's room and sees "the accumulation of days of dried milk and dirt on him." The passage was effective because it was honest and delivered in a matter-of-fact way. Through the tone in her voice, the speaker made it obvious that she believed such practices do not help. At this point, the women listeners would sometimes laugh embarrassedly or nod their heads with a smile and concede "She's right."

The other passages to which the attention of most listeners was drawn were the two sentences in which the name of al-Baghari Spring was mentioned. As with the humorous passages and the passage on washing sick children, people who had heard the tape before would point out these sections for the new listeners and try to get people to be quiet.

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The fact that the references to al-Bāghari were among the few things that most of the listeners remembered points to one of the limitations on the use of recordings and other instructional tools with people who have had little or no previous formal instruction in anything. Even when a recording succeeds in capturing the attention of people, listening is not the same thing as getting the message. The people of Wadi Ayyān are now quite accustomed to cassette recorders and cassettes; they are not accustomed, as people educated in the West are, to the use of these things as teaching tools and they do not approach or relate to them as such.

Moreover, tapes are not often actually listened to for very long periods of time by Yemenis. They are generally played as pleasant background noise and in no way impede conversation. Thus, the hygiene/sanitation tape suffered, to some extent, by this lack of concentration on the listeners' part. Although it was not very long and had two breaks of music between the sections to allow people to talk and discuss what they had heard, points were often missed because people would begin to talk among themselves, often on unrelated subjects.

4.2.2 The Drawn Pictures

Next in effectiveness after the tape cassette was the set of six colored pictures done by the artist of the Department of Health Education. These drawings were probably more effective than any of the other materials for initially capturing the attention of villagers. They proved very effective as a means of introducing a subject, of taking it out of the realm of casual conversation and of attaching some importance to it. As will become apparent in the discussion of the photographs, the drawn pictures had the advantage of there having been no camera or "live subjects" directly involved.

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The most popular and most easily understood pictures were those of older women who, being older, were depicted only half veiled - that is, with their facial features visible. These pictures portrayed older women washing a young boy's face and hands and washing and scraping vegetables. Although the picture of the young totally-veiled woman boiling water depicted the woman dressed in a decidedly urban Yemeni style and using an unfamiliar primus stove, the wadi women found this picture fascinating once it was deciphered and explained to them. They were very interested in the concept of boiling water, especially in terms of the care of sick children, and they were keen to discuss the idea further.

The drawn pictures did have some serious drawbacks. Even the use of the drawings was sometimes met with the half-joking, half-serious comment by some of the men that all visual representation is forbidden (harām) in Islam. Village women sometimes picked up on these comments, and the local assistants generally became reluctant to use the pictures. In those villages where this issue was raised, the use of all the visual materials was suspended in favor of exclusive reliance upon the tape cassette.

Because the pictures depicted women from urban Sana'a performing the various actions, many of the wadi women clearly felt that the pictures, although quite interesting, had no real relevance to their own lives. At one point, a woman articulated this popular undercurrent of thought: "Isn't it wonderful how many customs there are in the world and how many different ways people do things."

The women of rural Yemen have had little or no experience at "reading" and interpreting pictures. Although they were obviously proud of themselves when they did figure out what the lines, shapes and colors represented, the wadi women spent a very long time deciphering each of the pictures. Where is the woman in the picture? Her (veiled) face? The vegetables and the plate?



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on the hands and the action in the one set of photographs proved to have been a good idea. The wadi women found it fairly easy to understand how another woman could consent to having just her hands photographed. However, the unavoidable backgrounds to the central activities in these photographs proved to be very distracting, and they made it obvious that the context was an urban one.

It was quickly apparent that the effectiveness of both the drawings and the photographs depended more heavily upon the instructor than in the case of the tape cassette. A single picture does not tell the story - or deliver the message - and each picture required careful oral explanation and elaboration. More specifically, a picture does not "tell" the viewer why, how or how often a particular practice should be followed. For example, the picture of a woman washing a baby did not by itself communicate when and how often a baby should be washed. As a consequence, the women tended to distort, discount and even disregard the pictures and their implicit and explicit messages. "Washing babies? Washing vegetables? Washing hands? Of course we do these things," they would say. "But in our own way, of course."

5. Conclusions and Recommendations

The eight-week hygiene/sanitation campaign suggests tentative answers to some questions and offers rough guidelines for similar efforts in the future. The following subsections briefly outline some of the lessons learned.

5.1 The Linking of Health and Water Project Activities

The idea of linking a hygiene/sanitation campaign to water project activities was, and remains, a good one. However, it is not an easy linkage to make. If the potential drama of water project activities is to be used to focus attention on hygiene/sanitation concerns, then a conscious, persistent effort at coordination is required.

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In the end, however, the linkage will usually be imperfect and prone to discontinuities. The construction of a new or improved water system has its own tempo and schedule - and its own problems and delays. As will be apparent in the next subsection, the same can be said of hygiene/sanitation campaigns.

In addition, the experiment at al-Bāghari Spring suggests that certain kinds of water projects can be more effectively harnessed to hygiene/sanitation campaigns than others. Water project activities at a water source that is widely used and regarded as "public" may not be as easily used for this purpose as one that is seen as "belonging" to a single village or a clearly-defined cluster of villages.

5.2 The Form and Tempo of the Campaign

The way the campaign and materials were initially presented was important to the acceptance of them by the villagers. As previously indicated, my work and very presence were at the outset accepted and understood by the villagers as being official and under the authority of the government and the LDA. This official sanction is needed, and I would advise other health educators always to carry and to produce at the outset a paper (warāqa) from the relevant ministry or government agency. As important, the materials and the messages they carry gain in status and credibility with this stamp of authority.

Local assistants should be sought and utilized whenever possible. I believe they make a vital contribution to communicating the messages and are also a great source of support, especially in times of flagging enthusiasm. It would have been practically impossible for one outsider, without the support and help of a local assistant in each village, to conduct the campaign at all.

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Moreover, it seems to make little sense to carry out a short campaign, and then to leave behind no potential source of continuation and reinforcement. The local assistants with their copies of the tape cassette and their greater exposure to me and my messages are this potential source.

Cleanliness (nadhafa) plays only a small part in a woman's concerns about her day. People can only concentrate on it for so long before something of greater interest or importance comes up. It proved to be unproductive to continue with the presentation of materials or with discussions when this point was reached in a session. In short, it is necessary to be patient and flexible. It should be remembered that all "foreigners," including Yemenis from outside the area, are guests in the village before they are health educators. Time must be set aside for the inevitable barrage of predictable questions and the polite replies. Trying desperately and impatiently to keep to an efficient schedule will only lead to frustration and may be interpreted as bad manners or worse. The health educator must try to maintain enthusiasm for the work while realizing his or her status as a guest - and behaving accordingly.

With all the hygiene/sanitation materials, the ideal number of listeners was about five. Any more than this and the chance of a new, more interesting topic being introduced increased considerably, as did the potential for multiple, unrelated conversations. Moreover, in a group one finds the widespread belief in fatalism and Divine Will more readily articulated. Such expression finds social approval as a mark of piety and respect for God. After a remark such as "When Allah is ready to take my children, he will take them, and their being clean or dirty doesn't make the slightest difference," there is little that the health educator can or should say. Anything that he or she has been saying about hygiene practices rapidly pales into insignificance in such a context.

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However, without peer pressure, individuals are more keen to examine their own personal responsibility. For this reason, small group sessions and individual, house-to-house visits have definite advantages.

5.3 The Use of Audio and Visual Materials

Tape cassettes have a considerable potential as a medium for communicating health messages to illiterate villagers. They are a flexible as well as an efficient medium. They can be turned on and off at will, and they are less obtrusive than other media.

Tapes should be as interesting as possible in order to engage and hold people's attention - that is, they should be entertaining as well as informative. At the same time, however, the message should not be lost in the humor, music or familiar references.

The number of messages should be small and the temptation to cram onto a tape everything that needs to be said should be resisted. A series of sequential tapes would allow people to be exposed to variations and elaborations of the same basic messages without their becoming bored with the presentation.

The same speakers should be used throughout the tape series and preferably should be given locally-appropriate names. Using local speakers might be even more effective, although there might be resistance to this device. If the messages require action by women at the domestic level, then the most effective speaker would be a woman; if the message is aimed at the men in the village and requires "community" action, then a male speaker should be used.

The speakers should be placed in a series of dramatized, culturally-relevant situations which afford them an opportunity to discuss hygiene and sanitation issues. Indeed, a special advantage of using tapes is that,

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with adequate study beforehand, one should be able to represent the local situation - the practices, beliefs and problems - realistically. This is something that may not be possible with visuals.

Tapes are also an effective way of making sure the information being disseminated is accurate when and if the tape is passed on for use by a middle-level technician or local assistant. Pictures are far too open to misinterpretation.

House-to-house village work is not the only way to expose the population to recorded hygiene and sanitation messages. The water collection point, tea shops and eating houses on sūq day, schools and even private social gatherings are all places where the health educator may base his or her cassette system.

As indicated above, a problem with all of the visual materials was their openness to misinterpretation. For this reason, the person using them must be trained to use and interpret them. While I felt quite at ease at leaving the tape cassette with the local assistant, I would not have done the same with visuals even if they had proved culturally acceptable and I had had multiple copies.

Another problem with all of the visuals was that, while the urban or highland pictures suffered because of their lack of apparent relevance to the local situation, local pictures were even less well received due to suspicion and deep feelings of the wrongness of oneself being "represented."

From the reactions of the villagers, I would recommend that the pictures be drawn and of an as-neutral-as-possible old Yemeni woman. She need not, then, be veiled. Her other clothes will be quite acceptable in most places as "older women's clothes" since

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older women's dress does not change significantly with either fashion or place of residence. The context and her actions should be made rural without being too specific. She should also be "named" suitably for each area - for example, Al-Hajja Mariam.

Finally, one should not rely on the pictures to communicate the message. Their role is to interest people enough to give the health educator a positive start in his or her oral messages. It is a mistake to rely heavily on visual aids for communicating with illiterate audiences. Oral health education is far more effective than visual presentations in communities where history and news are still passed on primarily by word of mouth.

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