

**FROM BEACH SEINING TO *SAPYAW* FISHING
INNOVATION, COMPETITION, AND CONFLICT AVOIDANCE IN A
MUNICIPAL FISHERY IN CENTRAL PHILIPPINES**

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**IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN ANTHROPOLOGY**

BY

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This Special Research Paper entitled "FROM BEACH SEINING TO SAPIYAW FISHING INNOVATION, COMPETITION, AND CONFLICT AVOIDANCE IN A MUNICIPAL FISHERY IN CENTRAL PHILIPPINES" prepared and submitted by ALOYSIUS MARIAE L. CAÑETE in partial fulfillment of the requirements for the degree of MASTER OF ARTS IN ANTHROPOLOGY has been reviewed and is recommended for acceptance and approval

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INTRODUCTION

Research Problem and Theoretical Stance

The study of innovations in Philippine fisheries has focused on two areas of concern. Spoehr (1984: 43) summarizes these areas in the following words, "Innovation in Philippine fisheries has taken two main forms: technical, involving the incorporation of new technology or the modification of existing technology in production and marketing; and socioeconomic, or the incorporation of new social and economic arrangements into the organization of the fisheries." Other important considerations in the study of innovation in Philippine fisheries (Smith *et al.* 1980) are the problems of overfishing in the municipal waters and the economic marginalization of fishermen in the context of a growing population that "increases fishing pressure on inshore grounds." The improvements of fishing vessels and gear devised by development interventionists in order to increase yields have only exacerbated the problem of overfishing and income inequalities among fishermen (Smith 1979: 2) and have paid little or no attention to the social aspect of technology.

The subject of this paper is technological innovation and adjustments made by a fisherfolk themselves, not by government fisheries technologists. It maintains that technology is a product of the social interaction of its users, and should not be separated from the social and cultural context within which it evolves (Pfaffenberger 1988). The key to the present paper is the sociotechnical system (STS) concept offered by Pfaffenberger (1992). STS is the most current approach appropriate for a study of technology or technological innovation. It is used here as a model to help understand and explain innovation and adjustment in a series of fishing technologies in a small barangay in Cebu Province. The ways in which indigenous innovations are made, adopted and rejected by small-scale fishermen (Spoehr 1984, Acheson 1981), how these lead logically to certain kinds of required social relations in the work activities of cooperating fishermen or how the technological processes must be adapted to social norms and cultural values, depend on the social and ecological constraints that fishermen are faced with, especially in a situation where most of the population rely on fish for their protein diet.

Research Objectives

This research aims to advance the detailed investigation into instances of indigenous innovation in municipal fisheries in the Philippines, or any indigenous innovations for that matter. As a case study, it aims to determine the dynamics involved in the innovation of *sapyaw* fishing in the municipal fishery of the town of Bantayan on Bantayan Island, Cebu Province, Philippines. How were the innovated technological processes and the

requisite system of social relations among fishermen brought into line in the course of innovation? We will see later in the discussion that a chain of innovations and social effects was involved, and have to be understood.

Sapyaw (Eng “round haul seine”) fishing has already been identified as a technology found in the barangay of Sillon in Bantayan town in a seminal anthropological work on fisheries in the Visayas edited by Ushijima and Zayas (1994) Designed to catch anchovy (Ceb *bulinau*), it is described by Ushijima (1994: 62) as “undertaken using two fishing boats equipped with scooping nets and two to three *bancas* equipped with strong lamps” A further description of almost two pages is provided in Marine Biology Section, University of San Carlos (1996) From that description it is clear that *sapyaw* in Sillon requires the close social cooperation of fishermen to maneuver these two vessels skillfully in relation to each other and to draw the haul seine full of fish together at a certain point. The vessels consist of two dugout canoes, one of which is motorized, and two or three non-motorized small boats A distinguishing feature of this technology is the use of one boat with an outrigger only on the port side, and the other boat with an outrigger only on the starboard side, allowing them to meet at the end of the operation to haul in the net between them on the sides without outriggers We ask why these particular innovations were found necessary and useful Haul seining, already well known in the Philippines, has here been perfected by slight innovations made by local fisherfolk who are still alive and the not usual opportunity still existed to record how it was done by way of ethnographic interviews

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In this paper, the general objective is to describe the causes and processes involved in the local innovations and adjustments leading to *sapyaw* among a population of Bantayanon Cebuano¹ This technology appears to have been practiced only for a short time in barangay Sillon of Bantayan town (see also Ushijima 1994 60-64) *Sapyaw* is a historically known technology in Visayan fisheries (Umali 1950 150) So although not *invented* in Sillon, its advent was nevertheless a local *innovation* there Questions guiding the research were how were the innovated technological processes and the correlative systems of social relations and cultural values among fishermen brought into line in the course of innovation and adjustment? What was the fishing technology from which *sapyaw* evolved, under what circumstances has it evolved, and what has it lead to? How have fishermen adapted their technologies to meet the crisis of overfishing in a context of increasing populations of rural people who make their living competing with each other for fish catch and the fish trade, and of other people who rely on fish for most of their protein intake?

The research proceeded on the assumption that in order to understand technological change in relation to social relations at Sillon, the researcher would have to study both historical trends and the technology involved in detail

Research Setting

Barangay Sillon is a coastal village with a total population of 3,176 living in 680 households (National Statistics Office 1995) and is located on the eastern side of

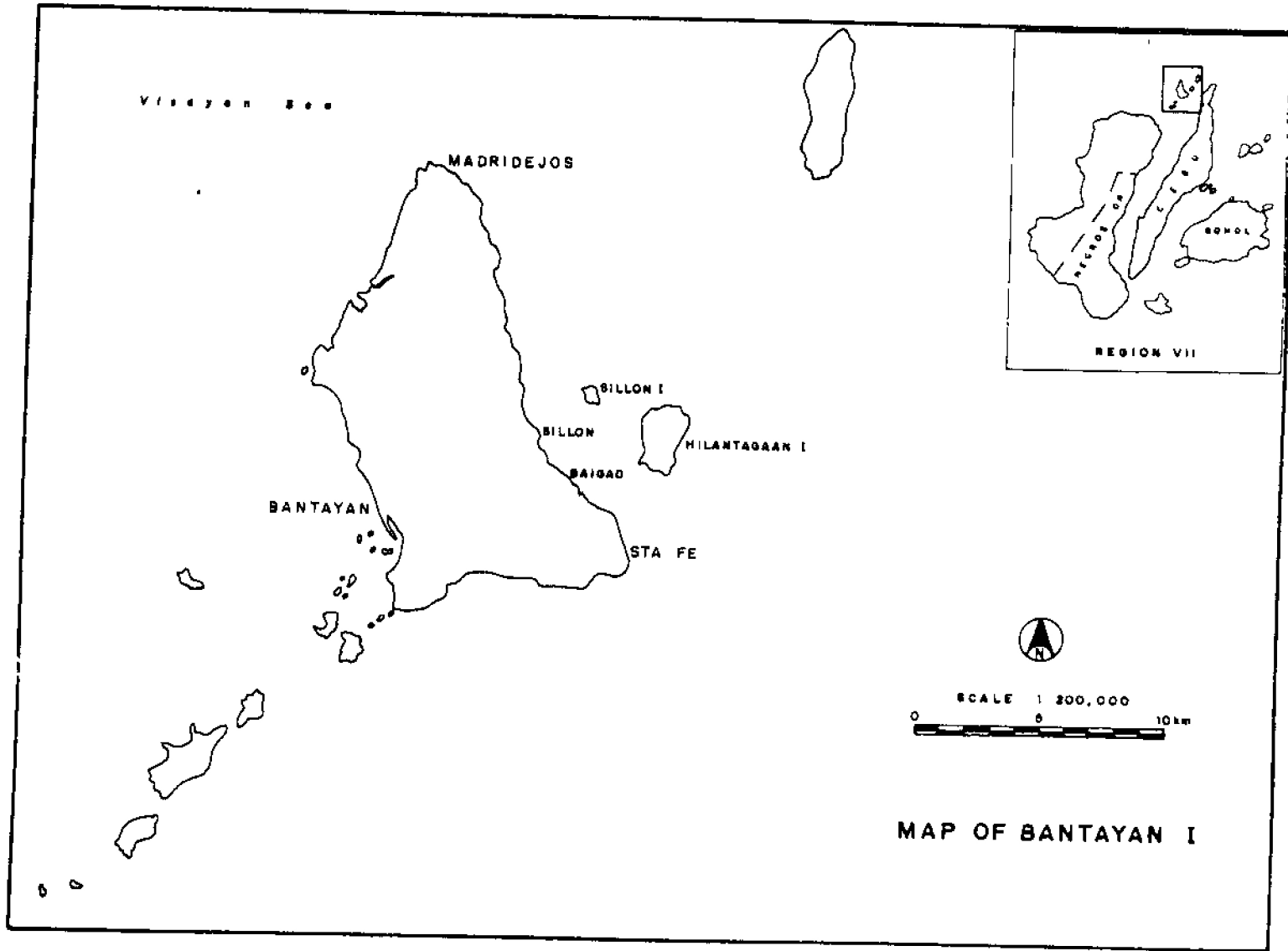


Figure 1 Bantayan Island, Cebu Province