Le Rutzil Wachaj rech le Nawal Ja' - The Well-Being of the Water Spirit
Community-Based Water Organizations and the Discourse of Well-Being

By

Caleb Hayes

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Approved:

Edward Fischer, Ph.D.

Nicolette Kostiw, Ph.D.

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CHAPTER 1

ETIC AND EMIC DISCOURSES FOR NAWAL JA'

Introduction

What initially motivated this work was a desire to recognize relationships spatially

between the people of Nawal Ja'[1] and water (in the sense of supply and sanitation categories and

spatial attributes, like form or location), and, how those relationships could correlate with or

cause different levels of health. The value of such a project would be great for an international

perspective on public health in the area; yet, the insistence of doing such a project gave way to

another question that could lay the groundwork for the above to be better founded as a project

itself. The question, "How do people in water committees or water work in the city talk about

water and health?" will be shown here to be the first and most necessary one to answer in

informing what I term the epidemiological or hydrological discourses related to Nawal Ja' as a

site for "etic"[2], or culturally "outside", perspectives to unfold in the future. This thesis argues that

the discourse of well-being and health arising out of discussing the water and water work carried

out by various forms of project organization in Nawal Ja' is evasive of etic epidemiology or

hydrology, yet neither is this novel discourse wholly constrained by typical "emic" logics as they

relate to the city's own people, history, or myths.

There were two simultaneous lines of thought in the planning of this project: first,

that a "subset" of variables related to the people, water, and their health could be captured in a

spatial sciences project using a geographic information system (GIS) software to describe what

health (and the larger category, "well-being") meant in the area, and second, that positioning as a

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1 *Nahualá* in Spanish, but the K'iche' Maya term for the town is used henceforth: (pronunciation) *[Na-wAhl-hA]*
2 "Etic" is a term from Kenneth Pike's linguistic theory about describing typical "objective" or "outsider" accounts
of phenomena; meanwhile, "emic" is suited for describing typical "subjective" or "insider" accounts.(Headland,
Pike, and Harris 1990)

participant-observer could figure out what health meant in Nawal Ja' through formal interviews and sustained informal interactions.

As it turned out, approaching the people of Nawal Ja' I met in my fieldwork as a student of the K'iche' language to talk about or inquire into issues related to water, water work, and public health in the city took on aspects that were far from any hard science. The first line of thinking above hinged on planning for an etic distance between the observer and the observed, and the second line of thought connected to finding the emic perspectives of people of Nawal Ja' as the observers themselves. Yet, the nature of inductively discussing water and health for the sake of those who saw water resources and work as the means to their ends in the events of research in the city indicated something new. Traditionally strict, or "hard", subject and object divides would be inadequate for describing the position of myself and the others in shared contexts where what was put into words was not measurable biomedical information, subjective well-being, nor water as a concrete object nor observed unit.

The discourses I present here have much to teach us about how the projects related to *ja'*, or water in K'iche', were and are significant processes involving meanings particular to Nawal Ja'. Still, the human structure behind the processes which makes putting those meanings into words possible may also indicate that the meanings have universal significance. For example, the linguistic snapshot that can be considered out of the interviews analyzed teaches us that communication among interviewer and respondents on projects having to do with any specific word or expressions, like *ja'* or *joron* (specifically, cool water in K'iche), is only going to form a segment of an interview event's disclosed communication. I situated the study at hand to ascertain inferences for why the questions posed brought forth the explicit responses given, or indicate how they elicited other relevant topics or descriptions for discussion by analyzing them.

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The rest of the communication may be non-verbal, and the intentions or means to the ends of, say, obtaining and consuming *ja'* must be permitted to be cross-referenced with how such means and ends existed in the other parts of the interviews and conversations therein. That things can be communicated without projecting one's voice actually insinuates the second possibility of universality above. If lived experience in shared contexts with Others can avoid definite labeling that differentiates one particular cultural context from another (because of varying points, units, or measurements of analysis like time, explicit wording, or the bodies of participants), the action of humans themselves may universally take on a teleological structure. Intimations that all human actions may follow some sort of purposeful structure can not be assumed without adequate comparison between logics and discourses of varying etic or emic statuses, which is to be taken as the primary subject in this thesis' first chapter.

To return quickly to the planning stages of the project prior to my arrival in Nawal Ja', it would be valuable to mention here that two components were prominent in this stage. The first, the human component, could most certainly be likened to the "subject" in typical scientific parlance; meanwhile, the second, the water component, could be aligned with the "object". This division helped to frame what questions could be asked by doing a tandem qualitative and quantitative approach, although, now that a pragmatic result of the fieldwork was a centering of a qualitative set of questions over the others, it will be important to balance this divide in a new light that sees the components as mere pieces of the "project" of water provision to people in Nawal Ja'.

Water projects in Nawal Ja' have a variety of lenses to be put under for examination. Again, prioritizing the scientific perspective right off the bat would have been a mistake. This thesis will largely remain circumspect of the scientific perspective, or the traditional philosophy

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behind such, time and again on the basis of perspectives about the projects grounded in participants' words, motives, and ends.

Nonetheless, the city itself and the public health situation as epidemiologically and hydrologically circumscribed (especially within a global health discourse) in the highlands region of Guatemala will be taken up with as the first task to understanding well-being in water work. Following this, and in a turn from delimitations of scientific logics of what to expect in Nawal Ja', oral and other literature on the symbolism found in K'iche' Maya myths and health discourses related to water will be reviewed for any sorts of values which may be found useful for analyzing interviews. Chapter One as a whole intends to lay out the stark contrasts between global and local, or etic and emic, perspectives on water and health, and, to begin opening up the topic of well-being. A variety of literature and critiques from anthropology and testimonials on water may also be brought in to achieve this, with the intention that the reader understands the potential discourses that can affect the way both human and water components get talked about in the interviews (by all participants, including myself).

Then, for Chapter Two, a methodology section will describe the fieldwork procedures related to collecting qualitative data, and the philosophical pragmatism to being with others in the midst of research endeavors that makes seeing the logic of the events of research as a model for analysis. This pragmatism calls together influences from the philosophers Jean-Paul Sartre and Alain Badiou with constraints placed on their ontologies by this investigation's concerns which were informed, adapted, and applied out of practical K'iche' Maya ethnographic critiques from Edward Fischer and T.S. Harvey. The model indicates why it is necessary to consider the thesis question about "how" water and health are talked about with cognizance of the events of research as groupings of elements, or signatures and sides as often referred to here, from which a synthetic idea can emerge. This is preliminarily explored with regard to Badiou's

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concept of events but constrained by Fischer's descriptions of cultural logics and Harvey's analyses of polyphony, which are all further developed in the discussion of Chapter Three.

Afterwards in Chapter Two, the analysis of how water projects are talked about in Nawal Ja' ensues and the analytic discourse that arose represents the events of research, the general emphasis of topics posited for discussion (among all participants), and their potential confluence with certain aspects theretofore displayed in Chapter One. A philosophical heuristic framework is applied for the analysis that moves readers along an ideal and real spectrum. The two are never mutually exclusive, and the participants' words in as much never stick to one category within such a framework – it primarily serves as a guide to the various topics of conversation which asking about water projects led to. The topical themes of these conversations characterize the subheadings for readers, and should basically reflect to readers more specific content and sets of meanings related to facets of water work, like "on the ground" operations or procedures from an everyday perspective, symbolic or historical elements that permeate the talk surrounding broad goals or aims of the work, or the personal attitudes, beliefs, and opinions of the people themselves.

Subsequently, a discussion begins Chapter Three on the problem of the human and water components being seen as a synthetic whole, where the breadth of purposes of water projects in Nawal Ja' is most readily apparent, is solvable. The end solution is in the novel possibilities for seeing the uniqueness of the idea of well-being in Nawal Ja' by juxtaposition of the events of research and their contained participants and observed actions and activities involved in water projects. This juxtaposition is achieved by introducing a call by Neil Thin to the discipline of anthropology to relate itself anew to the issues of well-being among humans, and by comparing the events of research in Nawal Ja' to another existentially-ontologically situated study by Gordon Mathews. Then, Harvey and Fischer are discussed again to contrast

how the idea of well-being in Nawal Ja' arises in the events of water work and research in a novel logic. After this, the new logic model, as informed by the analysis, is compared with respect to indigenous Maya, global policy issues, a local water crisis, and the model's implications in both.

The conclusion in Chapter Three summarizes how this thesis is the foremost necessary step to conducting research in the city of Nawal Ja'. It shows the effort is useful to any future hydrological or epidemiological concerns or potential projects in the area because its value can be explicitly drawn out as the demonstration that any such concerns do not seek to conform with the positions or values that participants talk about here may subject themselves to false truths about ideas of health or well-being in Nawal Ja'. The way forward with such ideas can and must avoid all pitfalls that lead into reduction of the wide lived experience of people in the city, it must instead subject itself to those ideas as they arise in the events of research themselves.

Background: Discourses and Logics at Play

The milieu of the thesis' background in terms of literature will be reviewed first. Initially, a global health perspective conveys the concerns of Nawal Ja' from an outsider point of view. This is an etic perspective that takes the form of public health as a set of activities done in order to prevent or resolve (mostly biological) health issues that affect entire populations. Ever since the supposed inception of public health, certainly for Western society hearkening back to John Snow discovering that the Broad Street water pump in London during the year 1854 was a primary cause of a cholera epidemic, there have been great changes to the way whole societies of people interact with perceived sources of infection.(Gordis, 2008, p. 14) [3] The purpose of seeing

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3 The endeavor to prevent undesirable health outcomes in populations led to a proliferation of evidence from those in the cutting edge of sciences for preventing the spread of disease, then being formalized under the novel "germ theory" that had gained credibility due to John Snow's maps and analysis of incidence of cholera as a fecally-orally transmitted disease (and not, as his rival contemporaries argued, a blood disorder or illness of a miasma).

how today's global (policy) indicators and (highly politically) defined variables are being used in Nawal Ja' and its surrounding highland area of the country is to begin with what there is so we may later define what the data from Nawal Ja' is certainly not, in comparative terms with such indicators.

Subsequently, the background goes to what there is, but in regards to research on indigenous Maya, most centrally the K'iche' of the highlands of Guatemala, which portrays the insider perspective. This pursuit of the emic experience has its own strengths and weaknesses, yet, it's an undebatable assistance in the aim of removing restrictions on the kinds of logic and values that the people of Nawal Ja', as indigenous K'iche' Maya, relate to water and to health. The contrasts of both of these sections of the background should open up a pragmatic and agile space for the comparison of logics and symbols that are not competing, but may at times appear to be so. Overall, the logics may have more to teach than just being resistant or receptive to the other, as they would be required to coexist, so any definite polar and opposite state would be far too restrictive.

The intention of laying out the varying etic or emic logics that could be at play in any pragmatic, agile, comparative space will aid the analysis to come, and in turn the resulting discussion and conclusion on how it is that Nawal Ja' is radically neither of these sets of logics, nor one specific logic among them. Nawal Ja' is a space where the cultural variation of existing in at a particular moment in time is but a synthetic amalgamation of these current logics that can be separated out here for analysis. Yet, Nawal Ja' is still a place where people interact with their resources in a conscientious and pragmatic rationality, a lived logic and experience not unlike anywhere else humans exist.

Global Health Discourses

   To start with characterizing Nawal Ja' (though the state would formally recognize it as Nahualá) as a municipality of the department Sololá, the Guatemalan government's Instituto Nacional de Estadistica (INE) estimated the population of Nawal Ja' to be 66,348 in 2013, making it the second largest municipal area behind only Sololá, within the department of the same name.(Instituto Nacional de Estadística Guatemala 2014) Nawal Ja' also had the second highest birth rate in the department that year, with 29 births per 1,000 inhabitants.

   The department of Sololá, as part of the INE's reports, provides a departmental description of the epidemiological situation in the area. At this level, the highest three causes of mortality in 2013 were pneumonia (40%), diabetes (10.8%), and diarrhea (7.7%). Some health care statistics for Sololá as a whole department include top motives for ambulatory consultations at private care providers among the general population, including (in ranked order, and with a total count of 12,432 consultations): malnutrition (20.4%), hypertension (19%), and diarrhea (10.1%). The top motives for children under age 5 to be brought to private care facilities were (percent of that aforementioned total count unknown): head injuries (24.7%), hypertension (19.9%), and accidental poisoning by exposure to alcohol (15.5%).

   On a global-scale, the issue of water-associated infections or diseases is often associated with greater population density, or greater average annual rainfall, among other issues. One study examined 1,428 outbreaks from 1991 to 2009 all across the world and found 70.9% to be associated with water-borne diseases.(Yang et al. 2012) For a country where estimates have been reported from its own Ministry of Health that state up to 98% of the water resources are contaminated,(Braghetta 2006) the danger to the health of the public would be obvious and for Guatemala perhaps rather exceptionally well documented. The fact that the INE's statistics for Sololá in 2013 lack indication of diarrhea as a major motive for consultation may be misleading.

We have to consider that the caveats that those statistics included just private health care providers and that cases of diarrhea related to water contamination may not all go to hospitals or centers, let alone the private-sector ones. Perhaps outposts or clinics attend to many who go unreported, as we can be certain many do, since it would be an unbelievable claim to say only 13,000 unique ambulatory consultations were undergone in 2013 in a department where 300,000 people live (4% of the population).

Also it is important to see malnutrition not as a singular phenomenon, because while it represented the greatest percentage of motives for consultation in 2013, it often is co-extant with infection-induced diarrhea as a mild symptom that reduces one's ability to pull nutrients from food over long periods of time. Research done in other nearby areas of Guatemala on rates of malnutrition, and interventions into the issue, are often very conscientious of the chance for gastrointestinal infection, and diarrhea associated with it, to affect growth and nutritional outcomes. Obstacles become how to define stomach illnesses, like with the Highly Credible Gastrointestinal Illness measure or costly stool testing, and whether the rates of malnutrition, responses by participants, and the sources of water in an area add up to greater odds of the incidence of gastrointestinal disease.(Arnold et al. 2009; Cook et al. 2009; Seccombe and Hughes 2009; Reurings et al. 2013; Davis et al. 2014)

For Guatemala as a whole, ten years after the end of the thirty six year civil war from 1960-1996, there was still great concern for the water sources utilized everywhere in the country being contaminated because of the war's destruction of infrastructures for water provision, especially in rural, indigenous areas.(Braghetta 2006) Internationally, and more recently, the United Nations (UN) Advisory Board on Water and Sanitation noted needs for major updates regarding water supplies and sanitation infrastructure in the form of financial and time investments on the parts of governments and private sector partners everywhere.(Deen 2015)

The passage of Sustainable Development Goal (SDG) 6 ("Ensure availability and sustainable management of water and sanitation for all") in September 2015 was a clear move toward water-specific initiatives and efforts to ensure improved drinking water and sanitation, which differs from Millennium Development Goal (MDG) 7 that contained these targets in an overarching goal of ensuring environmental sustainability.(United Nations n.d.; United Nations n.d.) While access to improved drinking water was halved in proportions through MDG 7, access to improved sanitation still loomed as a major issue for 2.4 billion people by the end of the MDGs. If SDG 6 and its targets related to ensuring water and sanitation for all is to be ensured, then the advice of the UN Advisory Board on Water and Sanitation should absolutely be heeded.

The lofty goals of development passed by the UN are shot through with a desire to plan, execute, and achieve progress on a global scale. The discourse of progress, and its overarching modernization theory, has been a powerful one for the histories and ideologies of many nations. On a global scale, unifying in order to cement progress internationally takes the propping up of cross-sectoral, inter-agency coordination that transcends strict national boundaries. UN-Water is one such "inter-agency coordination mechanism" created after the MDGs were passed that could be of greater influence with its own sphere of SDG-goal driven development.(UN-Water 2016) As mentioned earlier, the newly passed SDG on water differs by no longer being embedded in a MDG. This is a trend across several SDGs, as a greater amount of goals exist. This diversity may be necessary to carry out major updates like those noted by the UN Advisory Board on Water and Sanitation because keeping such areas together might reduce the precision of interventions in order to achieve specified goals or sub-goals. For instance, the division between SDG 6 and SDG 14 ("Conserve and sustainably use the oceans, seas, and marine resources for sustainable development") is not arbitrary. For one, SDG 6 emphasizes fresh water while SDG 14 accounts for salt water resources, but on the political level, it speaks to

the UN's delegation of power to committees that keep track of indicators and data collected to monitor progress toward these goals.

UN-Water's solution for monitoring and tracking data actually preexisted it. The World Health Organization (WHO) and United Nations Children's Emergency Fund (UNICEF) created the Joint Monitoring Programme (JMP) for Water Supply and Sanitation in 1990. This agency handles the monitoring of indicators and reporting of results on access to safe-drinking water and sanitation to other international agencies and partner platforms. The JMP also provides definitions for water supply and sanitation (Table 1). (World Health Organization and United Nations Children's Emergency Fund 2015a; World Health Organization and United Nations Children's Emergency Fund n.d.)

Table 1. JMP Definitions for Improved & Unimproved Water Supply & Sanitation

Improved Drinking-Water	Improved Sanitation

• Piped water into yard, dwelling, or plot
• Public tap or standpipe
• Tubewell or borehole
• Protected dug well
• Protected spring
• Rainwater collection
	• Flush or pour-flush to:
	  ○ piped sewer system
	  ○ septic tank
	  ○ pit latrine
	• Ventilated Improved Pit (VIP) latrine
	• Pit latrine with slab
	• Composting toilet

Unimproved Drinking-Water	**Unimproved Sanitation**
• Unprotected dug well • Unprotected spring • Cart with small tank or drum • Tanker truck • Surface water (river, dam, lake, pond, stream, canal, irrigation channel) • Bottled water	• Flush or pour-flush to elsewhere (that is, not to piped sewer system, septic tank, or pit latrine) • Pit latrine without slab (open pit) • Bucket • Hanging toilet or hanging latrine • Shared facilities of any type* • No facilities (bush or field)

*Shared facilities of any type includes improved sanitation methods that are shared between two or more households or a larger community

Where regards Guatemala's status (as of 2015) as surveyed by JMP water supply and sanitation data, 93% of the population is estimated to have some form of improved drinking-water (85% piped into their domicile); meanwhile, 64% of the country has access to a form of improved sanitation, 14% share facilities of an improved kind, and 22% have some other

unimproved sanitation method. In the JMP's data on rural populations of Guatemala, 87% and 49% have safe-drinking water and improved sanitation access, respectively.(World Health Organization and United Nations Children's Emergency Fund 2015b)

One problem for water work in Guatemala is the relationship between providers and consumers of the utility. The rural areas vary in municipal policies to provide the utility to homes, and research points to community-driven solutions (as opposed to municipally-managed) as being less likely to be paid for ("willingness to pay": WTP) or worked for ("willingness to work": WTW) so at to obtain more reliably safe drinking-water.(Vasquez 2015; Vasquez 2014) This prior research calls the community-driven solutions in mind community-based water organizations (CBWOs, an abbreviation adapted for use here). The location of the above research was San Lorenzo, another town in the highlands of Guatemala where Mam (another Maya language) is often spoken. The author above largely considers the economic preferences of people there and the wider context of poverty for exploring the relationship. Whether this points to the success of one form, or governance approach, of drinking-water provision or another may only speculatively be related to the rates of infection of people by contaminated water sources.

Another key aspect is the customary and formalized legal systems around water resources, use, and provision by people in different areas of the country.(D'Andrea 2012) Centuries of colonial nation-building have only partially deteriorated communal and informal systems of water and land ownership and rights. The thirty six year internal conflict, pocked with massacres like those along the Río Negro in Baja Verapaz after the beginning of construction of the Chixoy hydroelectric energy plant in 1978, never settled the place of indigenous rights to water in the country – not in a formal legalistic sense.

> *"[…] So let's go like this, there is a place for doing our prayers, but you all take your candles and go with me," like that he said to them. So, the people liked what they heard, and then they took their candles there and arrived at a big level spot, "Maybe we are good here… let's kneel in prayer here," said Estéban to the many people following behind him. "So you all see that, see the ravine here, and there's no water in it, and this great river would pass here. Here not one person could cross it in this great ravine, that great river that passes here, and you all see today there's nothing anymore. So therefore we assemble our cause, you all use your might like this," he said to them, "but with great happiness and with all your hearts, with all your might, let's ask God that he may give a little rain to us," so said the man to them, and he knelt before them, "Kneel yourselves," he spoke to them. "All right!" They said. They knelt, then lifted their countenances there to the sky and they spoke, "Our father, forgive our sins, have mercy on us, it's by our faults that we are punished by you, may your wrath pass us, bless us indeed today, give us a little rain and provide our food which we eat and we use," so they all said. They all spoke and took their lit candles and were all knelt in prayer, suddenly they saw when there was a sign above the great volcano.[4]*

The above passage comes from a story named "Esteban Shows the People How to Ask for the Rain", which was retold by a native K'iche' speaker and audio recorded by James Mondloch between the years 1968 and 1973 in the vicinity of Nawal Ja' (specifically, in the municipality of Nahualá itself).(K'iche' Maya Oral History Project: 045 | Esteban Shows the People How to Ask for the Rain n.d., p.5-7) As a turn from the scientific discourses in the first half of this chapter which support understanding hydrological systems in the sense of an unpredictable but natural system of a vital resource for societal use, introduced here is a deeply human relationship between people and the resource itself as a life-giving and sustaining

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4 […] entonse köjb'ë je wa' k'o jun lugar ke'b'anä wi ri qa orasyon pero chik'amä b'i ikandela i kíxb'ë wuk' je la xub'ij chikë, entonse ri winäq utz xkitö, entonse xkik'äm b'i kikandela i xo'pän pa jun nïmaläj lyana, we-në ütz waral köjk'oji' wi köjxuküla waral kachä ri Estëban chikë ri e sib'aläj winaq e terën chirij pwes chiwila' le' chiwilä ri jun xuwan k'o waral i maj chi ja' chupam y wa' nímaläj ja' k'üt kaq'ax waral waral maj jun winäq kakowin kaq'ax pa wa' we nímal(a)j suwan ri' nímaläj ja' kaq'ax waral y chiwilä kamik le' maj chík are k'u chi' qakojö qachuq'ab' iwonojel /6/ chikojö ichuq'ab' je la' xub'ij chikë, pero ruk' nímaläj ki'kotemal y ruk' ronojel iwanimä ruk' ronojel ichuq'ab' qatä chech ri Dyos chi chuya'ä ri sin qajab' je la' xub'ij ri achí chiké, y xuki' chikiwäch, kíx-xukulöq kachä chikë ja'ë kecha' xexuki'k, entonse i xpaqi' rikiwäch chila' chikaj i xkib'ij, qatat sachäla qamak toq'ob'äj la qawach, wa' xa rumal qamak wa' öj kastigada umal lä pa ri chok'öwa b'a ri oyowäl lä chiqij toq'ob'äj chi b'a la qawach kamik ya'äla ri sin qajab' i ya'älari qawä jasa kqatijö jachiri kqakojö, je la' xkib'ij konojel xetzijoník i kuk'a'm ri staq kikandela xkitzijö, entonse e xukulík konojel k'a të kakilö aretäq xuyä jun seña chuwí ri nímalaj juyüb'

necessity – and one that could be met through appealing to the powers of nature, centrally in this story the power of God, and through the power of the people themselves.

The oral history and mythic tone of the above tale about Esteban, the people, and some resulting "sign" over a volcano permits us to open the conversation had thus far toward an emic logic. That opening demonstrates the other side of this play between insider and outsider perspectives that has to end in a resolute synthesis through the events of research themselves. It may come as a bit of a surprise, but the religious beliefs involved with petitioning for rain appear from the above to be largely Christian. The process of the indigenous K'iche' Maya enmeshing Catholic theology, or even sainthood, in with the processes of rainy seasons in the country was documented early in studies on a nearby K'iche' Maya area called Momostenango.(Gossen 1986, p. 150) In another symbolically-driven study on K'iche' cultural logics, this time in an area named Chinique in the department of El Quiché, there is a structural focus on how agricultural practices relate to water, time, and space. For example, it is late February when thunder foreshadows the coming of rain in three months, and the drying up of springs until then. It is said that mountain rain spirits draw the water into clouds in the nearby mountain peaks. Yet, it is by Easter that the year is considered to turn anew and become "young" again, simultaneously with the rise from death of Christ. That study also draws out a parallel between masculine and feminine essences and the sun in the case of men, and the earth in the case of women. Likewise, it takes the essences and parallels them with the rain throughout the year for males (the increasingly/decreasingly active agent in agricultural production), and a lack thereof for females (the constant, active but passive atmosphere throughout the year).(Gossen 1986, p. 159-160)

Of course, such neat binaries often promise more than the ambivalent reality that cultural logics often play out in. There is no reason to believe as noted in the aforementioned citation that women can't have an active part in agriculture. Take for instance the words of

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Rigoberta Menchú regarding the issue. She describes planting in milpa fields, after ritual and prayer to water, earth, the sun, the moon, and animals, as a team effort wherein men plant the maize and women follow behind planting the gourds which lie at the base of the corn stalks. (Burgos-Debray 1992, p. 53) Also different from some neat and tidy notion of balanced and essential genders dividing up the work of indigenous Maya life was a real requirement on her and her family to go work large farms near coasts that exploited indigenous labor for coffee or cotton production. There, no distinctions were made with accord to sex, gender, nor age of the worker and their ability. In fact, after a point, with the army bearing down on their community and the potential for disappearances or kidnappings, that became the case even more.(Burgos-Debray 1992, p. 21-23, 129)

Now then we would do well to consider her points of view regarding water and sanitation in the communities she lived in and matriculated through as a child and worker where possible. When she was working large farms near the coast, she also described them like so:

> "There are no toilets in the *finca*. There was only this place up in the hills where everybody went. There were about 400 of us living there and everyone went to this same place. It was the toilet for all those people. We had to take it in turns. When one lot of people came back, another lot would go. There were lots of flies on all that filth up there. There was only one tap in the shed where we lived, not even enough for us to wash our hands. A little way away, there were water holes which the landowners used for irrigating the coffee or any other crops. So we had to go over to those water holes to get a drink and fill the water bottles we took with us to the fields." (Burgos-Debray 1992, p. 35)

It was made abundantly clear that access to water sources for human consumption and any kind of "improved" sanitation for the employed migrant workers was not valued by landowners. The expediency of survival may diminish any significance water has for the K'iche'; however, that expediency does seem mostly rooted in the context of the plantation or big farm work. Consider Menchú's later explanations that water holds a central theological value

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to the conceptions of God for her and her community. She says, "Our parents tell us when we're very small not to waste water, even when we have it. Water is pure, clean, and gives life to man. […] The idea that water is sacred is in us children, and we never stop thinking of it as something pure."(Burgos-Debray 1992, p. 56)

It is clear that something much more complex than some kind of polarizing normative claim about water at the plantation versus in her highland home with her native community would be made on her part. Each of the above notions inform us that the place of the water is deeply tied to social discourses, for example collective or private ownership, and lived experience, for example any mundane or spiritual experiences. Yet, the idea of purity appears to transcend the condition of water as even potentially contaminated by wastes, even if the posited practices avoid using both water near the sanitarium and a piped (technically "improved"), but insufficiently pressured, water supply.

The salience of the idea of purity with regards to water is no new association. As in a global health discourse, international definitions and standards come to unfold how people "ought" to categorize their water supplies and sanitation facilities in regards to preserving a purity that is in line with being "safe for human consumption". The same sort of logic is at work here embedded in indigenous Maya culture.

To take a slight step back from the water and human components in the K'iche' Maya context, I would like to bring forward an ethnographic and theoretical analysis in the nearby Kaqchikel Maya areas of Patzún and Tecpán that pulls from fieldwork centered on answering questions regarding pan-Maya identity and movements.(Fischer 2001) This will assist in informing our own theoretical framework for analysis of culture as a logical synthesis between emic and etic perspectives.

Ted Fischer researched the events and fields of discourse related to Maya cultural identities in the two above cities throughout the 1990s, using mixed methods of participant-observation and surveys with an awareness that the processes were engagements not of himself with Others in those areas, but with themselves as a group. This recognition of a terminal grouping, a "we", for the processes of anthropological analysis was summarized as residing in a space between any essentialist or anti-essentialist swings of critical theory.(Fischer 2001, p. 8-14) The model of a "cultural logic" is a singular deposit of a multitudinous variation. In everyday averageness, a definite meaning of a logic comes to relate to the function of the series of events occurring in process, however, there is a formless aspect of the logic that varies with the purposes and intentions of the decision-maker who carries themselves through the events or acts in bringing them about.

There is one set of constraints to the modeling of a logic: the individual's intentions, the cultural norms, and material contingencies. This set may be overly constraining for the events of research undergone in Nawal Ja'. For the analysis of pan-Maya identity as a cultural logic by Fischer, there is a resistance to enmeshing the multitude of individual interests involved with building a consensus for representation in the Guatemalan state.

There's a variety of reasons for these constraints: a social movement is not a bad expression of all of its contained inter-subjective agents' intentions, and, the work done by activists in Tecpán and Patzún indicate to any reader that there must be a strong common interest among very different Maya groups. After all, there are twenty two different Maya languages represented by indigenous populations in Guatemala, historic reasons for unified alphabetization of the Maya alphabet (Fischer 2001, p. 97-98), and not the least, the distribution of more urban and rural Maya may be affecting the composition of personnel in Pan-Maya activism when considering their unique interactions with spirituality, education, or politics. Lastly, another

factor is how the resulting leadership within the movement arose with people's particular

backgrounds usually being K'iche' or Kaqchikel, and the historical ideologies for political and

legislative agendas arising from that.(Fischer 2001, p. 104)

Yet, despite all the evidence for understanding cultural logics as constrained by that

set of issues, there is a not yet considered result of looking at the idea of Pan-Maya identity as a

singular thing for a given individual of the movement to synthesize with their own existence. It

closes the idea of being Maya to the particular person with a sense of private consternation about

whether to reject this homogenization or to see it as an acceptable addition in differentiating

themselves from the authority of the Guatemala state, while representing their own possibility.

Either one is a synthesis with their own existence, surely, yet the analysis often stays at the levels

of observing idiosyncratic cognitions in continuous patterns of the milieu (cultural norms or

material contingencies) for an individual micro-accounting of realizations meted up to and

possibilities left undone. However, there are resolute glimpses toward a substantive positioning

of an amalgamation of individuals into a singular movement (as opposed to a multiply

confederate alliance of individuals), as Fischer concluded: "[…] the data I have presented

suggest a more optimistic alternative: that community-based allegiances share underlying

features that transcend geographic parochialism." (Fischer 2001, p. 250)

In that theoretical framework, underlying features would have fit in with the

continuous patterns of the milieu surrounding an individual, which could be observed when

parsing out the meanings and functioning of a cultural logic. To increase our awareness of such

underlying features, we must move onto another ethnography which looks to the linguistic

contexts of K'iche' Maya speakers in "wellness-seeking" consultations with healers of both

biomedical and traditional specialties.

T.S. Harvey names his method for his book the ethnography of polyphony, based on work done by Dell Hymes. (Harvey 2013, p. 31) He recorded consultations at a health clinic and a dispensary among the healers and the patient(s) at each – without his own presence there. Before understanding "polyphony" in his sense, it is important to note that Harvey had already begun the process of researching "patienthood" among the K'iche' and other sister Maya languages in recent years. Understanding the movement of a K'iche' speaker through a health system is almost always done most effectively when one looks at their entire being and becoming – and in that way, not at their biological health, but to their wellness. This is what causes him to ascribe the term of "wellness-seekers" to indigenous Maya, instead of patient, in many contexts where the goals of health-related practices are not strict biomedical outcomes but holistic well-being.(Harvey 2008; Harvey 2011)

Polyphony is held as a phenomenon for viewing "multivoicedness" in communications of two or more people that approaches simultaneous narrative building. What Harvey calls the "polyphonic score" is an assisting visual aid for analyzing and understanding the consultations which he and a team of native K'iche' speakers transcribed. It puts the speakers involved on a "staff" as though they were notes on a sheet of music. One advantage of this is the ability to unfold participants in the event in a visual manner faithful to the order or patterns in which they are heard when listening to them in a recording.(Harvey 2013, p. 33-36)

But, what else is gained from this? First, one becomes cognizant of the ever-presence of all individuals at the event to the deposits of explicit words or communicative silences by them as a group. Such a reminder is powerful, as it ensures an analyst that there is purpose behind silences in the consultations. Harvey outlines some "discourse roles" of silence: it sustains the floor (for speaking), upholds the commentaries, repairs interruptions, elicits speaking from other actors, stalls interactions, and opens the floor.

Second, in viewing a polyphonic score, one can also gain a greater appreciation of the scope of wellness-seeking as an effort made not just by the wellness-seeker, but by their companions who often come with them. The narration of the episodes regarding a particular adverse illness or event becomes a "multivoiced" deposition, wherein the bodies and languages of healers, wellness-seekers, and their companions, whether silent or talking, come to dialogue. As a matter of course, Harvey came across biomedical healers who were not there for an understanding dialogue, but to do their common medical interview and surmise the episode at once and with prescription for treatment. He found that *centro de salud* visits were more often narrated by the biomedical healers there, than at the dispensaries, or *dispensarios*, in which traditional healers or *ajkun,* were listeners who elicited the narration of the group who came seeking wellness. (Harvey 2013, p. 93, 111, 152)

These findings then are what are necessary to clarify the earlier issue of underlying features that are shared across geographic contexts or differing ulterior motives. While the people who make up an event, which for example could be a CBWO's annual meeting or the interviews respondents and myself participated in together, will always vary in just who they are, and what their lived histories or statuses are that may influence what they are going to say – it doesn't make how they are all going to comport themselves within the same event all that different. That is, there are linguistic and bodily allowances and constraints that the group may observe or break with in order to satisfy a preference the whole group shares: like having water. The communication of the group will always share features through cultural logic that discloses to all people involved an understanding as to their benefits from the water work, and their responsibilities to that work as well. For instance, a reasonable expectation of benefits may be water that meets the idea of purity, even without explicitly mentioning it. Another one, following the idea laid out with Menchú earlier that water is transcendently pure but with the wellness-

seeking of Harvey, is that there is an idea of well-being which should always be derivable, or satisfiable, in line with meeting responsibilities to keeping water pure.

While in what follows, my own writing may represent a clear etic perspective at times, there will always be the words of the respondents to consider in any point of discussion, any reference with the literature, or any significance of the value placed by these people from Nawal Ja' on water and well-being. The events that we all shared in are not mine alone to narrate, because of the emphasis participation has in all aspects of the aggregated transcriptions. In the following chapter there is an explanation of the philosophically pragmatic stance that I do have to take as an analyst of the transcribed output.

CHAPTER 2

THE EVENTS OF RESEARCH AS A SYNTHETIC NAWAL JA'

Method

The design for data collection in this research is based on the ethnographic method of participant-observation with qualitative semi-structured interviews that utilize the active learning of language and cultural facts or objects in Nawal Ja' to elicit responses and explanations of how water systems work in the area. The participants were recruited through a "snowball sampling" method that used my contacts from living in the city and learning K'iche' Maya to seek out available respondents.

All the conversations were completed after explaining the purposes of the research, and obtaining a verbal consent on the participants' parts that agreed to interviewing and recording our discussions. All participants are de-identified and given respondent numbers (R1, R2, etc.) and do not provide their names, ages, nor any other personally identifiable information in the interviews. All neighborhood names are coded alphabetically while city names, like Nawal Ja' or Xela (Quetzaltenango), are retained. Other personal names are omitted from transcripts of the interviews.

All the transcripts for all the interviews were reviewed along with comments that had been generated during the transcription process. Coding of the transcripts followed a framework that allows for varying ranges of the conversations to fall under multiple codes. The analysis included recording several descriptive variables for each interview that were uniformly discovered in conversation, and other variables that were uncovered in some and not others, a

frequency count of each code used, and the discourse analysis below. All translations are mine, unless noted.[5]

Fieldwork and Language Acquisition

The fieldwork for this thesis research spanned eight weeks in the summer of 2016, and was synchronized with efforts to gain greater fluency in K'iche' Maya by attending a language school in Nawal Ja'. The first week of that fieldwork included time in Antigua, Guatemala to meet other students in the school's cohorts (both a K'iche' and Kaqchikel cohort existed) and to become acquainted with our teachers (both *ajNawal Ja'*, or people of Nawal Ja', and foreign-born professors).

When I lived with a family in Nawal Ja', the experience began to situate the types of questions I had already been researching, and it started to inform how interviews could be approached. The intensive purpose of my presence in Nawal Ja' could be acquisition of the language, but, in the events of meeting others in the city, I could begin to make known my other intentions for learning about water and health.

In discussing my research questions with others, in my family's home, during school, I began to understand that water committee members were known by almost every local I talked to. This sort of surprised me, as I assumed that committee members would have been difficult to meet. After I met with one through a teacher of the language school, I began actively reaching out to those I knew or went on to meet during my stay in Nawal Ja'. Whether my own position as a student of K'iche' positively influenced participants' perceptions of me may have, or may not, have been the case.

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5 Mareike Sattler, noted M. Sattler in text, checked K'iche' to English translations occasionally, and Miguel Cuj, noted M. Cuj in text, checked Spanish to English translations in necessary instances. Transcription markings are held in brackets: […] is a phrase before, during, or after a quote that was unnecessary to the meaning, [*] is a word that was indecipherable based on the audio, and other bracketed words are omitted but referred to parts of speech.

Nonetheless, twelve participants came to be a part of nine interviews that typically mixed Spanish and K'iche' use. These interviews typically lasted from around half an hour to an hour, and the questions usually followed a common structure which first emphasized description of the work, project, or committee that was of interest (name, number of beneficiaries, leadership numbers, etc.). Then, questions on the potential for collaboration between the given project and public health work was discussed, which often led into questions on water quality (testing, disease incidence, types of water supply and sanitation). Later, the interviews went on to focus on big ideas related to water provision, such as the Nawal Ja' origin story. Lastly, and oppositely, the mundane realities would be emphasized by asking about the costs and activities of a given project.

Philosophical Pragmatism

The process of methods and analysis when considering ethnographic field data should be developed in form prior to letting the analysis unfold. As has only been described so far, the relationship between myself as investigator and the participants as respondents or informants seems rather traditional to all social science research; however, the aim of this method was not to prop up such dimensions as usual.

After ethnographers Fischer and Harvey, noted earlier, there is a space where a novel "we" can be formed out of all people involved in the specific event at hand. Cultural logics, though arguably specific to one person's cognitive idiosyncrasy, can share underlying cultural features among individuals over space. A polyphonic approach, however, moves toward a position that narrates an event with multiple, simultaneous voices in proximal space. For this philosophical grounding, the "we" still holds a vital place, but it is conceived at the helm of how a project achieves its ends – prior to becoming conscious of who "we" are in all our absolutes.

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The critical roots of this perspective are Jean-Paul Sartre and Alain Badiou. First, Sartrean existential philosophy's emphasis on "projects" of people's being for themselves bounds together a notion of universal structural teleology to all possible human action; however, two notions influence this perspective: radical freedom and responsibility. The first was normatively preferred by Sartre for any analysis because the least constrained freedom was seen as one's utmost existence for one's self, one without any reflection of any inter-subjective differentiation that, while evidencing his argument against solipsism, could cause an unbridgeable gulf between knowing oneself as an object for the Other's transcendence and knowing oneself as transcendental subjectivity and the end of one's own project. This causes an unbalanced point of view on "Being-with-Others" as though it is ever-conflicting. My critique, as one of the investigators of this research along with other participants, has been to see the whole of this pragmatism stay ethical and responsible to them and avoid any kind of free "transcendence-transcending" monologue about my experience in Nawal Ja' where I would merely be making an object of the Other(s).(Sartre 1993; Gardner 2009)

Second, Badiou's ontological philosophy engages with this perspective in two main fashions: his theories on the Subject and on events. The Subject, for Badiou, is a "body-of-truth" that incorporates the individual bodies and languages of participants as an element to a greater realization of a Platonic Idea, or Form. Here, the argument is important because it embeds a theoretical solution to conflicts or differences between individual "transcendent consciousnesses", as Sartre might say. Participants choose to enter into the Subject that takes part as a whole in an event – that reforms who makes up the "we". The event might be glossed as the possibility of more possibilities by Badiou, in that it is a vertex moment where all the prior consequences of the state of things arrive, and must be open to exceptional possibilities in their being there, where a true Idea can arise. Each event withers the prior state away further, but

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through fidelity, the Idea arises again (eternal-as-ever), unfettered by the state of what is considered possible. The most notable signature of an event comes down to any action and course of action, or "truth-procedure" Badiou might say, that demonstrates the actor's Subject in one direction and to the other direction a third element or object that approximates the symbolism and history of the situation.(Badiou 2010; Badiou 2012)

This philosophically pragmatic stance led off on a foot of critically considering such concepts from the above during the fieldwork. In what follows before the analysis, I take into account the aforementioned ethnographers and philosophers so as to situate the reader in the sort of questions and solutions I have reflected on before, during, and after the collection of data.

There is a point within projects of science that had to be pragmatically dealt with, namely, the objective orientation of questions that characterizes the answers as the evidence and positions of truth. Here, my project would be given an "objective" priority, under typical scientific parlance, to answer my question, "How do people in water committees or water work in the city talk about water and health?" Yet, making any one or all explicit answers among the data to this question definitively the truth is a short-sighted exercise in "science".

The declarative statements on water projects that can be learned about from the data collected can not be readily assimilated to the question of this thesis, as an exact or "objective" description of "how" water and health are talked about. Doing so would discount every other event in the research apart from explicit words, which would be giving "what" was said more analytical privilege than "how" it was said, or "who" said it (and as noted, events are three-fold in their signatures of these categories: a Subject, a truth-procedure [action or course of action, i.e. a project], and an object). Participation and observation in this project were considered the roles of not only the investigator but the respondents themselves. The events of research did not start

and end with recorded interviews of spoken word, and the education of myself as an investigator extended to many other parts of daily life in the city and with the family who hosted me.

Altogether, the end of this analytical section is not some finality regarding the "true" nature of water and health in Nawal Ja', but the veneer of discursive terminology which rides on top of an existential sequence and unfolds through the events of research. The events here brought together a science project and water projects to form a new and original ground for talk and understanding about water and health, but not with the intent of defining those ideas in perfect (Platonic) forms nor finding Others to be a problem to understanding. This is how a synthetic view of Nawal Ja' can be produced: the individuals (including one's self) subject themselves, their bodies and their linguistic communications, to the events and admit their exceptional experiences or knowledge of water and health *through* their existent roles in the procedures or interactions of the conversations, and the events more generally-speaking.

These new and original grounds are a project that assimilates the investigators with the participants as both groups enter into a shared experience of the events. It makes their co-existence and lived histories the real material with which synthesis is possible. Every event of the project should deter one from seeing those involved as definite and total beings that can be absolutely defined. The reason for this is because the events open up new possibilities among all parties. Our inlet into what sort of possibilities there are in Nawal Ja' for water, health, and ultimately well-being is the series of interactions among all parties.

Hence, repetition in asking and answering questions in these events may vary in wording, or, in the features and experiences of different people which come to make up the questions and answers that arose during inquiries. Despite the phenomenological variations to procedures of conversations, it is how these conversations went that the following analysis and later discussion will seek to embody and represent with the utmost fidelity.

Analysis

The ensuing analysis of the conversations from the interviews begins by broaching the way in which the very origin story of Nawal Ja', as a city where water never-ending arrives, is a historiological event that reverberates in how water projects are discussed today. Different from its neighbors, say, in Totonicapan (Toto) or Quetzaltenango (Xela) where droughts are supposed to have happened, Nawal Ja' can be described as one participant put it: (WC09-11)

> *R11: […] in the old days it was said of Nawal Ja', it was said that all the water stopped, and here, it didn't stop – it went from Totonicapan, it went from Quetzaltenango, for that they tell you all that Nawal Ja' - the Water Spirit.[6]*

The mention of this story was sure to bring out varying reactions from respondents, yet, the direction of the question was always towards asking about whether respondents thought that the story held any sentimental value to participants in the water projects and neighborhoods that were being discussed. Analytically, there is a heuristically useful divergence which results out of considering the values of participants in water projects; explicitly, respondents began discussing answers to the posed question along two branches which is presented as a dichotomy between either the idealism or the realism of the situation in Nawal Ja'. Such a dichotomy, granting the caveat that they will not always be mutually exclusive of one another in the content or substance that participants' produce on it, will be of aid. Particularly, it frames the subsequent layout of responses in themes as a sort of amalgamation of the prior literature review on etic and emic logics that illuminate new formations which I and the other participants in this project lived in the events of research.

It will be important; however, to see the spectrum from idealism to realism as a part of this synthetic whole of the research process, thus, the timing, wording, or particular

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6 R11: […] ojer tyempo b'ix chech Nawal Ja' uchaxik k'is ronojel le joron i le waral na xk'is ta cha, xepe Toto, xepe Xela, xepe, xkimaj ri joron, por ese xixkib'ij chi Nawal Ja' - espiritu de agua.

participants at hand in any given area of this analysis do not express any assumption about there being higher value placed on ideas over the real (or any other overreaching, hierarchical argument) among K'iche' Maya people. The effort of this analysis is to prove the thesis that what occurred in Nawal Ja' during the events of this research and the unfolding of answers to questions posed therein is unlike anything coming singularly or multiply from the logics we have critiqued and reviewed, especially with respect to the idea of well-being

Idealism: Three Thanksgivings

While religion was never directly asked about as part of the interviews, responses indicated that the origin story of Nawal Ja' could bring out the topic. This section deals with what participants mentioned among Maya, Catholic, and Protestant rituals for giving thanks to the divine for the water that they had. The first respondent laid out one sequence of these "Thanksgivings": (WC01-22)

> *R1: There are three that we are doing. The Maya ceremony in the mountain, and we celebrate the holy mass, which is Catholic, and we give worship, with the Evangelical [Protestant] brothers, for that's the project we have, there are Catholic adherents, Evangelical, and there are also those who also use the culture. Thus, there are three elements that we have, so for that we do three things. What they've already seen, from the culture, then they search for a secon… their group goes to the mountain, to celebrate the ceremony thanking the mother earth, all that. They do their thing, doing one's culture is a difficult task. The following days one does the holy mass, there, yes, all are invited in order that they are in the holy mass thanking. In another day, they go to the Evangelical churches, all go to thank God also. Thus thanks to God, we have water.[7]*

As regards the Maya ceremonies specifically, the first respondent spoke candidly: (WC01-21)

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7 R1: Lo que estamos haciendo nosotros son tres. La ceremonia Maya en la montaña, y celebramos la santa misa, lo que es católico, y damos culto, con los hermanos evangélicos, porque el proyecto que tenemos, hay religiosos católico, hay evangélico, y hay también lo que es también lo que utilice la que es la cultura. Entonce eso son tres elementos que tenemos, entonces por eso hacemos las tres cosas. Los que ya ellos han visto lo que, de lo que es la cultura, entonce ellos buscan un segun… el grupo de ellos se van a la montaña, para celebrar la ceremonia agradecer a la madre tierra, todo eso. Hacen sus cosas, un reto se hace cultura. Los siguientes días se hace la santa misa, allí sí todos están invitados para que estén en la santa misa agradecen. Al otro dia, se van las iglesias evangélicas, todo se van también agradecer a Dios. Entonces gracias a Dios, tenemos agua.

R1: [There's] Always water, we do thanksgiving to God, every year. We go to the mountain, we do the Maya ceremony of the ancestors, thanking the lord of the hill, of the mother earth, that has given us water, thus we've always done Maya ceremonies.[M. Sattler assisted][8]

Whether participants are actively going about Maya ceremonies in the mountains still seems rather debatable, although, the fourth participant did note going to one as recently as two years ago, and described the process a little: (WC04-15)

R4: It's been two years since we carried out a Maya ceremony in order to give them, in order to give thanks to the mother earth for giving us water […] In the mountain, where the water comes from, where the spring is. We bring a man, and he carries all the material that they use for the Maya ceremony, and there he gave thanks to the world, for giving us water. And the people are happy.[9]

Yet, other responses doubt the actual occurrence of these Maya ceremonies happening any more. The fifth participant expressed such events were antiquated in today's Nawal Ja': (WC05-10)

R5: Specifically, there's none. Because, because it's – well, years ago the ancestors, I don't know, but they say that the ancestors had this, like, pride: pride for being here. Because with me, there's the water, if I'm not there, there's the water, but that is before. Now, no, now I don't know. The people do no more work for the water. Sometimes, like in different religions, each year they do a, this… like the Evangelicals, you know the Evangelicals?

I: Yes, yes – the worship...

R5: Yes, yes, Evangelism knows the shepherd – they worship, each year, out of giving thanks to God for the water, but they don't give thanks to the Water Spirit.[10]

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8 R1: Siempre agua, hacemos acción de gracias a Dios, cada año. Vamos a ir en la montaña, hacemos ceremonia Maya de los antepasados, agradecer al ajaw del "cerro", de la madre tierra, que nos ha dado agua, entonce siempre hemos hecho ceremonias Maya.

9 R4: Hace dos años realizamos como una ceremonia Maya para darles, para dar gracias, a la madre tierra por darnos agua. […] En el juyub', donde viene el agua, donde está el nacimiento. Llevamos un señor, y llevo todo el material para esos que usan para la ceremoia Maya, y allí hizo la agradecimiento al mundo, por darnos el agua. Y la gente está contento.

10 R5: Especificamente, no hay. Porque, porque es - bueno, años atrás los antepasados, no sé, pero dicen que los antepasados tuvieron este, como , orgullo: orgullos de que yo estoy aquí. Porque por mi, está el agua, si no estoy yo, está el agua, pero eso es antes. Ahora no, ahora no sé. La gente nada más trabaja para el agua. A veces, como en diferentes religiones, a cada año le hacen un, un este… como los evangelicos, ¿usted sabe los evangélicos?
I: Sí, sí - los cultos…
R5: Si si los sabe el pastor - hace un culto, cada año, de dan gracias al Dios por el agua. Por no le dan gracias al espíritu del agua.

The same participant, in expressing skepticism for the continued existence of Maya ceremonies in the hills, also mentioned that one thought it had been probably twenty years since such *brujeria* (shamanism, though "witchcraft" is another common translation) had been carried out where they enter caves, burn incense and candles, and sacrifice *tzam* or liquor. (WC05-11)

The notion that one might give thanks to the earth was also lost on the sixth participant, who shared the way that giving thanks preceded the start of water work: (WC06-09)

> *R6: […] they find where the water is, and they start: first, they look where it is, and then they say, they ask to God, or they pray, the-they pray before starting the work, they ask God that no – no – that the water doesn't get contaminated, or that the water doesn't dry up. And, having done the prayer, in that way they begin the digging up of water.[11]*

When asked about the the summary provided and if thanks was given to God or to the earth, the participant spoke: (WC06-09)

> *R6: Just one, just one only to God. […] There's not one given to the earth, yes, rather only to God.[12]*

So, it might appear that Christian beliefs are at times and places at odds with the ancestral Maya beliefs; yet, a coexistence still remains. This can be better propped when we consider that these participants were of varying ages, with some working on some of the earliest CBWO projects, while others were recently reintroduced to the area after having been emigrated to the USA for some years. That there may be intellectual distance put between respondents and those ideas which they do not personally adhere to seems entirely possible, given generational changes. After all, the physical work at hand of providing the water to the public is the point in which all these beliefs are coexisting, whether the laborers of differing denominations or faiths recognize or make known their own hybridizing cooperation or not.

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11 R6: […] kekiriqa jawi k'o wi joron, i kakimajij: nab'e kakilo k'olik, y te k'u ri' kakib'ij kekita chech ri Dyos, o ka'an orasyon, ke-keka'an orasyon antes de kekimajij ri chak, kekita chech ri Dyos ke na ka - na ka - na katz'aj ta le joron, u na kasach ta le joron. I, ka'antaj orasyon i je ri' kamajix uk'otik le joron
12 Xaq jun, xaq jun xew che ri Dyos. […] Maj kaya' che le uwach ulew, je' no ke xew che ri Dyos.

Part of what makes this point more palpable is the point made by the fourth

participant that everyone in Nawal Ja' is thankful that there is water, regardless of faith. It's a

matter of reverence by people to either the mother earth or to God, and all for water. (WC04-16)

This participant also saw that the public realizes that the resource of water in Nawal Ja' is a

fortunately plentiful fact: "the people are happy for that because there are places where there are

no springs. The people want to search for water but there is none." (WC04-15)

Idealism: Public Good

Now, we move in the analysis from how people revere their relationship with water

as a vital object to life and toward how that object comes to be seen as a thing in the world with

good qualities for society. We can understand more about how respondents see themselves as a

part of Nawal Ja' and and how water is viewed as the means to the end of meeting the needs of as

many people of the city as possible if we first look at this quote that defines some reactions or

thoughts a citizen might go through as water projects occur in their area: (WC02-10)

> *R2: [...] behind our house passes the tube, the tube passes there, but we do not*
> *say anything. "Why is a tube passing me here, why not there in the other side?",*
> *almost all the people do not say anything because they know that water is*
> *benefiting all of us.[13]*

One thinks that this attitude is prevalent when we bolster it with what was said in

earlier quotes and remind of the belief that springs and water in Nawal Ja' appear to be plentiful.

"[…] about the springs, the people are happy, pleased, because here in Nawal Ja' there are

sufficient springs." (WC04-15) Part of alleviating the stress that may occur when a water project

occurs near one's residence without benefiting from it may come down to a realization that water

as a resource is not going to run out. Another snip of conversation among two respondents and

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13 R2: [...] atrás de nuestra casa pasa el tubo, pasa el tubo allí, pero nosotros no decimos nada "¿Por qué pasarme un
tubo aquí, por qué no hay en otro lado?", casi todo las personas no dicen nada porque ellos saben que el agua es
beneficiando todos nosotros.

myself seems to indicate the surety of the beneficiaries that their springs and systems won't dry

up, as it shows that household utility of the public good is not measured – water use is unlimited

for human consumption and need: (WC03-13)

> *I: Yes, well, and one can use, utilize, all the water that they want?*
>
> *R2: One has to need a… yes! What one needs – one has no-*
>
> *R3: One has no measurement*
>
> *R2: Yes, one has no measurement*
>
> *I: No measurement or limit?*
>
> *R2: What that one needs because, because the spring is sufficient.*
>
> *I: Yes.*
>
> *R2: It springs from, springs… well in the rocks, the water. So, there's no measurement for… for example to each family, there's no measurement per year...*
>
> *R3: Because there's a tank, a tank equal [in size] to this house. There's a tank equal to this house filling itself with all the water. And after, for sharing it all – the people. Like so.[14]*

It's amazing to see no limit, yet, this quote also alights onto what the realist

perspective will draw us toward. A tank the size of a house is still a tank of a finite space, and the

planning that goes into that shall have to be further delineated. Yet, despite this impending

finiteness drawing down what the ideal talk of water as a public good for all can mean, others

maintained the sense of public goodness that grounds these water projects. For example, say that

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14 I: Sí. Y, bueno, y puede usar, utilizar, todo el agua que quieren?
R2: Tiene que necesita una… sí! Lo que necesita uno - no tiene-
R3: No tiene medida
R2: -sí, no tiene medida.
I: No medida o limite.
R2: Lo que una necesita porque porque el nacimiento es suficiente.
I: Sí.
R2: Nace de, nace… pues en las piedras, el agua. Entonces, no hay medida para… por ejemplo a cada familia, no hay una medida del año…
R3: Porque hay un tanque, un tanque igual como ese casa. Hay un tanque igual como ese casa se llena todo las aguas. Y después, a compartir todo - la gente. Así.

a participant cannot pay for the cost of connecting to a water system initially, a committee might

have planned for this and can begin a payment plan: (WC06-13)

> R7: […] when a person can't give, here at once – because it's 900 quetzals – one
> can give, one can pay little by little – with just 50 quetzals, with 200 quetzals,
> with 100 quetzals, but so one reaches the amount...[15]

The issue of paying for these systems thus becomes intertwined with the value of

providing a human necessity to all in the most affordable and convenient manner possible. The

grounding of these projects in such ideas of the public good becomes even more apparent if we

then consider that are potentialities that some beneficiaries never, with *efectivo* or money, pay

into the system outside of investing labor into it. Here a collective sense of ownership might

begin to be vested in the shared responsibility or obligations that people have to each other to

keep the system going. One quote explains: (WC08-03)

> R10: […] There's people that don't have the wherewithal: widows, orphans, those
> whose papa and mama have died, so, we get more or less six, seven, eight, ten –
> ten people of that condition and they just help in manual labor […][16]

While there is little doubt that water in the sense of a private piece of property can be

argued against based on such efforts to lower the barrier of entry to accessing the resource, these

issues do raise a question as to what kind of issues we'll see in understanding access by people in

Nawal Ja' in the "bridge" between the ideal and the real. What seems real about this sense of

public good is the desired effect of transcending suffering that the systems have on recipients

once they are in place. One of the earliest projects discussed by a participant was talked about in

such terms: (WC01-01)

> R1: Really, the people remained satisfied when they saw [our project] because
> the people here were suffering a lot, about water, almost - "there's a spring in

15 R7: […] cuando una persona no puede dar, aquí de una vez- -porque novecientos quetzales, puede dar, puede
pagar poco a poco - ya sea con cincuenta quetzales, con doscientos quetzales, con cien quetzales, pero que llega la
cantidad

16 R10: […] hay gente que no tiene de donde: viudas, huérfanos, se les ha muerto papá mamá, entonces, cogemos
más o menos seis, siete, ocho, diez - diez personas esa condición y solo ayudan en mano de obra [...]

some wells, let's go to carry water," and so much – like that we saw all that and thanks to God that, yes, it [our project] achieved all that we thought, for that now, well, the people are like so. Happy.[17]

Idealism: Collective Ownership of the Project and its Elements

Here we bring out another slight divergence between the idea of collective ownership and the actual "elements" involved in the project itself. These elements might be thought of as the faiths involved (WC01-22), or the leaders carrying out the project along with the whole corps of workers maintaining the system – as one quote puts it: (WC08-08)

R10: Seven, seven elements of the committee. Although, when it's a work, yes all of us work, all of us are leaders when it's work, when there's an execution of a project.[18]

Uniquely, this sort of understanding helps us to see how ownership through work will not be limited just to those who lead the committee. In fact, the number of leaders involved in committees of varying types (CBWO, COCODES, or municipal projects) varies in itself, depending on the year and time they can serve: (WC09-03)

R12: It changes, depending, he says.

I: In the year

R12: In the year because yes, depending, for that he was saying that there is, like decided, a determined time, sometimes, they stay at seven during the directive, and there are years that the amount of elements rise, it goes up to eleven, he was saying. Yes.[19]

---

17 R1: Realmente, la gente quedaron satisfecho cuando vieron porque la gente acá' sufría mucha, por el agua, casi eh- "hay nacimiento en unos pozos vamos a ir a cargar agua," y montón - que sí vimos todo eso y gracias a Dios que sí logró todo el que pensamos nosotros, por eso ahorita pues la gente así está. Contento.
18 R10: Siete, siete elementos del comité. Aunque cuando es obra, sí todos trabajamos todos somos líderes cuando es obra, cuando ya de si hay es una ejecución de un proyecto.
19 R12: Cambia, dependiende dice.
I: En el año
R12: En el año porke si dependiendo, por eso el decía de que hay como decidido un determinado tiempo, a veces, se quedan siete elementos ante la directiva, y hay años de que sube la cantidad de elementos, llega hasta once decía él. Sí.

The above, added to the earlier presented quotes about the most vulnerable in society who have no means to pay for the system (either ever or all at once), in turn indicates empowerment for them, or any individual able to participate, to be elements of equivalent ownership in the project. Ownership seemed to be further qualified by participants words when they would talk about the community as a whole and the water (or land where it was located) as possessed by that community. For instance: (WC01-07)

> *R1: [...] well we had to enter the municipal government as well, he supported us, because every water we have to have them give us a certification of water. Like...*
>
> *I: The municipal government?*
>
> *R1: Yes, the municipal government so that we are able to cede this. Although the water where we went to retrieve it in the mountain is ours, the land. So, from the land we have, there's water there. So, therefore we went to retrieve it without any bidding because it's from that same family, and we gave it to all the people.[20]*

As a matter of course, the above quote also refers to the relationship the committee in which the participant worked had with the leaders of the municipality, which became a common cornerstone for talk on the operations of water projects. Here, the main take is the insinuation that the motions of going to the governmental entities for certifications were merely formal, while customs of the area may have already normalized how to use particular water sources to meet the people's needs. Situational ownership seems to change toward an opposition of the CBWO (or even COCODE) committees to the municipal leadership, especially where the reach of the government is short – for instance: (WC01-13)

> *R1: In neighborhood A where I am, we have three committees – us, one of the neighborhood also, and another of the same neighborhood – so then almost the larger part of us have water. We have sufficient water, almost totally we are not*

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20 R1: […] pues tuvimos que entrar también el municipalidad, él nos apoyó, porque cada agua tenemos que nos da una certificación de agua. Como…
I: ¿La municipalidad?
R1: Sí, la municipalidad para que nos pudiéramos ceder este. Aunque el agua donde fuimos a traer nosotros en la montaña es de nosotros, el terreno. Entonces del terreno que tenemos hay agua allí. Entonces por eso fuimos a traer sin ningún postor porque es de la misma familia y dimos a todo la gente.

*reached by the municipal government and the water of the municipal government.
All that area that we have, it's not the municipal government's. It all belongs,
more to the committees, including a neighborhood there they call B, also there it's
surrounded by our project.[21]*

The opposition between the community water projects and those of the municipality

is more succinctly defined when a later participant is asked about the nature of the governmental

and civil society divide: (WC04-13)

*I: And, those of Parroquia, and of Intervida, those are public? Like, in the sense
of the government, or those are private works, or works of the people?*

*R4: Yes, it's work of the people. It's like private, but it's the people's, the
community's.[22]*

Thus, a wide sense of ownership seems embedded in water work in Nawal Ja'. As

we move through the ideal and real spectrum it should be interesting to further the notions we've

evidenced thus far with more material necessities and situations that participants have discussed.

To reiterate the ideal segments of the analysis, people see being thankful for the

water as a requisite to any given faith's rituals yet gratitude would not seem to be mutually

exclusive of the other faiths when it comes to water work itself, and the operations it will entail.

People also understand that every person needs water to live and that surviving without it is

suffering. Much of their intent in successfully seeing these projects through seems to be to meet

the former while diminishing the latter. So far this appears easily achieved given that many

appear to state again and again that there are sufficient sources of water, and no limits on use.

Lastly, the principles behind carrying out water projects seem to be motivated by an equitable

distribution of the resource itself among their elements (for example, the religions involved, or,

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21 R1: En barrio A donde estoy, somos tres comités - nosotros, uno del barrio también, otro también del mismo
barrio - entonces, casi la mayor parte tenemos agua. Tenemos agua suficiente, casi ya de la municipalidad ya no
tocamos. Y al agua de la municipalidad, todo esa área que tenemos, ya no es de la municipalidad. Ya pertenece, ya
más de los comités, inclusiva hay un barrio que se llama B, también allí estar rodeado también el proyecto de
nosotros.
22 I: Y, los de Parroquia y de Intervida esos son públicos? Como, en el sentido del gobierno, o esos son trabajos
privados, o trabajos de las personas.
R4: Sí es trabajo de las personas. Es como privado, pero es de la gente. De la comunidad.

the laborers as the leaders and vice versa) that diminishes their differences. So, the investments that people make into the project, through labor or money, are not taken as greater than one over the other – especially where rights to the resource might be concerned.

Bridging the Ideal and Real Spectrum: Logic of Resources, Prevention, and Repair

Despite the idealized facets of taking inputs for water work in order to meet the needs of the public in Nawal Ja', there were instances where the limits of such notions seemed to be stressed. For example, in the featured fact of living in a city where water springs are supposed to be plentiful and sufficient for such work. One conversation held that despite an unforeseen twenty day interruption one participant underwent in one neighborhood project's water supply, that everyone in the city has water: (WC05-09)

> *I: […] do you know, like, in general, which are the numbers of access in B of all the families to water? Because I don't know if there are some people that do not have access, because I'm not talking about the 20 days before because it is something...*
>
> *R5: It is an accident.*
>
> *I: Yes, certainly.*
>
> *R5: No, I believe that everyone has water.*
>
> *I: Yes.*
>
> *R5: All the families have water, everyone here, thanks to God, there is much blessing here for water. Here in Nahualá, a lot of water and the water's pretty. Yeah, no. All the people have water. I work with three projects of water, I have three water [supplies]. [If] I don't have one, then use the other, I don't have the other, I use… Yeah.[23]*

23 I: […] ¿sabe usted, como, en general, cuáles son numeros de acceso en B de todas las familias al agua? Porque no sé si hay unas personas que no tienen acceso, porque no estoy hablando de las veinte días anteriores porque es algo…
R5: Es un accidente.
I: Sí, claro.
R5: No, yo creo que todos tienen agua.
I: Sí.
R5: [...] todas las familias tienen agua. Todas aquí, gracias a Dios, mucha bendición aquí de agua. Aquí en Nahualá, mucha agua y el linda agua. Sí, no. Todas las personas tienen agua. Yo trabajo con tres proyectos de agua, tengo tres

Such suppositions about the water component as the constant object and resource involved in the projects make for a "vanishing point", or rather, a "bridging point" on the horizons of water work and this analytical spectrum of the ideal and the real. The bridging point will change "location" as the analysis considers varying aspects of participant descriptions having to do with making the ideal and the real situation meet for water work. Working together, despite religious differences, is just one basic example we've seen.

Specifically, and to start with this bridging, the perhaps never-ending cycle of payments for the system itself came out in a number of ways that begin to bridge the spectrum of ideal and real in a world where not every event can be expected and accidents happen. Opposite of how in the above quote it sounds as though money is no obstacle for everyone to have water, some of the structure of the water projects becomes more apparent if we begin analyzing how other inputs into the work are getting discussed, such as with money: (WC03-14)

> *R3: In the past year, 10 [quetzals], and after another year, the money did not suffice for the repair of the tubes, because that money is for the repair of the tubes, the pipes – that money. One is asked for 15 quetzals, so when all the money is called together, then and after – when a tube breaks, it goes to buy another tube to fix the tube. […] Now if the 15 quetzals run out, it doesn't suffice. Then, the committee, the authorized (maintenance) committee tells one the money already ran out, they ask one for more money but apart from that.[24]*

Another example of paying into the project indicates that the second ask of a year would likely be less than the initial, usually required payment: (WC01-20)

> *R1: Now, if it runs out, we're going to say that the money didn't last, so we gather another bit. We lower the contribution, some 15 or 20 quetzals more, in order to be able to complete the work.[25]*

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aguas. No tengo uno, entonce usa el otro, no tengo el otro, uso.... Sí.

24 R3: El año pasado diez, y después el otro año, no alcanza el dinero para reparación del tubo, porque es el dinero es para reparación de tubo, tubería - ese dinero. Le pide el quince quetzales, entonces cuando se llama junto el dinero, entonces y después cuando rompió una tuba, va a comprar otro tubo para que arregle le tubo. […] Ahora si termina es el quince quetzales, no alcanza. Entonces, el comité, le comité autorizado le diga, ya terminó el dinero, le pida otra dinero per aparte de eso.

25 R1: Ahora, si no alcanza, lo vamos a decir que no alcanzó el dinero, entonces juntamos otro poquito. Bajamos contribuciones, unos de quince o veinte quetzales, más para poder sacar ese trabajo.

The above quotes demonstrate the money collection process a committee must deal with. There may be a need to raise charges for access to a system simply because the system breaks down more often in a given year, and even then, frequent break downs might be more expensive than projected by a given treasurer or committee accountant. It's also now apparent that the secondary charges might vary given the specific repair at hand, or which project we're considering.

These efforts may only represent one strategy for funding and discounting a system, as others also talk about efforts to make preventive updates to the piping of their system which would save money down the road, for instance: (WC05-05)

> R5: The tubes are also very old, but they say that they change it every 15 or 20 years. I'm not sure. Like every 10 or 15 years, the change the piping. Every neighborhood. Like 10, that yeah I'm not sure, but yeah they change the piping. Time passes, 15 years, and they change the piping. They take out the old and put the new. Another 15 years, they take out the old, and they put the new.[26]

Regardless of just when exactly that repairs or new additions to water systems are going to be done, a part going into the work of a project that aims to provide water to all those who participate in it by working for it or paying for it will always be a sort of logical calculus of the means we've seen outlined in these quotes. The types of questions these participants ask themselves about how much money to ask from their beneficiaries, or how much utility one can get out of a section of piping, all model a rationale and what can be mistaken for solely emic logic. Such calculations mean that even though water and springs may be as plentiful as the participants say they are, investing money or labor into the project is no constant like the water resources component appears to be. They also represent a very etic logic in how respondents

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26 R5: Los tubos también están muy viejos, pero dicen que lo cambian a cada quince o veinte años. No estoy seguro. Como a cada diez o quince años, cambian las tuberías. […] Cada komon. Como de diez, eso sí no estoy seguro, pero sí cambian las tuberías. Acaba un tiempo, quince años, y cambian las tuberías. Sacan el viejo y ponen nuevo. Otros quince años sacan lo viejo y ponen otro nuevo.

engineer and and maintain water systems. Every neighborhood of the city has a unique set of challenges and events to go through in order to be successful with their inputs and both give and receive the "mundane", if you will, output of potable water in their homes.

Later in the section of the analysis on realism, we'll begin examining the discussion surrounding the human actions and activities that entail satisfaction of the many projects' aims regarding water use in a more quotidian or mundane fashion, but for the next few sections, we'll come to realize more on the preferred aims of water projects as programs for impacting common and broad goals.

Bridging the Ideal and Real Spectrum: Access

As was alluded to by one participant in the last section, it is totally acceptable for families to have access to more than one water project's piping system in their home. (WC05-09) Here we begin to examine such situations of access more fully, as well as qualify further the types of resource constraints there might be on the final numbers possible for access to a given water supply's piping and tanks, or even to sewers and sanitation methods, which up to this point have had little role in the analysis.

The third interview contained some piecemeal steps that water projects could come in in order to provide access to water in an area: (WC03-06)

> *R3: […] it's good one is able to have two or three or four spigots, or already another project, because there's a source that comes, and the commi- part of all the people [with] each one, each spigot – now, another project comes pulling one more spigot, but already another, so then, for example we have four spigots.[27]*

One of the advantages to such a staggered construction schedule would be as the earlier quotation noted, that if one has no access to a particular project's spigot, they still have

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27 R3: […] utz se puede k'o keb' o oxib' o kaijb' chorro o ya jun chik proyecto, porke hay un nacimiento que viene, y le komi- parte de todo la gente cada uno, cada chorro - ahora, otro proyecto que viene sacando un chorro más pero ya otro, entonce, por ejemplo nosotros tenemos cuatro chorros.

access through one of the others. Yet, the fact of constructing new spigots or water supplies in a serial fashion does mean that not everyone is likely to have access to as many or the same projects as others at any given time.

A question of vital importance to any potential consumer or beneficiary of the water will be: what options are available for water utility in the house? Providers come in one of three forms in Nawal Ja': the municipality, community-based water organizations (CBWOs), and *consejos comunitarios de desarrollo (urbano y rural)* or, urban and rural development community councils (COCODE). A variety of conversations were had that could contrast the varying differences between these forms of water projects – and no small amount of details related to these difference shall be brought out later; however, it should be noted now that that the CBWOs lost some of their autonomy when in 2002 the 11-2002 decree was passed in Guatemala that brought about the development councils system (SISCODE) that works from the community level up to the national level. Hence, COCODEs began to bridge typical civil society organizations, of the kind that CBWOs fell into, to the governmental channels with more rigidity in terms of regulation. Yet, for the tighter relationship and necessary distinction brought about through the COCODE system of reining in the autonomous committees of CBWO projects from before the system, a much greater distance seems to remain in Nawal Ja' between any given water project and the municipal water projects of Sololá specifically. Let us view an example: (WC04-03)

> R4: Let's say for example, of Parroquia [a CBWO], there's only 127 and they're benefited with that project, but, of Intervida [another CBWO] there's like 287 families that are receiving this project of Intervida, and the municipal government, maybe more or less calculating the amounts, like some 35 people are receiving water from the municipal government.[28]

28 R4: Digamos un ejemplo, de Parroquia, solo hay ciento veintisiete y están beneficiados con ese proyecto, pero, de Intervida hay como doscientos ochenta y siete familias que están recibiendo este proyecto de Intervida, y de la municipalidad, tal vez más o menos calculando los tales, como unos treinta y cinco personas que están recibiendo agua de la municipalidad.

When asked why it would be the case that there are such seemingly stark differences in the amount of beneficiaries between the three projects in the participant's neighborhood, they answered: (WC04-17)

> R4: […] from the municipality, it doesn't reach to the town of Nahualá. It doesn't reach because there are many people in Nahualá.
>
> I: Oh, it's for that that it doesn't reach from the municip...
>
> R4: Yes, it's for that it doesn't reach. So, therefore there are sufficient projects, let's say. So like, let's say an example, in E there's a project of Parroquia, there's one of Intervida, but only in that community – it doesn't come here to the center. No one of the center has water from E. The committees wouldn't give it, they don't authorize it. So then, in B here in B, not one family nor one person has a spigot or water from E. Only in E are there two projects: of Parroquia, of Intervida. Only there. In B there's a project there, that's from Intervida too, but only in B. Yes. It's like that.[29]

Interestingly, the respondent also defines here the customs regarding delineation of a project's boundaries as being the same as a neighborhood's, with no likely overlap – even if they share the same organizational backing, as say the *Intervida* project appears to. However, can the reason for their being so little municipal water supply brought in to the area stand? It seems that the amount of people in Nawal Ja' being the reason for the municipal leadership to allocate less support would stand independently because it certainly would explain the state of things in the city. Yet, this participant appended to that cause the detail that because there are so many people, there is a sufficient number of projects. Also, the participant and I agreed elsewhere that more may be going on: (WC04-18)

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29 R4: […] de la municipalidad, no alcanza por el pueblo de Nahualá. No alcanza porque mucha gente hay aquí en Nahualá.
I: A es por eso que no alcanza la de la munici…
R4: Sí, es por eso no alcanza. Entonces, por eso hay bastantes proyectos digamos. Así como, digamos un ejemplo, en E hay de Parroquia, hay de Intervida, pero solo en la comunidad - no viene aquí en el centro. Ni uno del centro tiene agua de E. No dan los comités, no autoricen. Entonses, en B aquí en B, ni una ni una familia ni una persona tiene chorro o agua de E. Solo en E está los dos proyectos de Parroquia, de Intervida. Solo allí. De B hay otro proyecto allí, que es de Intervida también, pero solo de B. Sí. Así está.

I: It would be interesting to compare further these two, like those of the communities and if there's of the… the… municipal system, what is it they think, or have opinions on over...

R4: Exactl-

I: … the two services, everything.

R4: Yes, everything, yes, it's important, it's important, the municipal [system] doesn't cover, it can't cover all the people of Nahualá. It's not able. Yes.

I: Yes. I don't think that all the cities in the world can do water like so, or the governments...

R4: Yes, yes, always there are different, different springs, different springs…[30]

       The participant agreed that the differences between water supplies could also relate to why a city or government does not provide more water to Nawal Ja' and that city governments can't expect to reach every single person. Then, the recognition that the sources of water are always different does draw out consideration for what kind of resources there are in the area of the city. My perception that Nawal Ja' is an area with a wide amount and variety of water sources or springs means that its historiological narrative, and potential geographic facts supporting such a narrative (as participants evidence here by their accounts), may have farther reaching implications to others, in the political sphere, in the department of Sololá than I'd considered. Regardless, the participant does correlate the population size, the types of water supply available, and the pre-existing water project situation to the issue. Whether it may in fact be the case that Nawal Ja' and its citizenry occupy a more autonomous position or character in the department of

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30 I: Sería interesante a comparar más estes dos, como las de la comunidades y si hay lo del… las… el sistema de la municipalidad, lo que piensan, opinan sobre…
R4: Exactament-
I: ...los dos servicios, todo.
R4: Sí, todo, sí es importante, es importante, de la municipalidad no cubre, no lo puede cubrir toda la gente de Nahualá. No está capacitado. Sí.
I: Je'. No pienso que todas ciudades en el mundo pueden hacer agua así, o los gobiernos…
R4: Sí, sí, siempre hay diferentes, diferentes nacimientos, diferentes nacimientos…

Sololá is unable to proven here in the analysis, but the inference may be supported by the above

for why the municipality is not strongly supporting the area's water provision efforts.

Now, access to water and sanitation is a more expansive topic than just the

relationship of a population to its government's support, especially for Nawal Ja'. As another

participant did mention of their CBWO project: (WC07-01)

> R9: […] when the projects come sometimes, not every, not everyone benefits.
> Only the people who come and do their work […][31]

Relenting that despite all the prior evidence of opinions that there is plenty of water

in Nawal Ja', and plenty of water projects, not everyone is guaranteed benefit if they do not put

in the labor required to make such work successful. This also implies that while the "ideal"

principles behind doing the work, of the public good, public stewardship of a vital resource, are

motivators, there are "real" detractors and limits to what just one project will be able to do in

terms of increasing access. Access is also constrained by what participants often referred to as

the *uchuq'ab'* of the water (sometimes as *fuerza*), or the water's pressure or force, for example:

(WC02-08)

> R2: […] if the water pressure is a lot, the committee asks how many people can
> be sustained by the water. Whether very many people can be sustained, or if
> there's no pressure to the water, yeah, the water doesn't move. (Then) there's no
> water in the houses. Only for that: if there are many people and the water is small
> – it's not good.[32]

Taken in most contexts, the force or pressure of the water is a big factor for

analyzing how the operations and activities of a committee must unfold to ensure sustainable

water provision to the benefiting families. In another interview, the question of how many people

can be supported by a water supply also gets glossed as its "capacity" or "size": (WC06-04)

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31 R9: […] los proyectos cuando vienen a veces no a todo, no a toda la gente de les beneficien. Solo a la gente que viene y hace su obra [...]
32 R2: […] le joron we sib'alaj k'o ri uchu'qab' le joron le komite keta'am e jampa winaq utzuku che le joron. We sib'alaj e k'i le winaq ketzukuxik, we maj k'o chuq'ab' le joron, je', na kab'e ta le joron. Maj le joron cho ta le ja. Xa rumal e k'i le winaq i nitz' le joron - na utz taj.

R6: They know how many people are paying them for the water. But such depends on its capacity, it all depends on the size of the water. If it's a bigger (source of) water, they can support many people, or many people can consume it.[33]

Through quotes like these, access is turned into a function of the water's physical attributes. While the conversations did not delve into whether the force or size of the water was characterized from the perspective of the springs themselves, the tanks they used to collect from springs, or the last spigots in the supply line, one respondent did note a detail about the how the rate of water flow gets measured: (WC08-04)

I: This pressure in the piping has to do with how many people can benefit, too...

R10: Yes, it has to be like so, has to be the pressure of the water, in how much time is a barrel or container, 5 gallons, [filled], so from there one sees how many families [a source supports]. Then, later one makes a list, the number of families, [and] begins.[34]

While those details mostly pertain to how the water's physical qualities are getting measured, it bears directly on the question of distribution, and just who will be able to benefit from water work. While the operations related to the specific committees (of CBWOs or COCODEs) at the helm of making such decisions have yet to be considered, it is certainly evidenced that investments on the beneficiaries' parts in the form of payments or labor are integral to the amount of access to potable water a project can increase. Also, one may appreciate the reminder that the word *chuq'ab'* has significance from the story about Esteban noted earlier, where he called on the efforts and strength of people to ask God for rain, although those types of investments are clearly not called for here, the referent feature of "force" works as another "bridging point" between the water and human components.

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33 R6: Keta'am e jampa winaq kekitoj le joron. Pero komo el depende le le ucapacidad, ta xew depende le unimal le joron. Sea más nim le joron', e k'i winaq kekirij, o e k'i winaq ketijowik,
34 I: Este presión en la tubería tiene que ver con cuantas personas pueden benefician- también
R10: Sí así tiene que ser, tiene que ser la presión del agua, cuanto tiempo llena un tonel o un bote, cin-cinco galones, entonces de allí se mira para cuantas familias es. Entonces, luego se hace un listado, el número de las familias, se empieza.

Since access to a potable water supply has been mostly emphasized, it would be valuable to also consider the snips of interviews that were taken up with characterizing sanitation methods in the city. One interview, near the urban center of Nawal Ja' although outside of the actual location of the participant's neighborhood project, discussed this at length: (WC04-09)

> *R4: Like already there's many people that have water from spigots, and they pay for the bathroom costs. […] there aren't families that use latrines anymore. They already have bathrooms, but with water, so...*
>
> *I: It's a, like, toilet.*
>
> *R4: Toilet[s], all the people. They don't have anymore, they don't have those anymore… like, I was telling you what you were saying to me, latrines. The latrine you know, more or less, that one digs in the ground. One digs the hole, and after arriving there, then they put a, a cement there where...*
>
> *I: Yeah, there are types with cement, and types only with mud or with sand, too.*
>
> *R4: Also, but now not anymore, already now one uses the toilet more, with water. Or the toilet has a connection with water, and like all the people of E, already they have drains, water, so, they connect it with the water, and connect the toilet with the drains, and there goes all the filth.[35]*

In some places then, water supply and sanitation are quite integrated and may be classified as what the JMP may call the "improved" kind. Yet, other places and interviews were expressed as less likely to have any "improved" sanitation: (WC07-09)

> *I: So, the types, or the amounts of toilets – there are no numbers of that?*
>
> *R9: There's no numbers – normally, normally the people from here don't use a toilet.*
>
> *I: Latrines?*

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35 R4: Como ya hay bastante gente que tiene agua de chorro, y compran las tasas de, de sanitario. […] ya no hay familias que usan letrinas. Ya tienen sanitario pero ya es de agua, entonces…
I: Es uno, como, inodoro.
R4: Inodoro, todo la gente, ya no tienen, ya no tienen esos… como le dijera yo el que me está diciendo, letrinas. La letrina usted sabe mas o menos que se escarba en la tierra, Kak'ot le jul, e xulik, te r'i kaya' jun, de jun semento wi donde…
I: Je' hay tipos con cemento y tipos solamente de tierra o ruk' arena también.
R4: Tambien, pero ahora ya no, ahora ya se usa mas el inodoro, con agua. O que el inodoro va a conexion con agua, y como ya toda la gente de E, ya tienen drenaje, agua, entonces, lo conectan con el agua, y se conecta el inodoro con el drenaje, y allí se va toda la suciedad.

R9: No, no.

I: Latrines or?

R9: Rather they make a hole.[36]

Water projects may invest parts of their labor on sanitation methods over more time, yet, access to a water-connected bathroom may not be a fact easily parsed out from a CBWO's measures of access. Another participant, who was working on a sanitation project at the time of the interview, somewhat explains this: (WC05-06)

I: When you all began this project that you all are doing now, were data required over how many toilets, how many – I don't know – types of sanitation there are – there are en the houses?

R5: No, no. It depends on each family. Because it's not a project of the municipal government, it's a project, like I told you, of each person. Yeah. It depends on the person. If you have money, you can buy a nice toilet, good and you do it, but if you don't have money, you buy a toilet that… that's simpler, because it's not a government project that they were [doing] for us[37]

A foreseeable question that could arise following such a distinction then is what will be the effect of these different management methods for surveying sanitation in the city. Speculation now would be inappropriate, however, because there is other evidence we've yet to go over that pertains to CBWO or COCODE management of sanitation methods through what participants often referred to as "actas" which lay out the agreements that homeowners have with their local committees and governance – thus, some kind of retrospective surveillance on the part

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36 I: Entonces, los tipos, o los cantidades de inodoros - ¿no hay números de eso?
R9: No hay numeros - normalmente, normalmente la gente de aquí no usa inodoro.
I: Letrinas?
R9: No, no.
I: Letrinas o
R9: Sino hacen hoyo.
37 I: ¿Cuando empezaron ustedes este proyecto que están haciendo ahora, requieren datos sobre cuántos inodoros, cuántos - no sé - tipos de saneamiento k'o - que hay en las casas?
R5: No, no. Es depende de cada familia. Porque no es un proyecto de la municipalidad, es un proyecto como te dije, de la, de cada persona. Yeah. Depende de la persona. Si usted tiene dinero, usted compra un inodoro lindo, bonito y usted lo hace, pero si usted no tiene dinero usted compra un inodoro de… del más sencillo que. Porque no es un proyecto que el gobierno nos estaban.

of even community-based water committees could be considered possible given the

documentation of such authorizations.

I digress, since potential future projects will be discussed later, and now turn toward

a more general description made by two participants regarding data management for numbers on

access to water supply or sanitation: (WC03-07)

R2: Each committee has their data.

R3: Each committee has data.

I: All of the spigots, not one… there's not a committee with all the data?

*R2: Yeah, it's not good, not good… yeah, there's none. Yeah in all, in all the water
(work) yeah, there's not just one committee. There are many: one project of F,
there's a committee, a project from D, there's a committee, (for) every project
there's a committee.[38]*

So, access to water is likely increased for Nawal Ja' by having so many projects, and

so many groups or committees for potential beneficiaries to work with – especially considering

the apparent lack of supportive emphasis by the municipality. Still, the other dimensions this

brings on to the system will have to be considered further.

Bridging the Ideal and Real Spectrum: Water Quality

Tied very closely to the discussion on how water is accessed in Nawal Ja' are

questions of quality and quality control. This section describes a variety of perspectives about

water quality and how higher quality or clean water gets defined, and by who. The kinds of talk

here bear directly on the sorts of understandings there are in the city that could be relevant to etic

logics or definitions of "improved" or "unimproved" water supplies, while also carving out a

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38 R2: Cada comité tiene sus datos.
R3: Cada comité tiene datos.
I: Juntiro re los chorros, na jun… maj jun comite ruk' juntiro los datos?
R2: Je', na utz taj, na utz taj... je' maj. Je' pa juntir, pa juntir le le joron je' maj xa jun komite. E k'i, jun tz'ob'aj re
pa F k'o le komite, jun tz'ob'aj re le D k'o le komite. Juntir le tz'ob'aj, k'olik komite.

distinct discourse of emic logic that looks at the "water component" and says just what it is for the sake of Nawal Ja'.

We know that access to a water supply for people is driven by factors, like the force of water coming from a spring, or how much community-based effort can direct that force into a system (and with little governmental support), but, participants also talked on "*saq'*", or clean, sources of water and where or how they themselves had to be found or accessed. One difference tied to quality was whether the water supply was "de piedra" (from rock) or "de tierra" (from land, though here more referent to the surface of the land): (WC05-04)

> *R5: But that water that I'm telling you about, what I drink, that, yes, is water – I don't know if you have heard the word they say – crystalline.*
>
> *I: Crystalline?*
>
> *R5: Crystalline… like – like, like really shiny. Like a water but...*
>
> *I: It shimmers…?*
>
> *R5: It shimmers! Sensational, exactly that is that water. Because it comes from a rock, and that rock is from a mountain. And the people did not re-do much, they made a hole and from the rock it goes out. It doesn't come from the surface (land).*
>
> *I: It doesn't come from the land?*
>
> *R5: It doesn't come from the surface, it comes from the rock.*
>
> *I: Yes… do you think, you think that this rock protects this spring?*
>
> *R5: It protects this spring of water, because it's natural, it's natural.[39]*

---

39 R5: […] Pero ese agua que yo te digo lo que yo bebo, eso sí es agua - no sé si has escuchado la palabra que dicen: cristalina.
I: Cristalina?
R5: Cristalina… like - como, como bien brillante. Como un agua pero…
I: ¿Kachuplin…?
R5: ¡Kachuplinik! Sensacional, exactamente es ese agua. Porque viene de una piedra, y esa piedra es de una montaña. Y la gente no más rehizo, hizo un hoyo y de la piedra sale. No viene de la tierra.
I: No viene de tierra?
R5: No viene de la tierra, viene de la piedra.
I: Sí… piensa, piensas que este piedra protege este fuente?
R5: Protege este fuente de agua, porque es natural, es natural

It would also be telling that the distinction as mentioned above associates the mountain with the spring that comes out by or from under a rock. Other descriptions bring detail and modifications to this subterranean and surface distinction of water as either safe to drink or not. For instance, one participant talks about the "*Uwa Kaqakoj*" (the Food of the Red Mountain Lion), a local river that should not be used when compared to a fresh spring: (WC02-14)

> *R2: The river, yeah, it's not good for the people to drink, just cause of the impurity […] The river the Food of the Red Mountain Lion, yeah, it would not be good to come in a tube we use - it comes, the people drink it, yeah, not good. The Food of the Red Mountain Lion yeah, it's not the same as the spring. Yes, not the same. Just because the Food of the Red Mountain Lion is not good, impure, the spring, really clean.[40]*

Another participant clarifies in depth how there are three classes of water used by people in one community, and indicates that the water from the mountains is usually cleaner spring water for human consumption: (WC09-10)

> *R12: […] here the water, the clean water good to drink, we use for our drinks, our food – three [kinds] – one has gone to our plants, it's said like this, one has gone to our domesticated animals again like that. One has gone to our water, like this, has gone from the top of the mountain, and it is only on top of the mountain. From the mountain, we bring it here, the spring like this, they see, but the water they have taken and they see, it is only on the mountain [...]*
>
> *I: But, does the committee know the kind of spring?*
>
> *R12: It knows. I am specifying for you, in that we are unable to differentiate the, the types of sources of water – we can't because of a lack of tools. No. We don't recognize them, but the question is about each family here, they have approximately three spigots, different sources of water.*
>
> *I: Yes.*
>
> *R12: Yes, so then, there's one that's only for crops, then, but that is not directly from the source, rather that is from the streams, there one extracts it for the plants...*
>
> *I: Yes, the plants.*

---

40 R2: […] Le b'inel ja', je', na utz ta kakitij le e winaq, xa rumal tzil […] Le b'inel le uwa' kaqak'oj, je', na utz taj kape le kaqak'oj le jun tubo, kapetik, kakitij le e winaq. Je' na utz taj. Le uwa' kaqak'oj, je' na junam ta ruk' le nacimiento. Je', na junam ta ruk'. Xa rumal na utz ta le uwa kaqakoj, tz'il, le nacimiento, sib'alaj saq.

*R12: Therefore, the only that we can differentiate, one that they bring directly
from the rivers, and separately are the springs, the sources of water are three but
we can't differentiate.[M. Sattler assisted]*[41]

The thought of using different types of water sources for differing purposes is not

unique to one project or neighborhood over another, as others make clear (WC08-11) (WC01-18)

From the above, it appears particularly clear that there appears to be a leaning toward potable

water supplies as needing to come from the springs in the mountains and hills. Another quote

might evidence that further: (WC01-08)

*R1: […] They (the health center) examine the water, they gave a test of the water,
if it's good to drink the waters, but yeah they said that yes it's good. The water,
that comes from the mountain, we only capture (it), therefore it's pure spring
[…]*[42]

Apart from where water comes from, two other participants explained that when a

rock, or rocks, are being used at the spring to protect it, it's necessary for workers to place the

rock purposefully. They also make note that cement can be utilized in the protection of the spring

too: (WC06-10)

*R6: […] the water spout, one puts the rock like this, puts the rock like this, and
the water goes through the rock. One makes the water's path so that it doesn't
close, or block the spring, it comes, and one lines up the rock, lines up the rock*

---

41 R12: […] le chi' le joron le saqajoron le utz katijowik, kqakoj che qabebida, alimentos - oxib' - jun elenaq le
chech ib'aq kuchaxik je wa', jun elenaq la' xe kejab'al jun chik je la'. Jun elenaq ri chiqaqaja' je b'a elenaq puwi
juyub', i xaq pa juyub' k'o wi. Pa juyub', kak'am uloq, na na, le k'wa' je wa' ke'ilik, per rib' joron kek'amoq i ke'il
taj xaq pa juyub' k'o wi […]
I: Par, ¿reta'am le uwach re le k'wa' pa le komite?
R12: Reta'am. Yo le estaba especificando, de que nosotros no podemos diferenciar las, los tipos de fuente de agua -
no podemos por la falta de herramientas - no - desconocemos, pero la cuestion es de cada familia acá tienen
aproximadamente tres chorros diferentes nacimientos de agua.
I: Sí.
R12: Sí, entonces, hay uno que solo es para cultivos, entonces, pero eso no es de nacimiento directamente, sino que
de los riachuelos, allí lo extrae para las siembras…
I: Sí, las siembras
R12: Entonces es lo único que podemos diferenciar, uno que traen directamente de los ríos y aparte son los del
nacimientos, fuentes de agua son tres pero no podemos diferenciar.
42 R1: […] Ellos examinaron el agua, dieron un examen del agua, si es bueno para tomar aguas, pero sí ellos dijeron
que sí está bien. El agua, eso sale en la montaña, solo captamos nosotros entonces es puro nacimiento [...].

[…] they leave behind cement, they use cement there so that the earth doesn't mix with the water.[43]

The second respondent in this interview also clarified and discussed rocks and

cement being used: (WC06-12)

R7: He is saying that when the work has begun, they take the rock, and they place it, they place it, they place it, they make a path for the water, and then, they put the cement, they place on top the rock so that the filth, the earth, […] it doesn't mix itself, mix, doesn't mix itself with the water so that the water comes clean, clean water.[M. Sattler assisted][44]

From this description, the rocks serve the purpose of filtering some of the potential

large debris that might fill up the tank on or near the spring, and the cement works to define the

exact dimensions where the rock is set in order to do this filtering. The question would remain,

how well does the overall design work? Several participants discussed that testing of the

project's water is handled cooperatively between the health center and the workers of the project,

and outlined the process or results of such efforts – which seem to vary: (WC01-09) (WC01-10)

R1: […] We go and take the water in the mountain, and we go ourselves to drop it off in the health center. They examine that. Yes, we always travel to the mountain and we have to take the water in a bottle so that they will examine if it's good. […] we put the name of the place where we went to take the water; which project, number one, number two, number three, number four, and the place where we went, so then we take all the water and we go to leave it there with them.[45]

While the participant makes it clear that multiple samples can be taken for multiple

projects, others explain that multiple samples can be taken at three separate points in the system:

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43 R6: […] kak'ix le le joron, kaya' ab'aj je wa', kaya ab'aj je wa', i kab'in le joron chuxol le ab'aj. Kaya' ub'e le joron para ke na ka- na katz'apij ta o na kaq'atij ta le k'wa', kapetik, i kakachol le ab'aj, kachol le ab'aj […] kakoj kan semente, kakoj semente wi para ke na kaqaj ta le ulew ruk' le joron.
44 R7: Le are kub'ij aretaq chi kamajix le chak, kakik'am le ab'aj, kakiya'o, kakiya'o, kakiya'o, kakib'aan ub'e le le joron. K'a te ri, kakiya' le le semento, kakiya' puwi le ab'aj arech le tz'il, le ulew, [...] na kayuj ta rib', mezcla, na kayuj ta rib' ruk' le joron arech le joron kapetik saq, saq le joron.
45 R1: […] Nosotros fuimos a traer el agua en la montaña, y nos fuimos a dejar en el centro de salud. Ellos examinaron eso. Sí, nosotros siempre viajamos en la montaña y tenemos que traer el agua en una botella para que ellos examinarán si está bien. […] ponemos el nombre de lugar donde fuimos a traer el agua; tal proyecto, número uno, número dos, número tres, número cuatro y el lugar donde fuimos a traer, entonces, ya traemos todo el agua y lo vamos a dejar allí con ellos.

the tank or well itself, the first spigot, and the last spigot. Presumably then, how well a system is working is known from start to finish: (WC03-05)

> *R3: The first water, in the mountain where the water comes from, we take a sample from the mountain, so after we arrive here, there's the first spigot, we take a sample in the spigot. We take a sample from the spigot, carry it with, and they look at it. We take a sample from the last spigot, so that they see here, here, and like that […][46]*

The issue gets clarified a bit though when that we consider that another participant mentions the three points as being the spring (in the mountain), the tank (presumably the first spigot being next to the release valve), and the last spigot in the system: (WC04-06)

> *R4: There are times that the health center workers request a sample of water, at the last spigot, at the tank, and up to where the water comes from in the hill. So then, they examine it.[47]*

Next, since there is apparently some kind of water quality testing done on any given project that is operating, the conversation could lean to finding out how often such tests were done. When it was discussed, some said once a year (WC02, WC03, WC04), one said twice a year (WC07), and one other said maybe once every few years (WC09).

Related to such activity is how participants mentioned the operation of committees of maintenance workers who go to the project's tanks to clean them at varying intervals of time. When asked, one respondent says their maintenance workers go to the tank once a month and their project's water is tested twice a year. This mainly serves as a preview to later discussions on the maintenance and operations of committees in CBWOs and COCODEs: (WC07-05)

> *I: Here, the health center sends, sends a worker that, that says, or takes, takes back a sample, a sample of water here?*

> *R8: Like that, yes.*

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46 R3: Le le nab'e joron, pa le juyub' kape wi la joron, kaqesaj le muestra pa le juyub', vay despues kujulik: k'o le nab'e chorro, oj kaqesaj jun muestra pa le chorro, kaqesaj jun muestra pa le chorro, kak'am b'ik, y kek'aya, keqesaj jun muestra hasta el ultimo chorro, entons para que ilik ri waral ri waral y je la' […]
47 R4: […] Hay veces los trabajadores de la ce- del centro de salud piden una muestra de agua, en el último chorro, en el tanque, y hasta dónde viene el agua en el cerro. Entonces, ellos le examinan.

I: Yes… how many times a year, or in-?

R8: Two times a year.

*I: Two times… in the mainten- the maintenance committee works every month?
One time every month?*

R8: Like that.[48]

One point of interest in the above dialogue is that I as an interviewer asked questions

with relatively embedded leads from having heard other participants, such as the idea that the

health center sends someone to the area to get the samples, or that the maintenance committee

works just once a month. This will provide better analytical and comparative foundation for the

sorts of obligations and responsibilities of the parties involved in defining and testing the quality

of water supplies which people in Nawal Ja' consume that get talked about later.

To finish with the section on water quality, we must first return to the earlier noted

discussion of other sanitation methods. This will be vital to setting up the following discussion

on the opinions and words of participants that relate ideas of the water's purity to the health of

people, and the sorts of forces at work there: (WC05-03)

*R5: […] There's maintenance that they do, but more so they go and see the well,
the well of the water, if it's clean, if it needs to be cleaned, to wash – yeah, you
understand what I'm saying, right?*

I: Yes, yes. In the tanks… yes.

*R5: Yes, in the tanks it needs to be cleaned. That is the maintenance it requires,
but for the water there's no maintenance. Or it's like, using a filter, or putting a
chemical in to kill the microbes, there's none of that. But they say that, the health
center here the other year, they say that they are going to join all the drains,*

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48 I: Le le waral, le nima kunab'al ja kataq, kataq jun chakunel chi, chi kach'a, o kak'am, kak'am loq jun muestra, juna frasco rech joron waral?
R8: Je la', je'.
I: Je'... ¿Jampa mul pa junab', o pa-
R8: Ka'mul jun año
I: Ka'mul … ¿pa le manten- le komite re mantenimiento, kachak ronojel le ik'? ¿Jumul ronojel ik'?
R8: Je la' .

they're going to make just one, and they're going to use a machine in order to mix it well. Or it is so that they separate it, and the good and the bad...

I: And, the municipality began that?

R5: The municipal government is working on that, but that costs a lot of money.[49]

That participant makes the first note of other water cleaning techniques that up to that point in the interviews had yet to be mentioned: chemical additives that eliminate microbes, and machines that can separate out the water from the waste coming from sewage. Although the water treatment facilities sound like they are work in progress for the area, another participant later on brought up the idea of chemical treatments, and, the opinions on them: (WC08-09)

R10: […] the health center says for there to be no sickness, it's necessary to chlorinate the tank, but the people still don't do it.

I: Who, who says that chlor-?

R10: The health center, so that the parasites or bacteria in it really have died, and the water's inside is pure, […] so it examines the water, and the tests say: apt for human consumption, the chlorine serves no purpose. And, but, the health center insists that one puts chlorine in the water.

I: To the committee or to…?

R10: To the committee, to the beneficiaries – and the beneficiaries stayed in consensus, they said, "the health center said, 'How many people have gotten diarrhea because of our water?' None. Why do they want us to chlorinate the water? There's no, there's no need for us to chlorinate the water." [M. Sattler assisted][50]

49 R5: [...] Hay mantenimiento que lo hacen pero, ellos lo más van y y si ves el pozo, el pozo del agua, si está limpio, hay que limpiarlo, lavar - ¿sí entiendes lo que digo, verdad?
I: Sí sí. En los tanques… sí
R5: Sí en los tanques hay que lavarlo. Ese es el mantenimiento que usa, pero el agua no hay un mantenimiento. O sea, como usa un filtro, o échale un químico para que mata los microbios, eso no hay. Pero dicen que el centro de salud de aquí al otro año, dicen que van a juntar todos de las drenajes van a hacer solamente uno, y van a usar una máquina para que mezcle lo bueno. O sea para que se separelo, y es bueno y es mal…
I: Y, ¿el municipio empezó ese?
R5: Está trabajando la municipalidad en eso, pero eso cuesta mucho dinero.
50 R10: […] le centro de salud kub'ij le are arech maj yab'il rajawaxik ka'an clorar el tanke, per le winaq na ka'an ta k'a.
I: ¿Jachin, jachin kab'ij chi clo-?
R10: Le centro de salud arech utz ke k'amisax le chikop chupam, i pam puro le ja', i komo kayom le pruebas, arechi k'a ka'an examinar ri ja', i le pruebas kub'ij: apto para consumo humano, maj upatan le cloro. I, pero le centro de salud kon exigir le are de que kaya cloro ruk' le ja'

Given such a conclusion, that no one is getting ill from the quality of the water supplied, the rhetorical question is: why would public health, in the epidemiological sense, be deemed relevant at all? The reasoning of participants is sound: water treatment may be but another step given current test results, and they are certain that measures have been taken to avoid impurities in the water sources. Here, we have seen a great deal on how the qualities of water are talked about and perceived, and how water for drinking is tied to the idea of springs in mountains and their purity. This purity drives efforts, from prayer to cleaning to cementing, to protect such sources prior to extracting them that synthesize emic and etic logics. We have also seen that water can be classified by other purposes, like for agriculture or livestock, and we can now assume that despite earlier ideas about the sufficiency of water in Nawal Ja' there are pragmatic, or realistic, activities which prioritize ways and means for continually providing good water to the population.

Bridging the Ideal and Real Spectrum: Lack of Public Health Emphasis

Finishing off the bridge in this spectrum from the ideal to the real in the analysis is this section on an apparent lack of public health efforts in the water projects. The notions of purity and classes of water serving particular functions in Nawal Ja' shall be relevant again, although we will be rounding such notions off into more discrete features of health that can fill in the questions made to participants around this topic again and again. The point, then, is not to analyze this lack from the epidemiological perspective, though a lack in that perspective it may be, but to understand that the occurrence of a positive, and collective, well-being in Nawal Ja' does not have to mete up to any concept of "public health" reviewed earlier in the thesis.

I: Che le komite o che…?
R10: Che le komite, chike le beneficiarios - i le xekanaj le beneficiarios consenso, kib'ij, xub'ij le centro de salud e jampa e winaq kon diarrhea kopan diario umak' le qaja', maj - ¿jas che kiwaj kaqa'an clorar le ja'? Maj, maj rajawaxik qa'an clorar le ja'.

First, it would be essential to reiterate the certainty that participants could carry

regarding the purity of water their project provides: (WC04-07)

> *I: In terms of other measurements like the water quality, does the Parroquia*
> *project do some measurements like the number of sicknesses in...*
>
> *R4: If the water is contaminated, you are saying, or not?*
>
> *I: Basically if, if you keep, or if you all keep some data over: "ah well, we see*
> *that in this area of the neighborhood there are some people that are getting si-"*
>
> *R4: Sick from the water?*
>
> *I: Maybe from the water but...*
>
> *R4: Yes, yes, yes. No. There's not that. The exam that the health center workers*
> *request, we are with them already when they give the results, of the sample, the*
> *test of the water comes out: zero contamination. Zero, there's no contamination.*
> *From the spring, from the tank, from the spigot – there's none. These periods, like*
> *three years, I have seen that they have taken exams of the water – zero*
> *contamination. The water is not contaminated. Pure, pure, clean.[51]*

The experience of this participant almost categorically denies that sickness among

the Parroquia project beneficiaries could have anything to do with the water quality. It's not a

matter of obstinacy but of evidence. The participants' lived experiences with the water systems

can be examined further here in the context of the question of whether any of the respondents'

projects track sickness incidence, or if they work with other health projects that do. A couple of

respondents lay out the basic response to these questions (WC02-05) (WC03-04), but here is just

one example: (WC02-05)

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51 I: ¿En términos de otros medidas como la calidad de agua, hacen el proyecto rech Parroquia algunas medidas
como el número de enfermedades en…
R4: Si el agua está contaminada, dice usted, o no?
I: Básicamente si si llevas, o si llevan ustedes, algunos datos sobre: "a bueno, vemos que en este área del barrio hay
algunas personas que están enferm-
R4: Enfermos por el agua?
I: Quizás por el agua pero…
R4: Sí sí sí. No. No hay. El examen que pide los trabajadores del centro de salud, nosotros estamos a ellos ya cuando
dan el resultado ellos, de la muestra, el examen del agua sale cero contaminación. Cero, no hay contaminación. Del
nacimiento, del tanque, del chorro - no hay. Estos tiempos, como tres años, he visto yo que han sacado exámenes del
agua, cero contaminación. No está contaminado el agua. Puro puro saq'.

I: Does the water committee work with a health project in the neighborhood?

R2: It does not. Yeah, there's nothing.

I: And specifically like municipal projects, or something like that – or something of collaboration between the water committee with public health projects...

R2: There's nothing, nothing.[52]

But, the quote above leans to mentioning or referring only to municipal health projects. When another participant was asked about civil society or non-profit health projects, the result appeared the same: (WC04-05)

I: Do you know if the Parroquia project works with health projects of the municipal government, or public health projects? That come from the government specifically.

R4: No.

I: Or something different, like from the private side: are there private organizations or non-profits that do projects...

R4: No. Only, only the community.[53]

This evidences a sort of reaffirmation of what has been discussed so far about the collective ownership of the projects. The autonomous nature of getting these projects done on a collective basis by the community itself could mean that outside projects are extraneous to meeting the need of water access, or potential obstacles to be avoided altogether.

In another quote, it becomes apparent that the sanitation project working on sewer systems in one neighborhood also had no partnership with any public health project: (WC05-01)

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52 I: Kachak jun le komite re agua, re joron, ruk' jun proyecto re salud, re le rutzil wachaj, pa le komon?
R2: Na kachakun taj. Je', maj.
I: Y específicamente como proyectos de la municipalidad, o algo así - algo de la colaboración entre le comité de agua ruk' proyectos de salud pública.
R2: Maj, maj.
53 I: ¿Sabe usted si el proyecto rech Parroquia trabaja con proyectos de salud de la municipalidad o proyectos de la salud del público? Que vienen del gobierno, específicamente.
R4: No.
I: O algo diferente, como del lado privado: hay organizaciones privados o sin lucro hacen proyectos…
R4: No. Solo, solo la comunidad.

I: Do you know if this project has to do with a work, or another project, or possibly investigation of the health center – in the municipality, or if, I don't know, are there others…

R5: There's another investigation of the health center, yes.

I: But, is it supporting in this project with the drainage… here?

R5: No, no, no.[54]

So then, the impending side of the story to settle is what respondents make of the health projects or research investigations there appear to be. This is a broad topic that is approached in a number of ways throughout the interviews. For example, here are some facts about what a health project's purpose is: (WC07-07)

I: But then, the – it's that, it's that he sounded a little positive, so, well then the health center reviews illness in L, or like, li- they compile, check, review, or…?

R9: Yes they compile. The health center has to compile, yes they do it. But the committee, do, do they go to compile? No.

I: So then, they send a, a team or some people...

R9: The health center?

I: Yes yes, that interviews homes or something…

R9: Yes.

I: But not specifically over water?

R9: There's nothing specifically over water.[55]

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54 I: ¿Sabe si este proyecto tiene que ver con un trabajo, o un otro proyecto, o posiblemente investigación del centro de salud - en el municipio, o si, no sé hay otros…
R5: Hay otra investigación de centro de salud, sí.
I: Pero, está apoyando en este proyecto con drenaje… aquí?
R5: No, no no.
55 I: Par, k'u ri' le - es que, es que sonó un poco positivo, entonces, k'u ri' le nima kunab'al ja kaq'atuj le yab'il pa L o komo, ko- recopilan, kaq'atuj, revisar o…
R9: Si recopilan. El centro de salud tiene que recopilar, sí lo hacen. Pero el comité que que vaya a copilar, no.
I: Entonces, ellos envian una, un equipo o algo de personas
R9: El centro de salud?
I: Sí sí que entrevistan a las casas o algo
R9: Sí
I: Pero no especificamente sobre agua
R9: No hay en específico sobre agua

Then, the objective behind health projects from municipal projects is likely not

motivated by rooting any burdens of disease on the population to water, or perhaps any other

environmental etiology. Given that a neighborhood's health projects are tested and all have

passed, why would the water component even be suspected? Well, in a return to the opinions on

quality, the health center was mentioned as insisting, even "demanding", that participants follow

guidelines like chlorination. Now, there may be some indication that the health center does not

merely test the water and recommend further in-home treatment, but that the people synthetically

comport with such recommendations how they see fit in their real activities: (WC08-10)

> *I: So, you consider that the time the center came to the committee and gave this regulation, this disposition of-*
>
> *R10: Chlorinating?*
>
> *I: -like recommending, yes, to every beneficiary of this project, was this like the last or only time that they directed something over what, I don't know, something of recommendation for the health of the people?*
>
> *R10: Only, only recommendation of the health center is to chlorinate. Only. The people said no, here we're going to boil water or use our filters. The decision of the people, well, is good.[56]*

So, people may not outright reject the idea of extra treatments, so long as the extra

treatments are affordable and easy to do given current practices, like boiling liquids or foods in

meal preparation. Filters and chlorine may not be affordable, nor streamlined into these current

practices enough to make them attractive, or at least widespread.

Another participant talks about a water project's maintenance committee as solely

aimed at their own work: keeping a functioning water system functioning. (WC02-06)

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56 I: Entonces, considera usted que la vez que el centro vino al comité y dio esta reglamiento, este disposición de-
R10: Clorar?
I: -como recomendar, sí, a todos los beneficiarios de este proyecto, ¿este era como la última o sola vez que dirigieron algo sobre lo que, no sé, algo de recomendación para la salud a las personas?
R10: Unica, unica recomendación de centro de salud es clorar. Uni. La gente dijo no, aquí vamos a hervir agua o ponemos nuestros filtros. Decisión de la gente, bueno, está bien.

R2: […] the maintenance committee doesn't look at health […] when we are in the maintenance committee, yeah, if the water broke down, we just repair it – yeah, if the water broke down we repair it – that's all the maintenance committee's work. Yeah, that's all of its work.[M. Sattler assisted][57]

It's this sort of focus on the responsibilities and obligations of people within water projects that indicates the lack of emphasis on public health in water projects is not an intention, but rather an effect of having successful water provision. Nonetheless, while no participants said they worked in projects that actively looked at disease incidence in their area, successful water projects may still have and increase health as a happy by-product in their planned area of effect. The health center tests and evidence-based decisions of the water committees in areas are also direct examples of this lack of a public health emphasis not stemming from obstructing efforts to improve the health or well-being of everyone. Rather, this lack may stem from a keen awareness that the activities and resources of the work are always going to be limited, like through the potential yields of a system's design and who is included as a beneficiary and worker. Therefore, spreading out the available inputs and resources for the end of water provision may look like a rejection of public health concern from outside, but having fidelity to the responsibilities and obligations that a system's design entails for participants may mean a change of form from the concern for epidemiological public health to general and collective well-being.

To review this "bridging" section of the analysis between the ideal and real extremes, a persistent aspect was the logic behind using resources to serve beneficiaries of a given system by either preventing or repairing problems. This logic also brings forward in relief the other features bridging real facts about the water, like its quality, to real situations of people in Nawal Ja', like their access to safely consumable water. Evidence for the way such facts are understood and discussed includes classification of water sources for specific purposes, and

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57 R2: […] le komite de mantenimiento maj karil ruk' le utz wachil […] Le oj aretaq xujol che le komite de mantenimiento - je' we xb'an joron' xew kaqab'an ub'anik - je', we xb'an le joron kaqab'an ub'anik - xew la uchak le komite de mantenimiento. Je' xew la' uchak.

those being the most pure – usually in mountains – being the sources for drinking-water, also, the

uchuq'ab', or force, of water in a system deciding how many can be supplied from a particular

spring, and also the available workforce that can invest itself into doing so. Lastly, the fact that

monitoring or surveying public health may not be an emphatic or explicit goal of many water

projects does not exclude positive or good health outcomes being contributed to by clean water

provision – which the health center testing should evidence as probable.

Realism: Volunteers and Substitutes

The final segment of the analysis goes over the activities of water projects that can

be seen from a realist perspective. This perspective is mostly recognizable through what has been

discussed above in the bridge (the facts of a water's pressure, quality, or location, for instance),

and, a sense that one is humanly capable of doing only so much to achieve the preferred aims

and goals laid out in the section on idealist perspectives (collective equity and equal distribution

of the good and plentiful blessing – water).

We'll begin by discussing the management of the labor input in the water projects.

The workforce for these projects has been portrayed in earlier quotations as a diverse set of

individuals formed from beneficiaries. The typical fashion for workers to be gathered is orderly,

as based on lists of benefited households, for example: (WC03-05)

> *R3: But each, each worker, for example, requests five hires, we put an X here.*
> *Fine, and after when they've worked then at another time, I need ten hires, so,*
> *little by little, they're going to work, little by little, it's basic. After that, another*
> *goes to work, little by little, the work always goes like that. We all work, we all*
> *work. Yes, but little by little.*[58]

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58 R3: Par cada, cada trabajador, por ejemplo, pida cinco mozos, echamos un X aqui. Vay, y después cuando ya
trabajan entonces al otro tiempo, necesito unos diez mozos, entonces, cada poco cada poco van a trabajar, cada poco,
cada poco, básica. Después va a trabajar otro, cada poco cada poco, siempre pareje trabaja. Todos trabajamos, todos
trabajamos. Sí, pero cada poco, cada poco.

The above participant was a maintenance committee member, meaning that they might ask a sequence of households on the list for their labor, and each one might hire a substitute worker, or *mozo*, for the work. Everyone may work for their water, however, the labor put in directly to the system might be contributed differently. There are situations where the more vulnerable individuals, like orphans or widows, are expected to contribute to the labor effort in some form – if not through volunteering, then through a payment plan they can afford, or, through hiring a substitute worker: (WC08-13)

> *R10: Now, now the solidarity aspect of the committee, yes, it chooses people that really can not offer money, they can't – so, they need water and they don't have water, then, it was agreeable as part, a part of love of the community, of everyone. They say themselves, "These people can not volunteer but the committee has decided that to him, if he doesn't go, request a fee: work if one can work, if one can not, one can not work." And the women, for example, sometimes the women say, "But I am a widow but yes I can pay for a day, a hire." It's good, that is good, no bad problem. There are others that can not, "My children are little," then there's no problem. So, the committee has that side – of choosing some families, a maximum of eight available, yes. Therefore, it's a part of the love of the project, not of the committee, of everyone because they inform everyone.[59]*

This quote introduces a number of topics that begin the process of bringing into reality the ideas of people in the community. The situations of vulnerable people are respected in the obligations of completing the work, without apparently barring people from access to water resources. The way that people of less means can afford this might be through working in other industries, like weaving, for money to get on a payment plan or hire a substitute worker. Yet, it also appears that if a situation is most despairing, no obligation may be put on the family. It may be a part of the "love" and responsibility of the others in the committee and in the community to

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59 R10: Ahora, ahora el aspecto solidaridad del comité, sí, se escoge personas realmente no pueden ofertar un dinero, no pueden de así necesiten su agua y no tienen agua, entonces, sentaba como un, una parte - una parte de amor, del- de la comunidad, de todos. Se les dicen estas personas no pueden voluntar pero comité ha decidido que a el si no se le va, pedir cuota: trabajo si puede, trabajo si no puede, no puede trabajar. Y las mujeres, por ejemplo, a veces las mujeres también dicen, pero yo soy viuda pero sí puedo pagar un día, un mozo - que bueno, eso, está bien - no mal problema. Hay otros que ese no pueden, mis hijos están pequeñitas, entonces no hay problema - entonces, el comité tiene ese lado - de escoger algunas familias, máximo ocho.- disponibles, sí. Entonces, es una parte de amor del proyecto, no del comité, del todos porque se les avisa todo.

look past differences of disparities and only put to work those who are able simply to meet the needs of the whole community.

So in other quotes, the relationship of volunteers and substitutes can be seen in a variety of "responsible" or "obligatory" lights, however, it misses the point to say that one is more valued than the other by participants. Let's start with the notion that substitutes are taking the place of males and and family patriarchs who have immigrated to the United States: (WC03-11)

> *I: And, these first people told me, I believe, that many times they pay a hire to do the work, like there's no…?*
>
> *R2: Yes, it depends, for example, [name omitted] is a woman, so, if, for example, her husband isn't here, he's in the United States, then she has to search for a hire to send. Now, if her husband is here, then, the husband has to work. There's no difference, it's – if it has one's name here, even if it's a woman, then, for example, if it's because "that there's a woman, she doesn't work", no. The work goes on equally.[60]*

Sometimes a substitute worker is paid simply out of necessity: a wife might not be permitted to do the type of work required, but she will be expected to find someone who can do it in her husband's place. The issue of migration does have another side, as a participant talks about remittances from the United States and how that chosen substitutes might be getting a better wage than others in the labor market who work for a family that just can't pay as high of a price: (WC08-14)

> *R10: […] They have given us a problem, because those who work in the States, when the money arrives here, it's worth more. So, the workers and hires say, like, [*] it was more or less 60 quetzals a day, when those sums have arrived, the hires raised it to 100, 125 quetzals a day. They, indeed pay, but here, one that works here – it's difficult to pay. […] and sometimes we maintain a tariff on everyone –*

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60 I: Y, ¿estas primeras personas me dijo, creo que, muchas veces compran un mozo para hacer el trabajo, como no hay…?
R2: Sí, depende, por ejemplo, le _____ es una mujer, entonces si, por ejemplo, no está su marido aquí, está en los Estados Unidos, entonces tiene que buscar un su mozo mandar. Ahora si está su marido aquí, entonces, el marido tiene que trabajar. No hay diferencia, es si tiene su nombre aquí, aun una mujer, entonces, por ejemplo, si vay porque que hay una mujer ella no trabaja, no. El trabajo va parejo.

75 quetzals – and the hire brings their food, but, those things they are fixing themselves today.[M. Cuj assisted][61]

Then, a contention among workers may exist when some sell their labor for more than others. The obligation to invest in the project does not seem to specify that a hired worker's labor be compensated at any normal rate, except when a "tariff" is imposed. Such a price limit for wages payable should provide a benefit to those who are not receiving remittances but have no way to provide able-bodied physical labor for such work. The actual productive output of the laborers as a whole can be more equitably harnessed; yet, directing the labor of a workforce mostly made of paid hires as opposed to volunteers seems to have made one participant opinionated on what it means for the work to be getting done by mostly one group or the other: (WC01-05)

R1: They work voluntarily, they do not charge per day, what they want is the betterment, therefore… "Pro-Mejoramiento" ("Pro-Betterment"), so there is the name Pro-Mejoramiento of the mentioned community, but now there's almost no Pro-Mejoramiento committee, it changed itself already. Now almost all the names changed already, this Pro-Mejoramiento Committee no longer exists, I just call them COCODEs.[62]

It could be that this *Pro-Mejoramiento* (*Nawal Ja'*, specifically) Committee is placed in the participant's mind as attaining a value of progress that they don't see in the newer COCODE system. Reasons for why they might see it that way, and the kinds of differences between such systems will be emphasized in the final part of the analysis; however, it is worth noting that the CBWO *Pro-Mejoramiento Nawal Ja'* Committee was one of the first water projects in Nawal Ja'. It began circa 1983 according to the above participant.

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61 R10: Pero ellos nos han dado un problema, porque los que trabajan en los Estados, cuando llega dinero aquí, vale más. Entonces, los trabajadores o mozos dicen, como, [*] fue a más o menos sesenta quetzales al día, cuando han llegado esas obras, los mozos suben hasta cien, ciento veinticinco quetzales al día. Ellos sí pagan, pero aquí, que trabaja uno aquí - es difícil pagar. […] y a veces mantenemos una tarifa en todos - setenta cinco quetzales - y el mozo lleva su comida, pero, esas cosas se arreglan el kamik.

62 R1: Voluntariamente trabajan, ellos no cobren al día, lo que quieren ellos es el mejoramiento, por eso… para eso, por eso "Pro Mejoramiento", entonces allí está el nombre pues "Pro Mejoramiento" de la dicha comunidad, pero ahora casi no hay comité "Pro Mejoramiento" ya se cambió. Ya casi se cambió todos los nombres ahorita ya no existe este "Comité Pro Mejoramiento", ya los llamó "cocodes".

It may very well be that the insinuation of solidarity in water work brought out such discussions quite frequently. Often the concept of *solidaridad* (solidarity) was asked about in order to discover further depth of this tension between types of labor input: (WC07-12)

> I: […] what I have seen at times is that there, it's like, there's no sense of cooperation or solidarity because many people pay a substitute or a hire in order to do the work for them [...]
>
> R9: […] No, in the sense that you were saying of them: the people always always always search for a hire to [*] to work, always [*] of all them I'm talking about, and I see that there's no solidarity in water. No no no no.[M. Cuj assisted][63]

The important aspect of the above opinions is not merely an idealization of one type of water project organization over another, because COCODEs are also based out of the community and its members. The types of leadership and management activities between them must provide more detail as to preferences for water provision, but first, it has to be shown that the variation between those aspects are held together by a constant: a continual fidelity toward maintaining these water systems proficiently.

Realism: Maintenance

The central reality for any water project's process is that one way or another the system has to be maintained. We know that the projects' require their beneficiaries to invest their budgets or their labor, but, beyond understanding that the start of a project and the provision of water from that point forward is one way such inputs get used, there is more to it. We have to look at the constant efforts of people in these projects' for whom the sustainability of the water supply is vital.

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63 I: […] lo que he visto a veces es que hay, es como, no hay un sentido de cooperación o solidaridad porque muchas personas compran a un sustituto o un mozo para hacer la- el trabajo para ellos […]
R9: […] no en el sentido que usted hablaba de los siempre siempre siempre la gente busca mozo para [*] trabajar, siempre [*] de los todos de estoy hablando, i yo veo que no hay solidaridad en al agua. No no no no.

Maintenance and specific committees within the water projects or CBWOs that are set out for this express purpose were discussed by all participants in various ways. The function was widely one of supporting the access and quality outcomes of the project, and in turn meeting the broader goal of ensuring water as a plentiful public good that all have a right to. The logic of participants often put forward maintenance committees as the solution when repairs or additions needed to be done: (WC02-04)

> *R2: Yeah, it's not the same. Yeah, the maintenance committee – they do a lot of work. Yeah, just cause if the water broke down, the tube burst, the maintenance committee are the ones who repair it, not the COCODE. [...]*
>
> *I: And, are there COCODE [members] in the maintenance [committee]?*
>
> *R2: Me?*
>
> *I: Are there COCODE, COCODEs...*
>
> *R2: There's not, there's not. Just because if the ten have been searched for – the ten people of the maintenance committee – and after it has been said that, "First, you be president, you, vice president, you, treasurer." They do it like so. But there's no COCODE, none.[M. Sattler assisted]*[64]

While the participant above is distinguishing the maintenance committee from the committees that handle the water issues through the COCODE system, the main point is the responsibility put on the maintenance committee to carry out repairs. Participants also bring up how maintenance committees are the only ones even authorized to do this kind of work: (WC03-02, WC03-03)

> *R3: I'm a maintenance committee [member], and it's the authorized committee. The authorized committee is the one that orders. It's the one that orders to all the hundred...*

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[64] R2: Je' na junam taj. Je' le komite de mantenimiento, ri are sib'alaj k'i le kichak kakib'ano. Je', xa rumal we xb'an jun, xb'an le joron, xwaq'in le tubo , le komite de mantenimiento are keb'anow ub'anik, na are ta le cocode. [...]
I: i, ¿k'o cocode pa le mantenimiento?
R2: In?
I: K'o cocode, cocodes...
R2: Maj, maj. Xa rumal we xetzk'ux le lajuj, le lajuj winaq rech komite de mantenimiento, i despwes kab'ix ke "le nab'e at, katok presidente, at vicepresidente, at tesorero," je la' kakib'ano. Per maj cocode, maj.

I: COCODE members order all the members of all the committees?

R2/3: No no. [...]

I: And, is there another committee apart from maintenance, water…?

R3: The first committee is the whole… the central committee. The second committee is...

R2/3: … the maintenance…

R3: ...it's ours, because we're maintenance [workers]. And it's the authorized committee. That authorizes. Yeah, for example, I'm in the maintenance committee. […] That committee [the "central" COCODE committee], no. It only advises. What it is I fix, and I do not fix, because I'm [in] the maintenance committee.[65]

While at times the above may sound convoluted, the message is clear: maintenance committees are the only ones doing the real work on the system, and they may direct work and labor in the system's area so long as the COCODE or other committees' leaders have advised them to act independently. Another participant helps to describe how the central committees (pertinent to a CBWO system) would typically do this for the maintenance committee: (WC04-11)

R4: COCODE has nothing to do with it. No. Purely the water committee.

I: And, the funds go to the maintenance committee later as well?

R4: When there's a need, if it needs. And, if it doesn't need, one puts it in the bank to save it. So, if there's a problem at the spring, with the tank, or with the pipes, then yeah it takes that money, and spends it, invests it in that.[66]

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65 R3: [...] yo soy un comité mantenimiento. Y es el comité autorizado. El comité autorizado es el que manda. Es el que manda a todos los ciento, ciento…
I: Miembros del cocode mandan a los miembros de todos los comités?
R2/3: No no.
I: Y, hay un otro comité aparte de mantenimiento, joron…?
R3: Es el primer comité es el mero… el comité central. El segundo comité es…
R2/3: … el mantenimiento…
R3: ...es de nosotros, porque somos del mantenimiento. Y es el comité autorizado. Que autoriza. Sí, por ejemplo, yo soy del mantenimiento. [...] Ese comité, no. Solo que avisa. Lo que arregle, y yo no arregle, porque yo soy el comité mantenimiento.
66 R4: Cocode no tiene que ver nada. No. Puro comité de agua.
I: Y, los fondos van al comité de mantenimiento, luego también?

The key thing to keep in mind before explaining deeper underlying differences between the forms of water project organizations is that whether each project unilaterally works with a water committee, a maintenance committee, and a set of COCODEs who sit astride the public and private sectors in the same way is beside the point. Here, the constant role and active realization of the project by the maintenance committees is the feature of focus. So then, when the maintenance committee is authorized, it has sole authority to work on the system, which introduces some policies for sanctions: (WC02-13)

> *R2: Yes, we have the authority of doing that. If a person, for example, is outside of the committee then they can't repair it. There are ten committee (members), they are the ones who have the authority of repairing. If it's in the street, or in bathroom, or in the tuj [a bathing steam room and sauna]… They are the ten in charge of doing that. If, if a person wants to do, wants to install their pipes in the bathroom, if the person, the homeowner, he fixed the pipes in the bathroom, if the committees hear, that he alone fixed them, then the committees, the COCODEs suspend the owner from the water, for a month or two months, because he doesn't have the authority to do that.[67]*

This helps to emphasize the singular purpose behind maintenance committee work. It is not to be sidetracked by public health measurement (as discussed earlier in WC02-06), even if the work itself is held up as a reason for why there is little illness to begin with: (WC06-03)

> *R6: There is no sickness because each week, or each 15 days, a cleaning is always done, the tank. Or, where the water is, a cleaning is done. We wash off all the filth so that it can't infect people.*
>
> *I: […] then two things, but the first: do the workers in the list of I work? Every 15, or 15, days in the tank, or in the spring, or the two?*

R4: Cuando hay necesidad, si necesita. Y si no necesita, se pone en el banco para ahorrarlo. Entonces, si hay un problema en el nacimiento, con el tanque, o con la tubería, entonces sí agarra ese dinero, y se gasta, se invierte en eso

67 R2: Sí, tenemos le autoridad de hacer eso. Si una persona, por ejemplo, está fuera del comité entonces no puede arreglar. Son los diez comités ellos son los que tienen la autoridad, de arreglar. Si es en la calle o en baño o en el tuj… son los diez encargados de hacer eso. Si, si una persona quiere hacer, quiere meter su tubería en el baño, si la persona el dueño de la casa, él arregló la tubería en el baño, si se escuchan los comités, que es solo, que el solito arreglo los, entonces los comités los cocodes suspendan al dueño del agua, por un mes, o dos meses, porque él no tiene la autoridad de hacer eso.

R6: Yes, in the tank, in the tank the ten [workers] work there to see that there's no filth, or if not, what the state is of the tank, so that there's no harm to people.[68]

While the amounts of workers and days between cleanings of the segments of the water system can vary across projects, the need to clean the system was found to be common, and fits in with the logic leading to positing that preventive action can prolong the life of their resources (in this case the tank or pipes) to begin with. It is also important to add that the constancy of maintenance makes it an untenable position for any one set of leaders to head up for very long, especially considering that the officer positions, like president or treasurer, are not paid: (WC02-12)

R2: […] sometimes in another group, for example this group right now, those in it this year, they fight among themselves. For example, one is at work, then they call him and he says, "No. I can't go, I am in work." And some get angry, sometimes they fight but when I am in the committee, we don't fight among ourselves.[69]

That outlines the problem and gives a perspective on why a tension may exist among volunteers and substitute workers in water work generally-speaking. If one is able to afford a substitute while making more money at their professional job, then responsibly absolving oneself of the water work may be justified; yet, there may be people who can not, and they may resist the losses in wages they experience by fulfilling the obligation. At least one solution to this problem seems to combine with the efforts to prevent leadership fatigue in the maintenance efforts. The maintenance committees turnover leadership at varying intervals: (WC01-11)

R1: We search for a maintenance committee, we search for another maintenance committee that each year changes. And, the year arriving, that committee

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68 R6: Maj yab'il porke si cada semana, o cada quince días, siempre kaya un limpieza, ri tanke. O ri ri k'o ri joron', kaya jun limpieza. Kaqach'aj juntir le tzil para ke na kowin ta kontaminar chikech le e winaq.
I: [...] k'a keb' jastaq, par le nab'e, ¿kachakun le chakunel pa le cholaj re I? ¿Ronojel le jo'lajuj, o quince, q'ij pa le, le tanke, o pa le k'wa', o keb'?
R6: Sí pa le tanke, pa le tanke, kechakuna wi le lajuj para ke kakilo la maj tz'il, o la maj, jas uwach k'o pa le tanke, para ke maj che jun daña k'o jun chikech le winaq.
69 R2: […] a veces en otro grupo por ejemplo este grupo ahorita, los dentro de este ano, se pelean. Por ejemplo uno está en trabajo despues lo llaman y dice no no puedo ir estoy en trabajo. Y unos se enojan, a veces pelean pero cuando yo estoy en comite, no nos peleamos.

*changes, others enter. Another year arriving, it changes again, others enter
because they're rotational [...]*[70]

This should help keep a high level of fidelity to the tasks of maintenance required to provide water continually, but it can't be said here if it fully works – if the real comes to meet with the ideal, if you will. Still, the committees' focus on solely water work and the inputs and outputs of the project may also aid in limiting requirements or obligations on the labor's capacity. Besides the incisive logic that cleaning the system itself and focusing on its functioning actually contributes to positive health outcomes, or at least prevents contaminations of and infections from water, there is more to present regarding this conscientiousness of just the water supply. It was mentioned earlier (WC05-06) that the municipal government held jurisdiction over sewers and sanitary drains, and this could come in again as a specific delimitation of an area or infrastructure that is not to be worked on: (WC03-08)

*I: So D knows a bit about the types of sanitation or latrines or something that
there are en some houses, but not of all because some of the piping has to do with
another committee?*

*R2: No, no because, for example, the wastes, the drains, so those are separate
already. It's part of the municipality. For example we have the wastes from
sewers, so, we are not maintenance committee [members] of potable water who
realize or do the work, rather that is part of the municipality. That has nothing to
do [with us].*[71]

Such a freeing from binds to engage with the municipal wastes and sewage requirements or expectations may go a long way to sustaining the capacity of workers in water projects, and make the projects themselves more affordable. Further, this also brings to the fore an unexamined conceptualizing of the provision of water in Nawal Ja'. If water supplies are

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70 R1: Nosotros buscamos un comité de mantenimiento, buscamos un otro comité de mantenimiento que cada año se turno. Y llegando el año, se cambia ese comité de mantenimiento, entran otros. Llegando otro año, cambia otra vez, entran otros. Porque son rotativos […]
71 I: Entonces D sabe un poco sobre los tipos de saneamiento o etrines o algo que hay en unas casa pero no de todos porque algun de la tubería tiene que ver con otro comité?
R2: No no porque por ejemplo los desechos, los drenajes, entonces esos ya, es aparte. Es parte de la municipalidad. Por ejemplo nosotros tenemos los desechos de drenaje, entonces, no somos comités de mantenimiento de agua potable que realizan o hacen el trabajo, sino que es parte del muni. Nada que ver eso.

coming one by one and little by little to homes, and each one that beneficiaries ask for requires

some investment of time or money on their part, then the attractiveness of taking on multiple

water work obligations is aided by solely needing to do the work when called on, and only as it

pertains to the provision of potable water in line with agreed upon quality and access terms – not

to its potential outcomes, be they some healthier or more diseased people, or, bodily wastes.

We can continue to examine a thus far assumptive concept, and others, by looking

deeper into the conversations on the details of operations among the three main types of

organizations used in providing water in Nawal Ja': community-based water organizations

(CBWOs), *consejos comunitarios de desarollo* (COCODEs), and the municipal system.

Realism: Operations – CBWO, COCODE, and the Municipality

The three organizational frameworks would best be understood through a temporal,

linear study of when they came to be common solutions for the problem of water provision,

however, many of the interviews and respondents discussed, compared, and contrasted these

types of organizations and solutions for their strengths and weaknesses without temporal

reference. In general, it could be parsed from the interviews that (in Nawal Ja') CBWOs

preceded both municipal and the more recent COCODE systems for managing the installation

and upkeep of water supplies. For this group of respondents, the CBWO system was the most

frequent point of reference or perspective to discuss how the operations would vary between it

and either the COCODEs or the municipally-managed systems. While it is apparent that the

COCODE system, begun in 2002, uproots the authority of earlier CBWO committees, there is

evidence that some of these CBWO committee members still lead on the maintenance and other

required activities, although the COCODE system plays a political and regulatory role meant to

follow democratic principles.

Because of the variety of configurations that could arise between all three of these types of water supply frameworks, this section will start from the respondents' words themselves about the operations they expect to occur among any given configuration at a time frame they describe. The perspectives of participants on these matters often come from experience in a CBWO; however, the purpose of this is not to rely on how frequently the "coding" of CBWO occurred to tell us how its operations are, in definite ways, better or worse when alone than in combined configurations with the other two. Rather the purpose is to let the meanings of participants' comparisons define relationships between these very real organizational phenomena and what they can or can not achieve.

The first two aspects of comparisons which bring up a realization of the patchwork configurations possible for these organizations are what could be considered vertical or horizontal efforts on the organizations' parts. A respondent explicitly differentiates how his old CBWO, the *Pro Mejoramiento Nawal Ja' C*ommittee*, that began in the early 1980s operated more holistically than COCODEs do today: (WC01-06)

> *R1: Yeah, COCODEs – and there are water committees, there are road committees, there are electric committees… but "betterment" includes any water, any road, any electricity, sewers, it includes all that.*
>
> *I: It has to do…?*
>
> *R1: Yes, it's not the same as a COCODE of roads – that's just for roads. A COCODE of water – just for water. COCODEs of sewers, you may suppose – just for sewers. It has one function, but each Pro-Mejoramiento Committee, that includes everything. This committee is the one that founded the voluntary firefighters company. We founded that.[72]*

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72 R1: Sí, cocodes - y hay comités de agua, hay comités de camino, hay comités de luz… pero mejoramiento abarca lo que es agua, lo que es camino, lo que es luz, drenaje, abarca todo eso.
I: ¿Tiene que ver?
R1: Sí, no es igual que un cocode de camino - solo para camino. Un cocode de agua - solo para agua. Cocodes de drenaje, suponga - solo para drenaje. Solo una función que tiene, pero cada comité pro-mejoramiento, eso que abarca a todo. Ese comité es el que fundó la compañía de bomberos voluntarios. Nosotros fundamos eso.

Then, this siloing of COCODE activities into specific areas of authority could become a major point of distinction between it and CBWOs, but, it doesn't tell us how the municipality can be distinguished in its operations, nor the relationship it might have with either COCODEs or CBWOs. Another interview that was more centered on a then current sewer project shows that the municipality may actually be as holistically oriented as CBWOs, if not more so: (WC05-06)

> *I: When you all began this project that you're doing now, did it require data over how many toilets, how many – I don't know – types of sanitation there are – there are in the houses?*
>
> *R5: No, no. It depends on each family. Because it's not a project of the municipal government, it's a project like I told you, of – of each person. […] If you have money, you buy a neat toilet, nice, and you do it, but if you don't have money you buy a toilet that's simpler […][73]*

The municipal projects would be concerned about the status of sanitation access when doing their projects, but, the CBWOs may not. Perhaps, with the advent of the COCODEs system as a proxy for the municipality's public works system, CBWOs became less likely to spread their work to anything more than just water supply and provision, yet the description at least implies that it's mostly the responsibility of homeowners to construct their home's plumbing without any external assistance.

Despite such an apparent lack of comprehensiveness on the part of CBWOs, there are also words speaking to the opposite effect. Even though there is a lack of external assistance from the municipal or COCODE systems, the plumbing of one's house still may require being authorized and documented by CBWOs of a given neighborhood, as one participant describes: (WC04-10)

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73 I: ¿Cuando empezaron ustedes este proyecto que están haciendo ahora, requieren datos sobre cuántos inodoros, cuántos - no sé - tipos de saneamiento k'o - que hay en las casas?
R5: No, no. Es depende de cada familia. Porque no es un proyecto de la municipalidad, es un proyecto como te dije, de la, de cada persona. […] Si usted tiene dinero, usted compra un inodoro lindo, bonito y usted lo hace, pero si usted no tiene dinero usted compra un inodoro de… del más sencillo […]

I: And, the homeowners have to make an agreement with your project of Parroquia over, if they want…?

R4: Yes, the connection, the connection. One pays 25 quetzals for the connection to a toilet.

I: Then, you all have some, the project has some data over how many toilets?

R4: Yes, yes we have them. And how many people have sinks, faucets in sinks. One pays also for that connection, and also the shower. [...] let's say – I want to connect a shower in my house, I'm going to talk to the committees so that they authorize permission, but I have to pay 25 quetzals for each connection.[74]

While the participant does mention going to talk to committees in a present day tense, it is referred to as the committees of *Parroquia* (presumably, the water and maintenance committees that administrate and manage within that CBWO). Whether the COCODEs have anything to do with this authorization is another question. It can be gathered, though, that CBWOs have some capacity to monitor the access of people to different types of sanitation, even if it is in a passive bureaucratic fashion.

The lack of comprehensive efforts or holism in water projects that COCODEs have to manage is perceived by one respondent to be the result of politics. This respondent worked with the *Pro-Mejoramiento* committee and could compare in depth the organizational structure of that CBWO with COCODEs: (WC08-06)

R10: [In] the meetings one votes, but, for example, in the society here there are two types of organizations: our committee is an old organization. Presently, the law changed, so, the law says there are COCODEs – that there have to be COCODEs there. [It's] like a council of development […] Now, our committee is, that committee – if one of us says "I'm retiring", the committee disappears because it's an old law […] so now there's COCODEs, but the COCODEs are more political – it's another thing.

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74 I: Y, ¿los dueños de las casas tienen que hacer un acuerdo con su proyecto rech Parroquia sobre, si quieren…?
R4: Sí, la conexión, la conexión. Se paga veinticinco quetzales por la conexión de un inodoro.
 I: Entonces, ¿tienen ustedes algunos, el proyecto tiene algunos datos sobre cuántas inodoros?
R4: Sí, sí tenemos. Y cuánta gente tiene lavamanos. Chorro de lavamanos. Se paga también la conexión de eso. [...] digamos yo quiero conectar una ducha en mi casa, yo les voy a hablar con los comités para que ellos me autoricen el permiso, pero yo tengo que pagar veinticinco quetzales por cada conexión. Cada conexión.

I: And they are voted into their positions also as COCODE, or they receive this position, this work, of being in the munici...

R10: Yes, the COCODE is very good because the law says that they have to be elected, and there's voting, but the mayors have been unjust and say, "I'm from this party, and these are my people, they have to be with the COCODE because here we're working directly with this." But already, it's different, because they just forget the town, they only look at this party and nothing more, the little group. So, food arrives only for my little group, they have work, just for my little group. Instead we don't have a political party there, we work through our Lord for all the community.[75]

COCODEs can become conflicted, it would seem, by a more powerful political party's influences. Operations then have to be considered with power as an element for what is being done, and where. Considering the resource base of a given project, especially in willing beneficiaries to work, there could be ulterior purposes behind giving some people a chance to join in to a water project and not others. While accusatory language of such occurrences is not evidenced by the interviews, it does indicate a difference between seeing water as a public good and seeing it is a politically divisive issue.

What does pan out from the above comparisons among the three forms of water project organization is more detail surrounding the "authorization" and regulation of specific work to be done. The question of whether COCODEs presently regulate and permit work to be done, by means of the maintenance committee or a CBWO's prior infrastructural and human resources, is answered in one example: (WC02-11)

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75 R10: El reunión se vota y pero, por ejemplo el- aquí en la sociedad hay dos tipos de organizaciones: la nuestra el comité, es una organización vieja. Actualmente se cambió la ley, entonces la ley dice, son cocodes - los que tienen que haber, cocodes. Como consejo de desarrollo, […] Ahora, nuestra es comité, ese comité - si alguien de nosotros ahorita dice "me retiro", desaparece el comité, porke es una ley vieja […] entonces, ahora ya son cocodes, pero los cocodes es más político - de otra cosa.
I: Y ellos están votados dentro de sus puestos también como cocode, o ellos reciben este puesto, este trabajo, de ser de la munici…
R10: Sí- lo que- lo que- el cocode es muy bueno porque la ley dice hay que seleccionar, y hay que votar, pero a los alcaldes han sido injustos y dice, "Yo soy de este partido, y esto es mi gente, tiene que estar con el cocode porque aquí vamos a trabajar directamente con esto." Pero ya, hay cambia, porque ya no miren al pueblo, solo miren al de ese partido nada más, el grupito. Entonces, llega alimentos solo para mi grupito, llevan trabajo, solo para mi grupito. En cambio nosotros no tenemos partido político allí, nosotros trabajamos en nuestro "ajaw" para toda la comunidad.

R2: Yeah, therefore if it's water of C, it's very, said in Spanish, the COCODE is very strict. […] there's our spigot, but if I want to use the spigot in the tuj it's necessary [...] that I tell the COCODEs, "I need to use my water in the tuj or […] shower." The COCODEs say to the maintenance committee: "It's fine for y'all to do the work with the family." They put the water in the shower, it's necessary that the COCODEs are told and that the maintenance committee are the ones who do it. […] The COCODE says, good, but you make an accord.[76]

Thus far, in present day projects, the COCODEs seem to maintain most of the decision-making authority regarding what work can be done or not, for example due to resources available for a specific job, or any biases related to their members' political leanings. Still, regulation of the water system for a specific area is likely not solely the decision of a COCODE – excepting potential acute instances – because of a variety of other operations the organizations often combine to carry out in service of a given water project at hand. Take the following series of excerpts from conversations which indicate activities including regulation, arbitration, and sanctions: (WC01-15)

R1: […] we have a need that we can't resolve, one could say, then we go to the municipal government – then the municipal government, they are the ones who intervene between us, if it's with the other committee, or neighbors that sometimes don't want to give space, or cede a space. So, sometimes, we go to the municipal government and they call to them, and they can reach an agreement, a consolation we can say […] so that they understand why it is we're doing that. It's a good dialogue, we could say, with the people.[77]

As noted before, the respondent was referring to the days when their CBWO *Pro-Mejoramiento Nawal Ja'* had more leeway regarding water project activities – and no COCODE group to deal with. Regulations regarding the usage of project water supplies can be reiterated as

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76 R2: Je', xa rumal we le joron re C sib'alaj kab'ix che pa kaxlan tzij, sib'alaj estricto le cocode. […] k'o le qachorro, per we kawaj kinkoj le chorro pa le tuj rajawaxik […] kinb'ij chike le cocodes, "rajawaxik kinkoj nujoron pa le tuj o […] chajamb'al," le cocode kakib'ij che le komite de mantenimiento: utz kib'anaj jun ichak ruk' le upa ja', kikojo kanoq le joron pa re le chajamb'al, rajawaxik kab'ix chike le cocodes i are le komite de mantenimiento keb'anowik, [...] Kub'ij le cocode, utz, per kab'an jun acta.
77 R1: […] tenemos una necesidad que ya no podemos resolver podríamos decir, entonce acudimos a la municipalidad - entonces la municipalidad son, ellos nos intervienen, si es con el otro comité, o vecinos que a veces no quieren dar el espacio, o ceder un espacio. Entonces, a veces, vamos a la muni y los llaman a ellos y allí se hace un consenso, una consolación podemos decir […] para que ellos entienden el porqué estamos haciendo eso. Es una buena diálogo, podríamos decir con la gente.

definitely limiting it to human consumption, and not any irrigation or watering of plants (WC08-11)(WC09-08), which has been noted earlier when considering water quality and the level of purity associated with the sources of water for other projects as well. But, what if a beneficiary decides to break codes for water use?

Multiple examples for sanctions on beneficiaries were brought up. Similarly to when the maintenance committee was noted as the group authorized to carry out work (WC02-13), one might also talk about how people formed extra connections to the same or another project's piping, and how the maintenance crews were tasked with ensuring or monitoring that no one did that, for example: (WC06-05)

> *R6: […] they know there's just one spigot, and also one latrine, if one has connected or you have linked with another the committee knows. And, the ten men know always… they observe so that it doesn't go there – if one spigot was authorized, one can't do another[M. Sattler assisted].[78]*

The punishments are not hidden from beneficiaries, or doled out at random upon discovery of some violation. One participant makes it clear that punishments such as three to four months with no water or 500 quetzal fines can be placed on beneficiaries who know the rules: (WC01-17)

> *R1: Then, we remove the water: like three, four months without it, and because the regulations tell us. So, for that well now they haven't done any because with those regulations already, people fear it already, so, in order not to do harm as well to the people, beneficiaries. […] And for irrigating vegetables and other plants, no one has been permitted because a plant is big, therefore tons of water. […] According to the meetings, one already knows that you'll carry a hefty sanction like a 500 quetzal fine. […] when the regulations were elaborated, they were there, so, they don't do anything because they themselves defined that, yes, we're going to follow the rules.[79]*

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78 R6: […] keta'am la xa jun chorro k'olik, i choque jun letrina, we 'anom conectar o atiqom ruk' choque keta'am le komite. I, ri are le lajuj achijab' keta'am siempre kekan, kakan k-kekilawachij para ke na kel tub'i jun neko- we xa'an autorizar un chorro na se puede ta chik.

79 R1: Entonces, lo quitamos unos tres, cuatro meses sin agua y porque el reglamento nos dice. Entonces, a eso pues ahorita ya no han hecho nada porque ya con esos reglamentos ya temían pues, para no hacer daño también a la gente, beneficiarios. […] Y para regar verduras o otros siembra no se ha permitido porque las siembra es grande, entonces montón de agua. […] Según los encuentros, ya sabe que llevas una buena sanción

The same respondent delved into the last statement about consent to the rules and participation in the rule-making process for water projects earlier in the conversation as well. Often, the meetings and events surrounding water projects are carried out in homes and on the streets or in alleys because they don't have offices or buildings expressly for the work, or even enough chairs to situate workers or leaders at the meetings: (WC01-02)

> *R1: We only meet on the sidewalks and sometimes the people bring their own chairs to sit with, it's like that. We don't have a room, that gave us – well – a difficulty like if, "Where are we going to meet?" Only in specific houses.*[80]

Beneficiaries, they say, recognize in participating that there are rules of good use. At times, announcements or notices are sent out as reminders: (WC01-16)

> *R1: We made regulations in order that, and all the people there endorsed that [...] there are regulations, like 15 regulations we made with them, and they were indeed in agreement, that all of that was recorded in the book of accords of each project. So, we give each beneficiary some sheets so that they see, well, what is good, "where y'all go to use the water, when, which is that that no one is permitted, why".*[81]

As one may suppose, the maintenance committees are largely responsible for this distribution of notices. It comes as no surprise since they have been noted to be the ones whose prerogative is to monitor homes for excessive connections to water projects people may not be allowed to use. In the structure of CBWOs, such as *Intervida,* the beginning of a project can include presentations on correct use: (WC07-10) (WC07-11)

> *R9: Then, the benefited people, from giving them talks, or training – how to manage the water, how to benefit from the water...*

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como quinientos quetzales de multa. [...] cuando se elaboró el reglamento, ellos están allí, entonces ellos no hacen nada porque ellos mismos definieron que sí vamos a hacer el reglamento.

80 R1: Solo en las banquetas reunimos y a veces la gente llevan sus propios sillas para que se sienten, es así. No tenemos salon, eso nos quedó pues una dificultad que si, "¿Dónde vamos hacer reunión?" Solo en casas particulares.

81 R1: Hicimos reglamentos para que, y toda la gente que allí avalaron eso [...] hay unas reglamentos como quince reglamentos hicimos con ellos, y ellos sí quedaron acuerdo, que todo eso quedó plasmado en el libro de actas de cada proyecto. Entonces, cada beneficiario entregamos unas hojas para que ellos vean pues cual es lo bueno, "dónde van a utilizar el agua cuando, cuál es el que no se permite porque".

I: The committee...

R9: By the committee, in the committee […] they go together with the health center […] The talks are around the beginning when, when the projects initiate. [...]

I: *And, they did these with the organization Intervida?*

R9: Yes.[82]

Although the CBWO *Intervida* provided the impetus for the informational talks on water use, this was one of the few instances where the health department in the area was mentioned as collaboratively educating beneficiaries. It's not clear that this or other CBWOs did or presently do any talks in the same manner. Still, the above quotations do indicate that the community customarily participates in meetings to define regulations and sanctions for a project.

The incessant role of maintenance teams in water projects means that potential obstacles (fatigue, willingness to work) of volunteer work may have to be managed by turnover in the team's composition. One respondent shared some inner workings on how COCODEs direct and manage labor in maintenance committees: (WC02-03)

R2: Yes, because the COCODE – they do invitationals two times in a year. […] January, December… yes, just cause in January they do a water day. Yes. In December the change is done, they change the maintenance committee.[83]

All of this brings about an unexamined perspective: the balance of power for deciding meeting dates and farther reaching outputs or impacts of the water projects between COCODEs and CBWO boards of directors or leaders. From the above, it would seem that COCODEs set up meetings and manage the labor operations for a given water project. We've

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82 R9: Entonces, a la gente beneficiada, de les dan pláticas, o capacitaciones, cómo manejar el agua, cómo aprovechar el agua
I: El comité
R9: A Través el comité, en el comité, a través el comité, van juntos con el centro de salud […] Las charlas se andan principio cuando, cuando se inician en los proyectos. […]
I: Y, hicieron estos con le organización Intervida
R9: Sí
83 R2: Je' rumal le, le cocode k'amul kakib'an jun siq'inik, pa jun junab'. [...] Enero, diciembre… je' xa rumal, le enero, kab'an unimaq'ij le joron. Je'. Le diciembre kab'an k'extajem, kek'ex le e komite de mantenimiento.

already seen CBWOs with committees of leaders that pre-existed the COCODE system being

talked about as though they could disappear with the retirement of one officer, so, are COCODEs

slowly gaining more administrative roles within water projects, or what kind of balances might

be out there? One participant said that their CBWO's board handled the maintenance

committee's requests for resources to do work, not the COCODE: (WC04-04)

> *R4: If there's a problem and it requires money, we do a meeting, so, there one asks the maintenance group, "How much money do they need?". So, where we are, it's like an administrative committee.*
>
> *I: Is the director board the same as the COCODE?*
>
> *R4: No.*
>
> *I: No?*
>
> *R4: It's different.[M. Cuj assisted][84]*

The response shows us that although COCODEs may assist in the operations of

projects, they do not necessarily direct how the projects' various resources should be used. These

administrative committees, or boards of directors – often including presidents, vice-presidents,

treasurers – still must lead in distributing resources. Meanwhile, COCODEs keep records of the

events that CBWOs are carrying out semi-independently. Maybe, as "proxies" for the

municipality's central governance, the COCODEs mainly channel data about water projects,

such as coverage of people and homes in Nawal Ja', to the municipal bureaus.

While such an assertion may not be made by the respondents, there may be some

reasons to suspect something along those lines when we recall that the municipality's water

system is not indicated to be far-reaching in the city. The need for activities to be carried out

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84 R4: Si hay un problema y se necesita dinero, hacemos una reunión, entonces, allí se les pregunta al otro grupo de mantenimiento "cuánto dinero necesitan ellos" entonces dónde estamos nosotros, es como un comité de administrativo.
I: ¿Junam le junta directiva ruk' le cocode?
R4: No.
I: No?
R4: Es diferente.

must be met primarily be the combination of CBWOs, and the COCODEs specific to facets or

silos of public goods. So, why would it be the case in participants' opinions that the municipal

system is not really that equitable in its operations? Responses ranged from a variety of points on

planning the projects, financing and working for them, and even staying faithful to the ideas

behind starting the work in the first place.

Planning for the projects often did not rely on the municipality's resources, except in

its ability to recognize the legitimacy of the works' collective ownership by the people and

formalize that work into permissions and agreements. (WC01-19)

> *I: But, the majority of the money comes from the requests to the municipality, to the government?*
>
> *R1: […] no, the money is from us… they… they gather – the beneficiaries. Therefore, each year, they give their quotas of 25 quetzals. So, they fund the money themselves.[85]*

Instead, CBWOs – apparently regardless of COCODEs roles or interactions with the

municipality – still had to get authorization or permission to do work from the head of the

municipality: (WC04-14)

> *I: Do these private projects also solicit the municipal government in order to (get) a little of…?*
>
> *R4: Authorization.*
>
> *I: Yes – accords.*
>
> *R4: Like permission, like permission: so, yeah one comes into the city hall. One requests a permission, and the city hall, if it authorizes the permission to go on to the spring, or, to pass the pipes under ground. One requests in the city hall.[86]*

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85 I: Pero ¿la mayoría del dinero viene de las pedidas al muni, la municipalidad?
R1: […] no, el dinero es del nos.. ellos… juntan ellos, los beneficiarios. Por eso, cada año, dan sus cuotas de veinticinco quetzales. Entonces se funden el dinero.
86 I: ¿estes proyectos privados también solicitan a la municipalidad para un poco de…?
R4: Autorización.
I: Sí – actos.
R4: Como permiso, como permiso: entons, sí se viene en la municipalidad. Se pide un permiso, y la municipalidad, si autoriza el permiso para traerlo en el nacimiento. O, para pasar la tubería en los terrenos. Se pide un permiso en la municipalidad.

The cost of starting and working for the water supplies seemed to vary across projects, but, one example can be indicated by the initial connection cost and work expectation by one committee: (WC08-15)

> *R10: And later, we already made the pressure for the houses, spigots, and small piping – we achieved another small assistance, we bought tubes and the people gave almost just that 1,040 (quetzals), plus the workdays which are… 15 days.[87]*

The municipal water system's availability may also have an unattractive market presence for provision when we consider the large differences between the cost of getting the initial water collection from a CBWO versus a municipal project, for example: (WC04-11) (WC04-12)

> *R4: 1,600 [Quetzals], the first spigot. If I don't water, I'm going to make an application, and I turn it into the committee. They go to do a meeting, right after I ask of them if they authorize or don't authorize me. If they say yes, I'm going to pay the 1,600 quetzals… for, not for the committee, it's a fund for everyone. Yes, yes.*
>
> *I: Yes… this is the committee of a project like of Parroquia or Intervida?*
>
> *R4: Yes, the same 1,600 quetzals. […]*
>
> *I: And, do you know if the first spigot costs the same from each, for each, project that a person asks?*
>
> *R4: Different, each community has a different price. And, it's equal: Intervida, Parroquia, it's equal, but that of the municipal government, there's a project that is from the municipal government. They are charging 3,000 quetzals. More expensive.[88]*

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87 R10: Y luego, ya hicimos el esfuerzo del tanque para las casas, chorros, y tubería pequeña - logramos otra pequeña ayuda, compramos tubos y casi solo eso mil cuarenta dio la gente, más los días de trabajo que son… quince días. Sí.

88 R4: Mil seiscientos. Primer chorro. Si yo no tengo agua, voy a hacer una solicitud, y entrego al comité. Y ellos van a hacer una reunión, ya despues pido a ellos si ellos me autorizan, o no me autorizan. Si dicen que sí, yo voy a pagar los mil seiscientos quetzales… para, no para el comité, es un fondo para todos. Sí, sí.

I: Sí… este es como el comité de un proyecto como rech Parroquia o Intervida?

R4: Sí, igual mil seiscientos. […]

I: Y, ¿sabe usted si cuesta un primero chorro el mismo de cada, para cada, proyecto que solicita una persona?

R4: Diferente cada comunidad tiene diferente precio. E es igual: Intervida, Parroquia, es igual, pero el de la municipalidad, hay un proyecto que es de la municipalidad. Ellos están cobrando tres mil quetzales. Más caro.

If the high charges of the municipal system have incentivized Nawal Ja' residents to work for their water supply, then the municipal water project will inevitably remain a small supplier in the area so long as it remains expensive.

Yet, comparisons do not seem to take away from the value that respondents place on the operations. In the end, to see such a valuation of the water work and operations, we can turn to some respondents who worked on the oldest committee discussed, *Pro-Mejoramiento Nawal Ja'*. There is a sense among those early committee members that their time was and always will be invested in those early events and days of labor trying to make things better for themselves, even if their CBWOs began being regulated with the advent of COCODEs: (WC08-07)

> *R10: […] the program is such that no one does a re-election, so we are the same, we came from the first project – it's been like 30 years, a little more than 30 years, the same ones have come […] there in the Pro-Mejoramiento committee […] the people, we convened, and "we're going to change,"; "No, rather, y'all, y'all are good there, continue," because to be in the committee is to lose time, one loses a lot of time – yeah, it seems a...*
>
> *I: An extra, very big...*
>
> *R10: Too much extra! Too much – there are days when – in those days we lost almost, almost 90 days without pay. Yeah. Nothing. Nothing...*
>
> *I: No day's pay.*[89]

Lastly, and as a coda to a point first made in the section of maintenance, just because the leaders in a water project may be original to that project's situation, doesn't mean that they don't involve everyone in the community. In fact, keeping a rotating roster of maintenance

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89 R10: […] el programa es de que no se puede hacer una reelección, pues nosotros los mismos vinimos desde el primer proyecto - hace como treinta años, un poco más de treinta años, los mismos han venido, […] allí en el comité Pro mejoramiento [...] la gente, los convocamos y "Vamos a cambiar - no sino ustedes, ustedes están bien allí sigan", porque estar en comité es perder tiempo, mucho tiempo se pierde - sí, se parece un…
I: Un extra, muy grande…
R10: Demasiado extra! Demasiado- hay días cuando se - en estos días nosotros perdemos casi, casi unos noventa día sin recibir ni un pago. Sí. Maj. Maj…
I: Maj tojb'al q'ij

committee workers appears to be the best way for the water's ideal and real aspects to be

faithfully reproduced and combined into the future: (WC01-11)

> *R1: […] well we did that project, but now, now we are not overseeing that project. We search for a maintenance committee, we search for another maintenance committee that every year rotates. And arriving the year, that maintenance committee changes, and others enter. Arriving another year, it changes again, others enter. Because they are rotating, rotating the turns so that they are accountable that they, everyone manages the "how one maintains the water".[90]*

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90 R1: […] bueno nosotros hicimos ese proyecto, pero ahora, ahora nosotros no estamos viendo ese proyecto. Nosotros buscamos un comité de mantenimiento, buscamos un otro comité de mantenimiento que cada año se turno. Y llegando el año, se cambia ese comité de mantenimiento, entran otros. Llegando otro año, cambia otra vez, entran otros. Porque son rotativos, rotativos el turno para que ellos den cuenta que ellos, todos manejamos lo que "cómo se puede mantener el agua".

CHAPTER 3

CONCLUSIVELY VIEWING LE RUTZIL WACHAJ RECH LE NAWAL JA'

Discussion

What have just been seen have been procedural interactions signifying the events of the research project among myself and the other participants. Now, it is necessary to consider the possibilities that the dimensions of the other two elements of the events – the human and water components, the Subject and the object – bring to these interactions. These elements together fulfill a synthetic view of Nawal Ja' as a place where well-being is achieved in line with goals and preferences that fit neither etic nor emic logics and discourses exactly. This discussion will take account, and evaluate, how seeing the events of the research as a synthetic space and series of practical interactions opens up the fact that water projects are never just about water.

Every time a gathering occurred for research, the human component, or Subject side to an event, held in it a constant variability for the different bodies and languages involved to influence the direction that it would go. Self-reflexively, in terms of "who is who", I held questions as a semi-structured interviewer; nonetheless, the placement and wording of those questions was never quite the same – every event was phenomenologically new. Despite any preparation, participants often told stories or opinions on the basis of my silence-making (happily taken as a silence to elicit talk or sustain the floor for them, Harvey might say), and in instances of two participants, there were often multivoiced narrative deposits placed into the data collected.

The water component is a little more complex. Part of the desire to use this component in plans for this research was the fact that as a concrete object, it holds a constancy to human society unlike most other objects of consideration in epidemiological science. In a

quantitative project its role could be quite clear: take measurements of consumption or interaction with water, its quality level, and then consider human outcomes regarding health (in my case self-reported health, though biological lab tests would be good as well). In this qualitative project, we have to lend the water component, or object side to an event, a little more variability. This is not in the sense of allowing participants to talk about soda or beer as water, but rather communicating about water as an object of symbolic and historical significance. The valence around water that a participant would be explicitly talking around will always depend upon the specific instance examined, but it is still constrained by being the "what" or object side of the event. Within that constraint, what may seem like an idiosyncratic cultural logic (as Fischer might say) is actually bound by being just one side of an event, thus losing some of its ambivalence and ambiguity.

The most constant side to an event, for the basis of the discussion here, is the series of interactions falling under the "how", or the "truth-procedures" (Badiou might say). These are the real actions we all undertook in talking about water as the object. They are the inquiries that have been laid out in the analysis of this work. This is where synthesis happens. It is where the participants and their observations on other events in their lives can project themselves into the event.

This discussion presents some major formations among elements of the events of research in the analysis and uses those formations to compare them with theoretical ideas and practical issues from others. In the end, a synthetic logic – general enough to be a model for use anywhere, but specified for the events of research in Nawal Ja' – becomes solidified. First, it takes seeing the amalgamation of the events, despite their variations in the "who", "how", and "what" elements discussed above, as an opening up of the possibility of well-being for Nawal Ja' for "why" the work is to be done. Second, the model must be appraised for its implications,

including its implicit criticisms of etic logic, its expansion of emic logic, and its reliance on having fidelity to events.

The Aperture of Well-Being

Epidemiology and anthropology have developed very polarized critiques on health-related phenomena. Each discipline enrolls different amounts of people for a study, with epidemiology leaning toward great and often greater yet sample sizes and anthropology leaning toward small groups of key informants. On the part of epidemiologists, the need is to reduce health down to its finest unit of analysis in order to show how the lack of health came to scourge a population. Most often, this "finest unit" of health is the lack or absence of the specific condition, disease, or illness that has caused either morbidities or death. Anthropologists and even physicians, on the other hand, have often maintained much closer relationships with their informants, and patients, and this has led to analyzing health as more than the absence of disease – even within biomedical science, and certainly within the critiques of it.(Kleinman, Eisenberg, and Good 1978)

This view of health as more than the absence of illness or disease has become constraining for anthropologists up to today. This is not due to health being the supposed lack of a biological problem. It is precisely due to their realizations of fieldwork where the cultural referents and referees for health come to signify much more than just biological problems.

To illustrate this, first consider Neil Thin's call for anthropology to open up to the idea of well-being in new and interdisciplinary ways.(Thin 2009) He criticizes the whole of the discipline's reductive tendencies in relating to well-being, of which the pathological or clinical bias noted earlier is just one. In an effort to revitalize the relationship, he lays out a variety of potential areas for work; however, the section of interest to this argument is the middle

assumption on the universality and diversity of well-being: "All cultures distinguish 'feeling well' from 'living a good life,' and base much of their moral debate and existential meaning-making on this distinction."(Thin 2009, p. 31) In the following, such an assumption will be examined in light of this thesis' data and existential-ontological philosophical pragmatism.

From the same collection of essays, a comparison is necessary between what Gordon Mathews researched regarding *ikigai* (a Japanese term meaning "that which most makes one's life worth living") and part of the namesake for this thesis, *utzil wachaj* (K'iche' for health, well-being, or literally: "the goodness of one's face").(Mathews 2008) There is a reason why this term has not been a more prominent analytical feature or supposition to health or well-being that results from water work, but it takes a critique on Mathews' task with *ikigai* and a review of this thesis to see why.

Ikigai, says Mathews, can be divided into *ikigai-taisho* and *ikigai-kan*. Falling under the logic of Thin's assumption in his own way, Mathews differentiates why *ikigai-taisho* should be the preferred focus for anthropological inquiry: it is socially constructed or recognizable as a thing or object (i.e. a lover, a job, etc.). It has existential "worldhood" as an entity, in the Heideggerian sense, and is the enabling-element for *ikigai-kan*, which is the feeling that one's life is worth living. However, *ikigai-kan* is internally felt or of one's state of mind and mood. The critical question for Mathews' starting point is just this: if one begins with the entity in the world (i.e. being as such and not being in itself), then does one ever arrive at anything other than that entity?

He does not think one can approximate the experience of *ikigai* without considering the social object status of the concept as it gets defined or constructed in cultural, social, and institutional worlds. While Mathews compares different cultural situations where informants discussed *ikigai*, he never returns to declare that the experience of *ikigai* is knowable. If it is true

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that the experience of feeling what it is that makes one's life worth living is unknowable to others, such as Mathews as the investigator, then what does he make of the events he shares with his informants while in the field?

When he describes his method for interviewing informants in Japan, the USA, and China, he says that self-reporting is an inevitable problem for knowing what it is that the other individuals know.(Mathews 2008, p. 176) This asymmetry of information is a common problem for all of social science, but there is a reason why it is diminished here: the recognition of the event as a synthesizing moment.

This is where the point of holding back *utzil wachaj* from analytical priority becomes significant. Mathews mentions in his methods as well that toward the end of interviews, the investigator would ask the respondent, based on what they'd heard, whether "X" was their *ikigai*. This explicit question about the concept brings it into relief for a definite disposition to be made on the part of every informant. It objectifies it, but if one follows Mathews' philosophical stance, then it is inescapable that doing so keeps what is also disclosed behind that objectification on both parties' parts – the subjection of the people's bodies and language to the event – hidden under the guise of uncrossable cultural variation. If one looks at the transcripts of the research events in Nawal Ja', one would be hard-pressed to find a single vocalized *utzil wachaj*, and certainly not in the form of an answer by a respondent (neither does *salud* get used, except when talking about the *centro de salud* [nor is *salud* necessarily the best translation of *utzil wachaj*, as *bienestar* is a possibility as well]). One might think it was a neologism that had never caught on!

These may seem like minor contrasts between this work and Mathew's, but these facts together must be emphasized at last. There is no reason for Mathew to separate himself as investigator from the informants and their *ikigai* during the events of research. Doing so is an attempt at keeping a "distanced" observer position, as a sign of stoic indifference, to oneself

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while making the informants mere vessels of the desired concept, and supposed "hidden" experience of *ikigai*. Conversation on *utzil wachaj* would have been a welcome addition to the events during this study, but, what I am advocating for is not the admission of this term, nor the experience of it, as required to understand well-being in Nawal Ja'. What this thesis does argue is that a radically new idea of well-being is possible when the water projects and their organizational structure are understood through "how" the events of research go.

Thus, as a coda to Thin's assumption that all cultures make a distinction between feeling good and living a good life, the situation for the K'iche' in Nawal Ja' appears to be more complex than simply imposing the word for health or well-being in conversations as an objectively-addressed thing or a subjectively-felt state. Just like how it was noted early on in the discussion that just because water or water projects were being explicitly talked about by participants did not mean that doing that project was solely to get water, so it is that just because *utzil wachaj* was not verbally disclosed in a majority of interviews, does not mean that it was not a communicative factor in the research or processes of water work themselves. The following clarifies why it is that despite the variations among participants and their utterances, there is a unified structure to the idea of well-being in Nawal Ja' (and elsewhere in the world).

With the release of the need to maintain a specific K'iche' term for "well-being" in the context of Nawal Ja', a specific article from T.S. Harvey can be used to justify why the notion of individuals of various languages "subjecting" themselves to an event is stolidly founded and not an exercise in futility for an understanding of the idea of well-being.(Harvey 2011) In this article, Harvey travels around the Western Highlands of Guatemala and uses participant-observation during public sales pitches made by Maya mobile medicine men (and records multiple languages, including K'iche', Spanish, Kaqchikel, and Tz'utujil). Harvey

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describes three functions of the speeches: declaration of conditions to remove stigma, declaration of local solutions, and declaration of itself as a health discourse.(Harvey 2011, p. 55)

Differently from the contained events of this research, Harvey watched as individuals shuffled through open air markets, some stopping to hear these "snake oil" salesmen, others passing through, and some buying into treatment. Apart from the functions of the events being similar in talking about health issues, in any case there is a critique embedded in them about the place of etic perspectives on the health of the Maya which re-situates emic symbology and historiology. An example is the use of pharmaceutical medicines to demonstrate how impurities enter one's blood, like when they hold a blood-colored test bag of liquid that changes to a purple color with the introduction of aspirin, and then clean the impurities with all-natural medicine.

Despite the fluidity of individuals being able to move to and fro as the public event is going on, a crowd often manifested. This crowd of wellness-seekers, as Harvey calls it, go along with the salesman's symbolic project and they observe phenomenal critiques on how natural medicine is healthier for you than pharmaceutical and chemical medicines. The effect is an emic space, and, an emic public health. The power of Harvey's analysis lies in the previously uncounted experiences of Maya who access health care this way, further, it helps to explain a wide variation that can consistently be located in the human component, or Subject side, of the event. The inability to know who is sick, or who is even interested, among that anonymous crowd is a definite characteristic of the differences among individual bodies and languages (recall that multiple Maya languages could have been involved) who must accept this diversity when bringing about a totally new Maya logic or discourse regarding health. It is that characteristic which is found in the human component of the events here as well, but with greater accentuation for the synthetic power of the events for all sides involved in them.

In the fullest cross-cultural treatment of the notions of well-being found among indigenous Maya in Guatemala, the last material to compare with is in Ted Fischer's book *The Good Life*, which compares markets and microeconomic decisions of agents in Guatemala and Germany that aspire toward an idea of well-being, the good life.(Fischer 2014) Considering the central role that cultural logic plays in this work to bridge an understanding for the types of logics (emic, etic, epidemiological, etc.) that can be posited for analysis, comparing where Fischer takes this concept is important to distinguish what follows in the end.

To start, there is still a focus on the individual within Fischer's analytical lens, but now with a more distinct critique through an anthropology of economics. He uses the economic divide of stated and revealed preferences on the parts of buying and selling agents to begin parsing out just how an individual comes up with what "the good life" is for them. Anthropology can counter a typical positivist economics claim that revealed preferences are preferable for theoretical analysis of human society because of his recognition that stated or revealed preferences are both just frames of decision-making, or "modalities of thought, what [he has] elsewhere referred to as cultural logics."(Fischer 2014, p. 64)

The cultural logic of stated preferences shows the values of the agents who hold them up, and just because they might not follow through with them does not make them any less real than the "revealed" outcome which happens after a material calculus about one's expected utility from a market decision. That is a point I would like to belabor.

In a sort of holdover from one of Fischer's other works in collaboration with Peter Benson, *Broccoli and Desire*, he injects into this discussion the near-normative economics paradigm of "moral projects", which shows that in a cross-sectional analysis of a single agent's opinions and preferences, one's desires can supersede one's needs when they consider their long-term goals and hopes.(Fischer and Benson 2006, p. 170) In *The Good Life*, Fischer uses this

same sort of moral projection to elucidate how to fit individual's idiosyncrasies which arise when considering cultural logics in the overall society. They "tap into larger cultural currents. Social structures and institutions condition these projects, shaping their flow without absolutely determining their path[...]".(Fischer 2014, p. 74)

Whereas Fischer comes to conclude his analysis of well-being as a very similarly structured phenomenon in two very different geographic locations (in line with his findings on pan-Maya identity earlier on) with a consideration toward the philosophy of measuring it both objectively and subjectively, the task here is to show why the idea of well-being is an open possibility at any event of this research.

What this aperture of well-being has been preparing us for is this view: although *idealistic* points of view have been brought up repeatedly during the interviews about how the drinking water of Nawal Ja' is pure, abundant, equitably provided, or even holy, the *realistic* points of view about maintenance, labor, and all the regulatory operations inherent in water work do not invalidate the contribution of these participants and their perspectives on *le rutzil wachaj rech le Nawal Ja'* (the well-being of the Water Spirit). Even classifying their declarations into the uncomfortable, but unified, spectrum of idealism and realism has been nothing but a heuristic attempt to override saying some participants sound "objective" and others sound "subjective" about water or water projects from a banal analytic and basic observer perspective. What was shown by presenting the data this way was a pragmatic and reflexive consciousness of the "how" side to the events in research that compares the "who" and "what" sides of those events simultaneously with the factors (either etic or emic discourses and logics, or individually varied bodies and languages) that can be projected into them through actions or "truth-procedures".

What is the prize to viewing Nawal Ja' and all the events of this research this way? Well, when it is finally put together, what is synthesized through the series of projections had by

all of us participants in this research is a novel logic that is a composite of all those elements or sides discussed here. It is the exceptional opening up of a possibility for well-being to be brought into the existence of all who shared in the event.

A New Logic Model

The play between global health discourses and K'iche' Maya discourses now comes to an end. Having presented what is being said in the literature in regards to each in Chapter One, and then having shown who is saying what in the specific location of this research in Chapter Two, we can now make a confident leap toward a synthetic modeling of a new cultural logic on the idea of well-being arising out of water work in Nawal Ja'. This modeling includes a comparison of the data in this research with an etic logic on global policy issues regarding indigenous Maya water use and a comparison of the data with an emic logic of indigenous Maya and local media narratives about their relationship to a water crisis. Lastly, it designs how the reliance on fidelity inherent to this modeling of well-being can be mitigated from causing problems.

Often, the mode today is to think of inputs, activities, outputs, outcomes, and impacts in the global health development scene when implementing projects for an area.(W.K. Kellogg Foundation Logic Model Development Guide 2006) This research indicates a need to supplant any such logic model from being imposed on water work because of the projects' exceptional informality and collective rights and usage of water. There were multiple instances where the respondents would discuss a need to consider the resources (be they the size of the tank, the money for infrastructural purchases, labor pool, or anything else) and what kinds of activities or operations they would carry out with them, but practically no one said that a project had formal goals about outputs, outcomes, or impacts. The informal nature of the projects,

despite many being said to be backed by international organizations, indicates the dominance of customary rules and systems for regulating them.

Aricella D'Andrea talks about a variety of indigenous customary and legal issues in water provision in Guatemala with a framework of four principles (respect, trust, credibility, and integrity) and three approaches (flexibility, dynamism, and circulation).(D'Andrea 2012) She articulates this framework through multiple areas to form a recommendation about indigenous legal activities relating to water that we can compare our analysis with.

First are access regulations. D'Andrea summarizes the collective ownership traditions that are common to Maya water resource usage, and highlights how formal colonial legal systems recognized these customary rules. It could be granted that this research has a very prominent strain of collectivism in the ownership of the water, as a public good, and of the work as a project for all.

Second are water use and protection regulations, which she breaks into domestic, agricultural, construction, and cultural and conservation uses. We readily heard about everyday uses of water for all these areas. The difference between understanding her distinctions between cultural uses and her other uses lies in an apparent religious adherence to indigenous ideas about the earth, and water as the blood of the earth. We did hear about this sort of "idealism" in our analysis, and yet, much of it was couched in a recognized co-existence of adherents to Christian and Maya religion. It's clear that we have a more holistic view of the indigenous of Nawal Ja' as neither strict believers of the Maya cosmovision nor Christian theological purists. As a matter of course, the other uses outlined mentioned prohibitions, sanctions, and obligations which were all heard about throughout the analysis.

Third are institutional arrangements, which the analysis certainly can align with in view of the various committees (of water, of maintenance or operations, and through the

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COCODE development system). Though, more is discussed with D'Andrea that seemingly went unmentioned. For instance, committees for natural resources, system operators (*fontaneros*), forest rangers *(guardabosques)*, and water judges (*jueces de agua*) went without explicit note. One suggests that the reason may have to do with the purposes for our interviews being more focused on human water consumption, and not the management of natural resources or other committees of water for agriculture or irrigation. Still, the other aspects of institutional arrangements she notes, regarding decision-making or mediation of disputes, do get discussed. But importantly, the notion that where formal legal systems, of the municipal government for instance, do not reach is where the indigenous customary laws hold the authority is certainly supported by the analysis.

What the difference is between how "indigenous customary law" related to water work in Nawal Ja' arose in the interviews and the way it is discussed by D'Andrea is the lack of "rights" disclosure, which she emphasizes toward the end of the article. She looks at the rights of indigenous populations in Guatemala to water under the Peace Accords, and criticizes the lack of progress toward instituting those rights on the state's part by either rejecting, ignoring, or not implementing international policy measures to devolve authority to indigenous people (in short, they include: the right to access, the right to participation, the right to consultation, and the right to environmental protection).

The reality of water provision in Nawal Ja' is perhaps aligned with her conclusion and recommendations.(D'Andrea 2012, p. 696) People have taken a step forward toward mitigating the effects of marginalizing national legislation that doesn't recognize their water rights by registering with the local municipal (in this case the COCODEs) system on water. But, the reality does not seem to lend itself to her second recommendation, in that they might want to pool the neighborhood or community resources in order to purchase their water springs or

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sources as private property. The formation of ownership of the water and the projects in Nawal Ja' is repeatedly understood as collective and prior to any private property titles, and the projects' logic do not seem to procedurally insert "obtainment of a title" as a necessary step toward achieving well-being through water work. Even suggesting that they go to register their projects with the COCODE system out of a desire to synthesize their everyday water use with the etic logic of "rights" may be a stretch for this new model.

It is exactly this kind of critique about the synthesis of water projects with an etic logic, and its inability to fit, that can be turned on its head now to look at how this new model is unable to synthesize with emic logics as well. T.S. Harvey examined the process of the Maya public reactions to a cyanobacteria outbreak in Lake Atitlán in Sololá.(Harvey 2012) The Maya groups around the lake include Kaqchikel, Tz'utujil, and K'iche', and Harvey goes into the stories and cultural significance of the lake and water to the Maya early on; however, his aim in the article is to show the way that these groups become the scapegoats of the cyanobacteria outbreak according to the outsider perspectives of the larger Guatemalan media narratives. Far from showing that the Maya willingly accept or interpret the outbreak and the potential risks of exposure to "cyanotoxins" as a part of their everyday moral projects in life, Harvey shows how the communication between the two groups, Maya and non-indigenous Guatemala, is mostly a one-way street of transmission – where the crisis, the event, is blamed on the Maya Other as an object and not as individuals capable of entering into the Subject side of participation and observation on the phenomenon. (The actual cause was unknown, but in one instance was noted as untreated household and industrial waste, lake floor thermal vents, or warming of the water.)

Harvey excellently represents the local perceptions of risk that arise out of the event, and traces the larger narratives of media outlets that provided translations of science about the cyanobacteria.(Harvey 2012, p. 489) In turn, these affected the response of local mayors, who

minimized the science and encouraged their local constituents to go out into water where

cyanotoxin from the microbes may have been in high concentrations to remove the algae-like

substance. Radios and newspapers echoed an ambiguity about whether there was any risk at all.

The downplay of the crisis is held as exploitation of an historical vulnerability for marginalizing

the Maya, who see so much significance and of their livelihoods tied up with the resource.

What is clear about Harvey's "ethnography of risk communication" is its staunch

support for viewing the events surrounding the cyanobacteria outbreak as a process.(Harvey

2012, p. 491) This is where this logic model has differed all along. The comparative perspective

of Harvey within his analysis of risk communication runs into a problem with merging the

behaviors of and narratives of Maya and non-Maya with regard to the crisis because it never

pulls the ideas related to it into full view of the event. It can not see full ideas without stopping

the comparisons between these groups and how they objectify one another, and instead seeing

that they deal with the events together, even though the variation embedded in their elements

changes whenever one's awareness considers a specific part of an event. The reason why this is

comes down to Harvey's positing that the Maya were being blamed as causes of the outbreak due

to their life-ways (for instance, their use of chemical fertilizer), but that analysis – while keen

from the etic perspecive – leaves out the enmeshing of such a narrative with the Maya narratives

for why the lake became "impure" or a site of risk to their well-being. This is despite that the

Maya are carefully discussed for the significance of myths or notions about water throughout the

article, because that is mostly done from the local, emic perspective that doesn't look at their

opinions for why the outbreak occurred.

Now it is time to appraise the implication of using events as an analytical frame over

time. The continual framing of events as the three elements explored here which permit the rising

of an idea of well-being has to be considered in light of a reliance on fidelity that what happens

from one event, or moment, to the next is a true continuation of that idea.(Badiou 2012)

In the context of Nawal Ja', the events of research there, and their contained

elements as part of this new logic model, the idea of well-being was clearly existent in each

interview and as part of the purpose for any given interaction in those events (in example: to

explain why water was only tested once every one, two, or more years). Relying on the idea to be

the same and unchanged between interactions, or even new events and interviews, only requires

recalling that the event is a possibility of more possibilities. It moves away from merely fulfilling

the possible and toward defying impossibilities. This is seen most clearly in the radical

responsibility of individuals to accept the diverse differences between or among themselves and

participate equally as a co-existent human component of bodies and languages subjected to the

events' activities.

Fidelity can not fail to bring about the idea of well-being, so long as those who co-

exist in the events do not reject each other and the content of the events is towards a goal which

is an expression of that well-being. This is what allows the idea to transcend just Nawal Ja'. It

can be true of humans all over the world because the structure of an event will be the same in

each case, even if the content in each element changes. That is the paradox of this logic model:

when the content varies too much, and there are unaccepted differences among the participants of

an event, there is a breakage from the goal, and thus a fall back toward doing only what is

possible, and not a leap out toward succeeding in what is impossible.

Conclusion

Normally in scientific endeavors, events are thought of in terms of cause and effect,

agent and patient, etiology and manifestation, so, the thought that one might impose a model

over them that calls for an existential-ontological frankness regarding the interactive positioning of subject, object, and project without valuing the description of one to another is not altogether welcome. Despite this consternation in unfolding the model of a new logic on water work in Nawal Ja', there is a reason to think the framework holds great promise, and, that it can inform future research projects in the area.

Talking about the water projects in Nawal Ja' could not have been analyzed more adeptly than through a radical recognition of the participants, especially the respondents, in the research being the experts on the matters and procedures at hand for achieving their own ends for water use. This model allows that, lending the analysis all the descriptive material for their part it could permit. By entering the events of research together, we demonstrated that a reduction on my part here in writing about them would be misguided to evaluate "how" water and health are talked about in the city strictly from the basis of the words they spoke.

The argument of the thesis that the talk of water in Nawal Ja' where water, in some of its variable cultural forms, is its namesake does not fit in with any emic and local perspectives, nor any etic and global perspectives has been argued to saturation. The wide selection of comments and quotations has clearly shown a large gamut of aspects to managing water work – for the part of committee members, the respondents, of the research. Alongside the selection is the necessary recognition of my place among the respondents during the research events. This has been dealt with in a philosophically pragmatic way. Namely, the stance I held in participant-observation has to be included in, has to be subjected to, the formations provided by the, traditionally, Others.

Doing this permitted the aperture of well-being to be critically examined as the centerpiece for *why* the work is being done. If there were efforts to examine Nawal Ja' from purely hydrological or epidemiological perspectives, then they may commit an error similar to

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Gordon Mathews' analysis of *ikigai* and succeed at finding water supplies that meet with "improved" definitions, or "healthy" gastrointestinal tracts, but fail at seeing that the who and the how change the way those entities or things are encountered in Nawal Ja', and the world at large, thus missing the whole idea while over valuing a single side to an event as "the truth". This over valuation of some thing, entity, or a "what" amounts to a false truth is avoidable.

While the implications of attempting to prize the three sides to events of research appear to be a great distraction or loss of accuracy on the part of investigations centered on just one or two primary outcomes, there is no reason to believe that. Greater emphasis on why the events of research led up to such outcomes can benefit evaluations of the outcomes just like reviews of one's analytical method can be peeled back to show why certain numbers led to a particular primary outcome. This emphasis includes fidelity checks with how procedures are carried out during research, and checking informed understandings of participation for long-term research. Even without this bigger emphasis in a project, because of its specificity for instance, it would at least make it apparent the sorts of variation that have been underrepresented in the given outcomes of research. Remarks on limitations usually go to weaknesses of statistical analysis or blind spots that are very important, but drawing out one's limitations as far as events of research should go a step further than just sample size, retention of participants, biasing in self-report, or losses to follow-up.

Let this work here evidence that; despite the potential to see nothing but differences between myself and the other participants in this research, or nothing but variation across the patterns of speaking and explicit dispositions of all of us regarding the objects of conversation pertinent to the symbolic-historical situation of Nawal Ja', the idea of well-being can be modeled from synthetically viewing the events of research. If other sciences wish to pursue other ideas, then the the way that data is collected about the events where those ideas arise must be

consciously watched, but this is but one answer to Neil Thin's call for anthropology to reassess

its standing with regards to well-being.

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