

AGENCY FOR INTERNATIONAL DEVELOPMENT WASHINGTON, D. C. 20523 BIBLIOGRAPHIC INPUT SHEET	FOR AID USE ONLY
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1. SUBJECT CLASSIFICATION	A. PRIMARY Social sciences	SB00-0000-G430
	B. SECONDARY Anthropology--USA	

2. TITLE AND SUBTITLE
 Ritual adaptation to risk and technological development in ocean fisheries: extrapolations from New England

3. AUTHOR(S)
 Poggie, J. J.

4. DOCUMENT DATE 1978	5. NUMBER OF PAGES 30p.	6. ARC NUMBER ARC US301,444,P746
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7. REFERENCE ORGANIZATION NAME AND ADDRESS
 R.I.

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publisher, Availability)
 (In Anthropology working paper no. 28)

9. ABSTRACT

10. CONTROL NUMBER PN-AA6-607	11. PRICE OF DOCUMENT
12. DESCRIPTORS Adaptation Fishermen Attitudes Risk Fisheries Technological change Psychological aspects Cultural factor USA	13. PROJECT NUMBER 931011300
	14. CONTRACT NUMBER AID/csd-2455 211(d)
	15. TYPE OF DOCUMENT

US
301.444
P746

PN-776-607

Anthropology Working Paper No. 28

Ritual Adaptation to Risk and
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November 1978

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by

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Abstract

This paper deals with the role of taboos as a means of psycho-cultural adaptation to personal risk among fishermen in southern New England. It is argued that knowledge of such wide spread psycho-cultural features as ritual adaptations enables planners to better select technological innovations that are psycho-culturally appropriate and, thus, more likely to be accepted by and, contribute to the well-being of fishermen in regions of the world where technological development of fisheries is possible.

Ritual Adaptation to Risk and
Technological Development in Ocean Fisheries:
Extrapolations from New England

Introduction

In a study of the success and failure of agricultural development projects, Morss et al. (1976) have identified social reasons as the main factors contributing to the failure of such projects. Long-term observers of attempts at planned change are probably not surprised by this finding, and many who are concerned with the development of fishing have indicated an interest in identifying social and cultural factors that may get in the way of development. While intentions are good all around, I feel that the way we have looked upon social and cultural features as "things that may get in the way" needs to be changed. Instead of looking for aspects of peoples' cultures that need to be overcome, it might be more productive to try to understand what the cultural patterns do for the culture. By understanding how various characteristics operate within the existing culture, we can more likely work within the context

of the culture to produce new modes of higher production and greater well-being.

Understanding peoples' cultures is not an easy assignment, and it is one that takes time. I am afraid that one of the other problems with trying to apply cultural information to development plans is that planners rarely allow sufficient time for the kinds of analyses that are required to obtain the kind of understanding that is useful (cf. Schindler 1976, Pollnac 1976). Contrary to the widespread view, cultural patterns of behavior and thought are not self-evident to any observer. These domains are real to people and require the same careful scientific study that we give to such areas as biology and economics.

This paper will deal with one aspect of cultural adaptation to risk. It will focus on ritual adaptation to risk to person among fishermen in southern New England. By looking at ritual adaptation to risk in this sector of an industrial society, I hope to illustrate how we can better understand fishermen's adaptations in general and how to better work with these

adaptations in attempting development projects in other areas of the world where fishermen cope with risk to their lives each time they venture out onto the water. The risk to self which is a common feature of all fishing around the world is so ordered by the foreign aqueous medium in which all fishermen must work.

Personal Risk in New England Fisheries

The chronicles of fishing in New England are replete with references to the great risk to life involved in pursuing this occupation. For example, Procter (1873) reports that between 1830 and 1873, 1,437 Gloucester fishermen were lost at sea. Connally, writing in 1927 noted that over 800 vessels and 4,000 men were lost from Gloucester between 1830 and 1927. Another indication of this is that during the Civil War twice as many Gloucester fishermen lost their lives at sea than did Gloucester sailors fighting in the war (Connally 1940). One is also reminded of this

risk in such places as the chapel of the Fishermen's Bethel in New Bedford where plaques describe how various men lost their lives at sea. In old New England graveyards, tombstones often depict the fate of the dead who may or may not be buried beneath. In such places as the Block Island, Rhode Island cemetery one encounters frequent references to people having been drowned or lost at sea.

This risk to personal self may be considered a thing of the past by many, but although the rate of loss of life has been reduced in recent times, there remains a clear ever-present risk of death to fishermen. In this past half year (1977) without seeking out all the cases of fishermen's deaths at sea, I am aware of at least 23 in southern New England. Thirteen of these were lost on the scalloper named The Navigator from New Bedford which was equipped with all the modern safety equipment such as survival suits, radar, radio, lifeboats and was considered an exceptionally seaworthy vessel. This vessel either capsized because of rough seas and icing, or was hit by a freighter. This tragedy

occurred at the same time as seven coeds were killed due to a fire at Providence College. The news that The Navigator with its 13 men was lost received far less coverage on television news, an indication, I think, of the marginality of fishermen to our society. This marginality may be responsible for the lack of a realistic view on the part of landlubbers as to just how dangerous fishing is. Besides the actual deaths that I am aware of in New England this past year, I am also aware of numerous near-misses where boats have sunk and people have been rescued.¹

Official statistics also support the view that fishing is an extremely risky business. In fact, it is far more dangerous in terms of loss of life than the most dangerous land occupation in American society - coal mining. The Office of Merchant Marine Safety in 1972 reported that in 1965 the commercial fisheries of the United States recorded 21.4 deaths per million man-days in contrast to 8.3 in coal mining (U.S. Bureau of the Census, 1970). In contrast the rate of fatal accidents in industrial jobs such as textile mill work

was 0.8 deaths per million man-days in the same year (Bureau of Labor Statistics, 1971). Yet southern New England fishermen do not often state that their work is dangerous. When I asked a number of fishermen about the danger involved, they often denied that it is dangerous or said that it is no more dangerous than riding in a car. The possible repression of the danger in fishing leads one to suspect that they may cope with it in more subtle ways.

Rituals of Avoidance

A number of social scientists have pointed out that situations in which there is doubt, uncertainty, and risk in the human condition are areas in which ritual practices abound (Horton 1960). Thus the rituals associated with the life crises, food production, and danger have been well documented by numerous ethnographic studies around the world.

Within the activity of fishing, Malinowski (1948) discusses the increased amount of ritual associated with the less sure, more dangerous open-sea fishing

compared to the reliable and non-dangerous lagoon fishing. Other authors have documented the presence of rituals of avoidance among fishermen in a range of different societies, such as Nova Scotia, Creighton (1950); Scotland, Anson (1930); Japan, Oto (1963); Micronesia, Lessa (1966); Taiwan, Diamond (1969); Soviet Union, Taksami (1975); Trobriand Islands, Malinowski (1948); Martinique, Price (1964); southern New England, Poggie and Gersuny (1972), Poggie, Pollnac and Gersuny (1976); Peru, Sabella (1974); Tikopia, Firth (1967); Texas, Mullen (1969); California, Orbach (1977); and the Ainu, Watanabe (1972). Poggie and Gersuny (1972) have argued that taboos among New England fishermen are the result of risk associated with protection of life and limb and not with production of fish, a distinction not made by some theorists. Poggie, Pollnac and Gersuny (1976) provide empirical evidence from New England that degree of ritual in the form of fishermen's taboos covaries with degree of risk. That is, time at sea and taboo usage were shown to be positively related to each other.

The Psychology of Perceived Control

Psychologists have developed a theory which helps explain in psychological terms the ritual behavior associated with risk. Burgers (1975) provides a discussion of the theory that both humans and nonhuman animals are in a continual struggle against randomness, trying to acquire the freedom to make choices or exercise control. Recent work (Perlmutter and Monty 1973) shows that not only is actual or "real" control important, but that perceived control (the feeling of doing something to control) plays a role in improving behavioral performance in a variety of situations. It also plays a role in covert physiological activity. For example, Stotland and Blumenthal (1964) show that whether or not humans feel they have control is related to degree of sweating of the palms, a common indication of anxiety. DeGood (1975) showed that sense of control resulted in reduction of systolic blood pressure among college-age males. Thus the experimental evidence from psychology seems to support the view that perceived absence of control

is dysfunctional to humans and reduces our ability to deal with our environments.

It is the thesis of this paper that fishermen's taboos function to reduce the sense of non-control which humans experience in the face of the overwhelmingly powerful forces of the sea and its sister the wind.

Taboos of Southern New England

Fishermen's taboos in southern New England consist of a series of proscriptive sayings such as: "Don't turn the hatch cover upside down," "Don't whistle on board," "Don't mention pig on board," "Don't leave for a trip on Friday," etc. These taboos have a wide distribution, being found from Nova Scotia to Connecticut.

When asked, most fishermen can list a number of these taboos, and it is the knowledge of these taboos which has been used by Poggie, Pollnac and Gersuny (1976) as a measure of an individual's ritual involvement in three ports in southern New England. This is

not a direct measure of ritual behavior in the context of fishing, but it has been shown that knowledge of a topic is related to a person's interest in the topic (Cattell 1965).

Poggie, Pollnac and Gersuny (1976) found that the number of taboos a person knows was positively correlated with length of trip ($r=.36, p<.01$) and concluded that this represented a relationship between ritual and risk. A day fisherman who goes out for one day at a time is more "secure" than a "tripper" who spends anywhere from two to eleven days at sea. The greater amount of risk associated with trip fishing results in greater anxiety which is lessened by more extensive ritual behavior.

These researchers also found that there was a negative relationship between ritual involvement and coming from a fishing family. That is, individuals who grew up in a fishing family know fewer taboos than those who grew up in non-fishing families. They suggest that there is a process by which individuals coming from a fishing family are "preadapted" to the

psychological stresses of fishing through familial involvement and exposure to successful role models (primarily father) as fishermen.

This observation deals with the question of intra-cultural variability in perceived control. As Rotter (1966) has pointed out, there is considerable individual difference in the perception of control. The Poggie, Pollnac and Gersuny (1976) finding in southern New England provides some possible insight into why this variability exists. In a reexamination of the same New England data reported on by Poggie, Pollnac & Gersuny (1976) I found that there is also a negative relationship between wife's father occupation and number of taboos. Although the zero order correlation of wife's father a fisherman and number of taboos ($r = -.13$) is not quite statistically significant at the .05 level, its partial correlation with number of taboos when trip length and father fisherman are controlled is significant ($r = -.21$, $DF = 2105$, $p < .05$) and contributes three percent to explaining the variance in number of taboos. Furthermore, in a recent (1977) survey in Point Judith, R.I.,

it was also found that the more kinsmen a person had who are fishermen the more satisfied the individual was with the safety of his work ($r=.23$, $DF=179$, $p<.05$). These findings further suggest that having other relatives as role models helps to preadapt and adapt individuals to the personal risk involved in fishing.

It might be argued that not all the fathers or wives' fathers in the sample of southern New England fishermen are successful role models. This may be true. However, by the time a father or wife's father becomes a role model for his son or son-in-law he will have been through a selective process by which those individuals who do not have the complex of attributes that are necessary to be a successful fisherman will be less likely to still be in the industry.

Before turning to the discussion I would like to summarize the points made thus far in this paper.

These are as follows:

(1) I have argued that it is useful for individuals concerned with the social and cultural aspects of

development to develop a view of understanding how social and cultural features contribute to the adaptation of a culture rather than viewing these traits as obstacles to be overcome.

(2) I point out that this kind of understanding often takes considerable time.

(3) As an example of how a cultural trait may be analyzed as an adaptive characteristic I discuss how fishermen rituals in southern New England are understandable as adaptations to personal risk.

(4) I have shown that there is individual variability in the use of ritual related to aspects of fishermen's social organization which serve as preadaptations to risk, namely close kinship-linked role models.

(5) The last point I wish to make is that a more complete understanding of any population would require that we analyze much more than a single trait and that we determine the interrelationships between and among various sociocultural traits.

Discussion

The applied significance of rituals of avoidance in New England may seem remote if one does not understand how these rituals function. But once it is realized that they are not just quaint relics of a past era and are psychologically important, their significance becomes clear. The New England case appears to provide an example of the applied significance of such an understanding which may be extrapolated to other areas of the world.

In 1968 the United States Bureau of Commercial Fisheries (now the National Marine Fisheries Service) provided funds for the construction of a 294-foot factory stern trawler, the Seafreeze Atlantic. This project was an attempt to revolutionize the old-fashioned New England fishing technology by introducing modern offshore fishing technology that was so successful at that time for foreign fishermen in the same waters. This was an attempt at technology transfer of an order of magnitude above anything that existed in the American fleet.

The decision to introduce this technology was based on projected productivity from actual figures from the foreign trawlers of the same type. As pointed out by Boeri and Gibson

(1976:108), the scheme failed because it was made with the assumption "...that American fishing labor would perform just like their foreign counterparts, a supposition that became the Achilles heel of the plan." According to Boeri and Gibson (1976) American fishermen were not attracted to this scheme because it meant that they would have to give up their independence and be paid a fixed wage rather than by the traditional incentive of the lay system and would have to spend 60 to 120 days at sea. We might suspect, as will be argued below, that there were additional reasons why fishermen could not accept this radical change in so short a time. However, the main point here is that, as was the case for the majority of cases of agricultural development studied by Morss et al. (1976), it failed for social and cultural reasons. The plan was not grounded in an understanding of the reality of the social and cultural characteristics of New England fishermen.

In a New England port (Point Judith, Rhode Island) where fishermen have a choice between day fishing, short trip fishing (3-4 days), and long trip fishing (7-10

days), the vast majority select day and short trip over long trip. We asked a stratified (by type of fishing) random sample of 79 fishermen to rank different types of fishing. The result of this ranking is interesting in that it shows that of the three types of fishing (day, short trip, and long trip) long trip fishing is considered the least desirable in terms of personal independence, family and social life, the best future, and personal enjoyment (see Table 1). The fact that long trip fishermen themselves do not rank their type first in personal enjoyment suggests that they are not strongly committed to it or are locked into it because they cannot shift to short trip fishing which they rank first. Overall, long trip fishing is considered more financially rewarding than day fishing, but less than short trip. The trip fishermen themselves consider this type most desirable only in terms of income. They do not rank it first in any other domain. Long trip fishing appears to be tolerated by actual long trip fishermen because of its economic returns; and, for others, its economic return does not

outweigh the social and cultural costs that accrue to it.

Among these social and cultural costs could very well be an overwhelming sense of added risk on the already high threshold that fishermen carry. This view is supported by the fact that ritual involvement is positively correlated with length of trip in this population (Poggie, Pollnac and Gersuny, 1976). Contrary to what one would expect, larger trip boats do not appear to result in a sense of greater security among New England fishermen. This appears to be due to the fact that they are out for long periods of time, being away from one's normal surroundings including land and family and subject to the stimulus deprivation that accompanies the monotonous life at sea (Boeri and Gibson 1976). It has been suggested that the longer one is cut off from one's normal surroundings the less rational one is likely to be. We and others have observed this in doing fieldwork on board fishing vessels (cf. Finn 1970; Boeri and Gibson 1976). If this is true, then we might suspect that the longer a person is out to sea the greater will be his

perceived risk and perceived non-control. Gloucester fishermen refer to "channel fever" as something that one feels upon returning to port after being out on the water for extended periods (Miller and Pollnac 1978). Some of the symptoms of this are restlessness, impatience, and inability to sleep for extended periods of time (Bartlett 1977).

Given the worldwide distribution of rituals associated with the risk of fishing, it behooves us to consider the interplay between proposed technological change and psychocultural adjustment to risk. Such an understanding may improve our ability to enhance the well-being of fishing people in all parts of the world by introducing psychoculturally appropriate technology that does not create an overwhelming sense of non-control.

Table 1
 Ranking of Types of Fishing on Different Criteria
 Point Judith Fishermen (N=79)

	<u>Income</u>	
	Rank: Overall Sample	Rank: Long Trip Fishermen (N=12)
Day	3	3
Short Trip	1	2
Long Trip	2	1
	<u>Independence</u>	
Day	1	3
Short Trip	2	1.5
Long Trip	3	1.5
	<u>Family and Social Life</u>	
Day	1	2
Short Trip	2	1
Long Trip	3	3

Table 1 (continued)

	<u>Best Future</u>	
	Rank: Overall Sample	Rank: Long Trip Fishermen (N=12)
Day	2	3
Short Trip	1	1
Long Trip	3	2
	<u>Personal Enjoyment</u>	
Day	2	3
Short Trip	1	1
Long Trip	3	2

Notes

1. According to the Providence Journal (October 15, 1978) in the six-year period ending September, 1977, 71 fishing boats sank off Rhode Island to Maine. Thirty-nine fishermen went down in these wrecks. In the 12 month period ending October 1978, thirty-one additional men lost their lives.

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