

## WARNING FROM THE GODS: PERCEPTIONS AND COPING STRATEGIES OF THE DROUGHT-STRICKEN COMMUNITIES IN A PHILIPPINE PROVINCE: A PHENOMENOLOGICAL APPROACH



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### ABSTRACT

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Understanding people's coping strategies in response to the 2016 drought that hit Cebu province deserves a revisit. Toward this end, this paper discusses people's coping strategies in conjunction with their perception on this climatic event. It is argued in this paper that any intervention plans for implementation to mitigate the impact of natural disasters should be placed in the context of the people's socio-cultural milieu. By using twenty-eight (28) transcripts of the focus group discussions and in-depth interviews from the respondents in the different municipalities in the province of Cebu, the coping strategies of communities were founded in their local knowledge founded on their perceptions of the 2016 drought. In conclusion, people's knowledge on this specific climatic event is experiential and their coping strategies, drawn out from experience, were primarily developed to live compatibly and harmoniously with nature and secondly, to improve adaptive capacities to natural uncertainties.

**Contribution/ Originality:** This study is one of very few studies which have investigated people's perceptions on climatic phenomenon using the phenomenological approach as a participatory assessment tool.

## 1. INTRODUCTION

Mitigating measures against the effect of climate change become a priority of governments, urging communities to draw up plans to mitigate the impact of disasters brought by climate change. The main challenge now is the mainstreaming of these plans into the local government plans, actions, and programs. Communities have already acknowledged that extreme climatic events, such as typhoons and droughts, can change communities and institutions including their adaptive capacities. In the Philippines for instance, as reported by the International Federation of Red Cross and Red Crescent Societies on the 2016 El Nino phenomenon, Mindanao and the Visayas regions were the worst hit areas in the Philippines with a combined estimated loss of \$78 million in agricultural production. As contained in the reports of media, economic and infrastructural losses made it to the headlines, but people's experiences and their coping mechanisms were hidden from the world's view. In this paper, people's experiences on the

severe droughts that hit the country, particularly the province of Cebu, were assessed qualitatively to understand their coping strategies on the 2016 drought.

People's coping strategies on extreme climatic variations lie on their understanding about the phenomenon. This perception is constructed through the many climatic events that these people have experienced. In this connection, it is believed that intervention measures to mitigate the impact of droughts, in this particular study, should be in conjunction with the people's perception on the phenomenon. Past studies on the impact of climate change such as prediction models used for storm-prone areas, the simulation on the global fossil resource markets and climate change, and the agricultural models were focused on the development of simulations models to design and implement climate-change based scenarios adaptive strategies (Bauer *et al.*, 2013). Furthermore, policy studies on specific climatic events e.g. multivariate analysis for integrated drought assessment (Rajsekhar *et al.*, 2015) and ecological response monitoring (Aldrich and Meyer, 2015; Creutzig *et al.*, 2016) were strongly and aggressively pursued to understand the adaptive responses of communities. Most of these studies emphasized the design and production of technologies to mitigate the impact of natural disasters.

In the design of mitigating technologies, engineering solution is just one part of the equation. The other part is the adaptive behavior of people against the insurmountable impact of nature. However, in the face of intractable natural disasters, such as droughts and floods, communities, even with the absence of these engineering solutions, were able to adapt to certain conditions (Lei *et al.*, 2014) and develop survival strategies. According to Ifejika and Scholz (2013) the better way to learn survival strategies from natural disasters is learning from people practicing them. In this context, exploring people's adaptive schemes become an initial step towards the development of mitigation plans that could minimize losses attributable to climate change.

## 2. PHENOMENOLOGY AS PARTICIPATORY TOOL IN DROUGHT ASSESSMENT

Known as the study on the nature and meaning of things, phenomenology lies its roots from hermeneutic analysis through the interpretation of texts for core meanings. With the advancement of this method, it focuses on concepts, events, and lived experiences of humans. Studies using this approach aim to acquire an "an intimate awareness and deep understanding of how humans experience something" (Saldana, 2011). In this respect, the predictions on the occurrences of behavior given the sets of stimuli and conditions, and the measurement of the strengths of the associations between variables are beyond the concerns of phenomenology. Rather, phenomenology seeks to understand people's perceptions and experiences of something. To carry out this objective, in-depth, personal, and singular interviews coupled with other forms of gathering information are essential in the phenomenological processes.

Several studies were conducted around the theme of understanding human experiences. These studies were mostly found on the health-care sectors where varied techniques and approaches were utilized in these studies. For instance, to get the meaning of healing from men who have experienced childhood maltreatment, verbatim data were used in the analysis and in the identification of themes to capture the meaning of a phenomenon (Willis *et al.*, 2015). The significant contribution of this study especially to the field of nursing and health care was the recognition on the multidimensional nature of childhood maltreatment and experiences.

Intimate partner violence (IPV) has been another subject explored by researchers and scholars using the phenomenological approach. Studies on IPV have revolved around numerous factors of IPV, such as, but not limited to tradition, culture, aspects of health and socioeconomic status of IPV victims. However, the focus of the study, according to Sylaska and Edwards (2014) was centered much on the reports of victims as disclosed to their informal supports. Understanding the experiences and perspectives of IPV victims and their support structure are crucial in the development and successful implementation of IPV intervention programming.

Phenomenology fits within the context of participation theory. With the lived experiences as the subject matter of any phenomenological studies, these lived experiences can be utilized in the design and implementation of

intervention programs and activities. Furthermore, these lived experiences are concrete manifestations of people's responses to the different engagements they have as members of their community. Hence, with the aim of the participatory approach, the goal of the participation theory is the inclusion of the stakeholders' perception, ideals, and goals into the program, thereby considering them as partners of development efforts. These perceptions, ideals, and goals form part of the lived experiences or life-world of the stakeholders (Honer and Hitzler, 2015). For the stakeholders, their life-worlds are concrete, real, and tangible, and anything not apprehended as a life-world is a fiction and therefore incomprehensible. Within this conceptual paradigm, phenomenology is a participatory tool.

### 3. EXPERIENCE AND LOCAL KNOWLEDGE

Human knowledge is primarily experiential and these experiences are stored in language and are revived during narration. In the act of narration, the experiences are shared, and the shared experience becomes knowledge and is transmitted across generation. The argument that nothing comes to the mind unless it passes through the senses only proves that experience becomes an essential requisite of knowing, and this pragmatic requirement is an essential foundation of local knowledge. Thus local knowledge is experiential.

The experiential nature of local knowledge is the result of an actual engagement with an event which validates its epistemology. People's experiences with droughts form the perception that droughts are consequences of something. For the people, drought is the result of over-utilization of the natural resources which leads to the interruption of the climatic pattern. Human activities perceived as abuse of nature such as the conversion of agricultural lands into housing subdivisions, deforestation, quarrying, and conversions of hillsides into housing projects are contributory factors to the occurrences of drought. For these people, drought is a punishment from nature a destruction of nature.

Mitigation strategies should be aligned with the people's worldview. In this context, it is the role of science to identify the different components of people's worldview and finally come-up with taxonomy of the different elements so that each component can be incorporated into the mitigation plan. People have experienced water scarcity during the occurrence of El Nino, have seen the browning of vegetation, the drying up of riverbeds, the damage to vegetation, agriculture, and livestock, the rationing of water, occurrence of spontaneous bush fire and the children getting sick. After all, these subjective initiatives of the people to mitigate the impact of drought have been primarily developed to live compatibly and harmoniously with nature and secondly, to improve adaptive capacities to natural uncertainties (Lei *et al.*, 2014).

### 4. THE PROJECT

The data used in this paper were taken from the project "Social Capital of Rice/Corn Farmers and their Perspectives and Responses on the 2016 Drought". Twenty-eight (28) interview and focus group discussion transcripts and a desk-based review on literature discussing the El Nino phenomenon were used in the analysis. Aside from assessing the direct impact of the 2016 drought on the lives of the small rice/corn farmers (R/CF) in the different municipalities in the province of Cebu, the project also documented the coping strategies of the R/CF and the utilization of their social capital in the access of the services of both the provincial and local government.

Data collection was conducted for a period of eight (8) months focusing on the selected heavily affected communities within the province. Visits to communities were made with the help of key informants and if it was required, the researcher spent few days in the community.

Analyses of the PDs were facilitated by Atlas.ti8, a qualitative data analysis software. The analysis began by loading the PDs to a text cloud generator to get the visual view on the textual prominence. Coding of texts of the PDs followed afterwards of which through the code manager routine, the relationships between codes were later established. This procedure was also applied to the memos used in the analysis.

For reporting purposes in this article, all statements were translated to English. However, some of the terms were left in the vernacular.

#### 4.1. People's Perception About the 2016 Drought

People's perceptions about the 2016 drought were represented in the terms such as *water, climate, change, warming, heat, and temperature* with water as the central topic. This representation indicated that the drought that hit the province attributed to climate variability with its effect on the water supply and temperature. As stressed by a respondent:

*"This is the worst dry season I have experienced in my whole life. I used to work in the farm until 9:00 in the morning, and be back at 4:00 in the afternoon. But this has changed. I should rest my carabao earlier. Furthermore, the heat of the sun is hardly bearable"* (1:1).

Locally, people referred to this phenomenon as *hurwarw* which is popularly characterized as "having intense heat", "dry spell", and "scarcity of water supply". In an official report by a government agency tasked to monitor the weather condition of the province, the 2016 drought reached 38°-39° Celsius which was much higher compared to the 2010 drought event. Usually, the province used to have an average of 50mm of rain during summer, but for 2016, it had only 4mm of rain.

Interviews with respondents proved the realities of *hurwarw*. *Hurwarw* caused extreme water scarcity, high temperature in the localities, and agricultural failure. The provincial government has reported crop failures and declared a state of calamity compelling the provincial government to insure the farmers' crops and livestock with the premium to be paid by the provincial government. As reported during the FGD sessions:

*"Browning of vegetation is evident. We have been clamoring for assistance. Furthermore, water is scarce in our area, (15:7). Like in my place, my family happens to live in a hill and used to have an abundant water supply, but now, our local water supply is already rationed x x x. We have to line-up just to have a gallon of water" (18:2). In our place, we used to fetch water from the deep well, but at present, deep wells dried up because of this phenomenon. To survive from this difficulty, we need to share water with our neighbors. This water sharing was the first incident I have witnessed since my childhood" (3:4). Personally, I've observed and felt that during this phenomenon, the rainfall is reduced. . . crops and livestock are dying (8:16).*

##### 4.1.1. Nature's-Way-of- Getting-Even Perception

*"Nature retaliates and man is helpless against the forces of nature"* (2:15). Expressed in the term *gaba* – a belief that something will befall on someone if something is desecrated or abused – *hurwarw* is *gaba*, a form of punishment, because of "man's irresponsible use of nature's resources" (20:1-2). Being a *gaba*, humans are helpless against it for *gaba* is an inherent consequent of the subsequent actions – the exploitation of natural resources – made by humans. This exploitation of the natural resources was identified in the narratives through the following expressions e.g. "conversion of agricultural lands into housing subdivisions, deforestation, quarrying, and conversions of hillsides into housing projects". Consequently, the following climatic events and variability such as "sudden change of climate" (2:9), "extreme heat and no rain" (3:10), and "irregularity of unusual temperature in the natural environment disrupting our typical weather patterns" (4:1), and "extreme weather condition, an irregularity that disrupts our typical weather patterns" (20:1-2) were attributed to the exploitation of the natural resources without compensating for the loss. In the context of the people's perception about the drought, extreme heat and having no rainfall were experienced with its heavy toll on the human condition.

##### 4.1.2. The Consequence Perception

Usually expressed in the dialect as "*Maoy sangputanan*" – the inherent end-result of an action – the impact of drought is an inherent consequent of either individual or collective actions. Due to the destructive activities of man in the guise of progress and development referred by some development agencies as affirmative actions, drought

and other natural calamities become a *sangputanan* of these affirmative actions with its impact manifested in these forms: 1) health impact and 2) economic consequent. For the former, drought brings with it food insecurity which leads to malnutrition, decreased water quality, lack of water supply and sanitation. During FGDs, respondents have reported that “*children got sick*”, “*children had skin rashes all over their bodies*” (15:3), “*have cough and colds*” (11:15). For the latter, it is focused on the household allocation of its resources. Expressed as “*increase in the price of goods*”, “*livestock failure*” (5:12, 19:2), “*increase charges of utility bills*” (7:6), and “*electricity outage and food shortage*” (8:16), “*damage to agricultural crops*” (22:1), and “*difficulty of sustaining livestock*” (24: 3-9), subsistence becomes everybody’s primary concern.

#### 4.2. The Coping Strategies of the Drought-Stricken Communities

The coping strategies of the drought-stricken communities on the 2016 drought were responses developed from the people’s perceptions about the climatic event. Having two types of perceptions identified, two types of coping strategies were recognized as well, namely: regulation of the body temperature, and resource sharing. Table 1 contains the matrix of the sample coping strategies in conjunction with the people’s definition of the 2016 drought.

Table-1. Sample of the coping strategies of the drought-stricken communities in Cebu Province, 2016

Perceptions on the 2016 Drought	COPING STRATEGIES	
	Regulation of body temperature	Resource sharing
Nature’s-way-of- getting-even	<i>seek for cooler areas, shaded and open areas; re-hydration; always, keep yourself cool; prayer; bring water to avoid heat stroke; tree planting</i>	<i>water stocking and rationing water sharing; save water; budget water</i>
The consequence perception	<i>medical check-up for proper diagnosis; stay fit and healthy; seek temporary residency</i>	<i>re-use water for other purpose e.g. hygiene and sanitation</i>

Source: Social Capital of Rice/Corn Farmers and their Perspectives and Responses on the 2016 Drought. A Terminal Report: Cebu Technological University-Main Campus, Cebu City, Philippines.

##### 4.2.1. Regulation of Body Temperature

Founded on the belief on *gaba* which results to “*extreme heat and no rain*” (3:10), cooling the body becomes the immediate response of individuals. Strategies were varied, such as, “*seek for cooler, shaded areas, trees providing cooler breeze* (18:8), *tree planting, caring for nature, stop the abuse of nature, avoid the direct heat of the sun and keeping oneself cool* (2:17), *drink lots of water*” (5:8, 9:9, 10:10) become the most expected response. By maintaining the normal body temperature, temperature-related fatalities and illnesses can be avoided e.g. heat stress and heat stroke, skin rashes (5:2) and respiratory diseases (25:5).

The concept of *gaba* applied to the El Nino phenomenon played a crucial role as a coping scheme. Considered as a form of punishment, it is implied that the divinities governing the rules of nature should be appeased with. In this context, people believed on the dichotomous world: the world of the gods (nature), and the world of man. Nature is the domain of the gods where as social activity is the domain of man. To appease the gods, a sacrifice should be offered to lessen the wrath of the gods or in the Christian perspective, a collective prayer (*Oratio Imperata*) should be held for God to listen to the cry of His people. Because of this belief on *gaba*, some respondents reported that they have been conducting voluntary tree re/planting or re-forestation prior 2016 because of their prior experience with drought. Restoration of the environment to its prior stage should be performed to appease the gods. This conception of natural calamity as a punishment or warning from the gods is not unique among the communities under study. Similar situations were found among the Florenese of Indonesia which considered calamities as warnings from the gods due to societal misdeeds (Islam, 2012).

##### 4.2.2. Resource Sharing

Resource sharing, as a coping scheme, is indicated in people’s narratives as “*requested to share water*”, and “*taking temporary residency*”. At the height of the scarcity of water supply, thus prompting the provincial government to declare a



state of calamity, and allot funds for the rehabilitation of agricultural crops and livestock, households with deep wells were requested to share water not only to meet human demands but also for agriculture and livestock concerns. Water, which is a vital commodity during crisis, is a commodity that cannot be easily shared. During the occurrence of drought, some deep wells run-out of water. Storing of water in jars and other containers by the deep well owners was usually done overnight. For the neighborhoods, water storing was done during the day time especially early morning.

In some cases, some respondents narrated that they took temporary residency in their relatives' places not severely hit by the drought. In this situation, informants recounted:

*"This is the most crucial decision we have to make when we have to open our household to others so that they can get water from our well. Our neighbors asked for water for cooking and drinking needs, and for livestock, not anymore for personal needs. We have to give them water for it means survival for the family. To prepare for the worst, we instructed every member of our household to save water, and re-utilize it for some other purpose"* (7:15).

*"I could hardly bear anymore the heat of the sun. It was so hot in our place, that I have to move out and should stay somewhere else. I contacted my mother's sister and requested to stay in her place. Her place has lots of trees and shades and comparatively much cooler than mine. So I stayed there for awhile"* (6:19).

## 5. CONCLUDING REMARKS

People's coping strategies which were grounded on their perceptions about the 2016 drought formed through their varied experiences only proved that the utilization of such knowledge was a viable tool in the development of mitigation programs to enhance the "adaptive capacities to natural uncertainties" of people. In the development of any mitigation strategies therefore, the inclusion of the target community as well as maintaining close consultation with them in the design and implementation of mitigation programs ensures people's cooperation in the implementation of the different activities.

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