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THE ANTHROPOLOGY OF TOBACCO USE: TOBIAN DATA AND THEORETICAL ISSUES

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An investigation of tobacco use on the isolated Micronesian island of Tobi provides the basis for a general discussion of the role of tobacco in human societies. Although physiological and psychological variables are attended to, the primary focus is on social and cultural aspects of the tobacco complex. All adult Tobians are heavy smokers; all tobacco is imported; all contacts with the outside world are made to yield tobacco. Nevertheless, periodic tobacco shortages occur. Changes in rates and character of interactions are correlated with fluctuations in tobacco supplies, because tobacco use has deeply penetrated patterns of sociability in a variety of ways. This penetration is a result of the understandings that Tobians have of tobacco, the physiological effects associated with smoking, and certain features of their understandings of the self. A complete explanation of tobacco's attraction for humans, therefore, is seen to depend upon more than the simple notion of tobacco as an "addictive substance;" the social and cultural ends to which its rather amorphous arousal are put must also be investigated.

I WAS LIVING AS A PEACE CORPS VOLUNTEER on the small coral island of Tobi, one of the more remote Micronesian islands, in 1968. In the center of the village stood the *abai*, or meeting house, a large, open, thatch-roofed structure. In the abai was an old table, and on that table rested an ancient, rusted typewriter. Miraculously, it was still working. One day, for lack of any other entertainment, I began to write a short story on that typewriter. I based it on an actual incident that had occurred at Pulo Ana, a related island about two hundred miles to the north.

For the young men of Pulo Ana, as for Tobian young men, the rules of incest combined with accidents of demography had produced a situation in which there was a severe shortage of eligible young women. The shortage on Pulo Ana had been relieved about ten years earlier, however, when a boatload of castaway Indonesians had drifted onto the reef. Most of the people in that boat were young women. The story I began that day was to be a fantasy about a similar event on Tobi. I had not written more than a paragraph or two when someone called me away and I left, leaving the page I was working on in the typewriter. I did not get back to the abai that day. During the night I saw a light there and heard the laborious sounds of an unskilled typist at work. The next day I found that one of the two Tobian English speakers had added a few paragraphs to the story. Like me and like the other Tobian English speaker, he was single and in his mid-twenties. More graphically than I, he had described the physical attributes of those imaginary Indonesian women. I

composed another paragraph, carrying the narrative farther. By the time I finished, the other Tobian English speaker had arrived, had read what was written, and had joined in the creative effort. Over the next week or so, the story gradually grew, as the three of us took turns adding to it. But as the story grew, it became less sexual in orientation as another fantasy began to grip our imagination.

It had been some time since the last supply ship had visited the island, and we all were running out of the imported luxuries that, in Tobi's basically subsistence economy, add flavor, ease, and style to life. Kerosene, rice, and flour had all been exhausted. Worst of all, the island was running out of tobacco. This was particularly distressing to us because, like every other adult in this population of fifty-eight souls, we three were heavy smokers. As the island's tobacco supply shrank, more and more cigarettes showed up in that story of ours. Finally the long, elaborate descriptions of the Indonesian women and their sexual prowess disappeared. Instead equally long and loving descriptions of the tobacco they brought with them, its appearance and consumption, dominated the story. Tobacco had displaced sex in our imaginations as the tobacco shortage replaced the shortage of women and other topics in everyone's conversations. Cigarettes had replaced sex as an object of fantasy, interest, and desire.

This incident points up the importance that tobacco can attain on Tobi. Tobian society, of course, is far from unique in this respect—tobacco smoking is a wide-spread human activity of great importance. Yet despite this importance, it has been relatively neglected within anthropology. In this paper I discuss why anthropologists have given tobacco use so little attention, present material that will demonstrate how much is to be gained from the ethnography of tobacco use, and offer a preliminary model for understanding tobacco use. In order to achieve these ends, I shall describe the role of tobacco in Tobian daily life. My primary focus will be on the symbolic organization of tobacco use, a social process to which the substance rather easily lends itself.¹

THE STUDY OF TOBACCO USE

The practical significance of tobacco use on Tobi, as well as in the rest of the world, results from its widely publicized public health consequences and the economic ramifications of the major international tobacco industry. Tobians, in common with people living on other isolated islands in the western Carolines, suffer from a high rate of chronic respiratory and pulmonary diseases, many of which may be tobacco related. Furthermore tobacco plays a very important role in the economic relations between Tobian society and the outside world. Indeed, as I shall detail below, tobacco was one of the major vehicles by which Tobi was incorporated into the world economy. The ethnology of Micronesia indicates that Tobi is far from unique in this respect. Therefore, just as an investigation of Tobian tobacco use may further understanding of the public health situation in the western Carolines, it is also reasonable to expect that such an investigation will help to make sense of economic and intersocietal relations in the area.

Tobian tobacco use must be understood in light of the world-wide tobacco complex. In the 350 years since the Virginia colonists discovered tobacco's potential as a cash crop (and thereby secured an economic base for their faltering settlements), the production and distribution of this plant have come to play an increasingly

important role in the U.S. and international economies. Tobacco is the sixth largest cash crop in the American economy. World production in 1981 is reported to have been 5.7 million metric tons, up 8 percent from 1980 (Anonymous 1982; Maxwell 1982; Tobacco Institute 1982; see also U.S.D.A. 1982). It has been estimated that more than two-thirds of the Western world's adult men and one-half of its women consume tobacco (Faust and Mensen 1974; Todd 1978). The proportions of non-Western men and women who use tobacco products are probably at least as high, and the market in the Third World continues to expand (Eckholm 1978; Van der Burgh 1979).

These figures become more impressive when it is realized that the tobacco complex spread extremely rapidly (Laufer 1924b). Clark Eissler (1966:51) has provided a useful summary of the custom's diffusion from the New World to the Old World and then back again. It took only a little more than a century from the time the custom arrived in Europe until it reached the Alaskan Eskimo. And it reached the Eskimo not from their New World neighbors to the south, but from their Asiatic neighbors across the Bering Strait.

Tobacco's rapid circling of the globe occurred despite a variety of social and political obstacles. For example, an English king, a Turkish sultan, and a Moscovite grand duke all attempted to prevent the entry into their realms of what the first of these (James I) called "a custom loathsome to the eye, harmful to the brain, (and) dangerous to the lungs" (Counterblast to Tobacco, quoted in Borgata 1968:9). Prison terms and fines, special courts and public ridicule, torture and even the death penalty were all applied in fruitless crusades to persuade people that they should not smoke, chew, or snuff tobacco (Gehman 1943).

Scientific and medical arguments against tobacco use have also proved to be of little demonstrable affect in getting people to stop using the substance (at least until recently, in certain developed nations). The earliest health warnings based on empirical research were issued by Morgagni and Pereire, in the eighteenth century (Gehman 1943:124). If, as Festinger (1957:153) claims, "the knowledge that smoking is conducive to lung cancer is dissonant with continuing to smoke," then the current generation of smokers is but the latest in a long line of people who have clung to the habit despite cognitive discomfort (but see Eiser 1978).

Geographical barriers have proven no more effective than political or medical opposition to the spread of this trait. More than fifty years ago, Berthold Laufer, former curator of Chicago's Field Museum and long-time student of the diffusion of New World plants, stated that he knew of only one people who were innocent of tobacco (1924a:245). No doubt there were others besides "the poor islanders of Botel Tobago" who had yet to acquire the tobacco complex, but they must have been few and far between. Certainly there is no region in the world today, no matter how remote, where tobacco is unknown.

Clearly, then, the consumption of tobacco appeals strongly to humans, no matter what the social and cultural differences between them. This situation leads one to expect much from any satisfactory explanation of smoking. At the least, such an explanation should further understanding of universal aspects of human behavior.

Given anthropology's holistic, cross-cultural perspective, it is remarkable how little attention it has given to the social significance of tobacco use, especially in light of the trait's rapid and thorough diffusion. Anthropologists have occasionally turned their attention to tobacco use, but this nearly pan-cultural trait has not received the attention it deserves. Laufer and others traced the diffusion of tobacco. Damon (1973) conducted a small cross-cultural study. For some of the relatively few societies where tobacco is known to serve as a hallucinogen, its use has been reported and sometimes even analyzed (Furst 1976; J.E. Thompson 1970; Wilbert 1972). Claude Lévi-Strauss devotes the second volume of his series on the study of myth to an examination of the contrast in South American indigenous peoples' daily life and mythology between honey and tobacco-each in its own way what he calls a "culinary paradox" (1973:303). Louis Golomb (1978:39-48) provides a very interesting description and analysis of the role of tobacco production in the generation and maintenance of Thai-Malay ethnic differences in Kelantan State, Malaysia (see also Mougne, Maclennan, and Atsana 1982; Pathmanathan 1974). Reference should also be made to the Field Manual for the Study of Tobacco Related Behavior (Social Systems Analysts 1978), a thorough guide for the collection of the kind of data I am concerned with.2

So far I have only located one detailed ethnography on tobacco use, carried out among the Karuk of Northern California (Harrington 1932). However, despite the author's masterly description of the details of tobacco's place in the Karuk world, one question seems to have escaped him—why do the Karuk want to smoke in the first place? Harrington takes their involvement with tobacco as a given. Despite these specialized works, then, tobacco remains unstudied in most of the environments where it occurs. The primary need is for detailed ethnographies of tobacco use covering as many cultures as possible, with special attention given to exploring reasons for the origin and persistence of the habit. Such studies should provide a framework within which an understanding of regularities and variation in human involvement with tobacco can develop. Then a start can be made toward answering the fundamental question of why people want to consume tobacco.

Despite tobacco's practical implications, it fits into our culturally constituted "world of goods" (Douglas and Isherwood 1979) as quite a minor item; tobacco does not have a major symbolic role in our culture. Thus it neatly illustrates the discrepancies that can arise between the cultural-symbolic properties of an item or a behavior and its economic, social, and political weight. After all, the tremendous burden that tobacco use places upon public health has been well known for a long time. For years a well-reported, fierce political struggle has been waged in and around the U.S. Congress over federal subsidies to tobacco growers (Sapolsky 1980). Furthermore, at all levels of American government the cigarette tax has provided an important source of revenue. Yet tobacco as a symbol has, at least until very recently, played a rather insignificant role (see Sobel 1978). Anthropological neglect of tobacco use may therefore be an example of the contamination of Western social science by Western folk notions.

The crucial question of why people want to consume tobacco may at first glance appear to be an almost nonsensical query. Our culture provides us with an

answer: people want to use it because there is an addictive substance in tobacco. This bit of conventional wisdom does not exhaust the topic, however. Even leaving aside questions of why people begin to use tobacco in the first place, one is left with the inadequacy of resting the whole explanation on tobacco's biochemical properties. After all, some people can, and do, give it up.

It makes more sense to think of tobacco as a member of a much larger set of substances that at one time or other and in one society or other have achieved very widespread social acceptance. For example, gin use in Dickensian England was a major social problem (Horn 1968). Opium was at one time used by a significant percentage of the Chinese population (Spence 1975). Both of these situations have changed. Again, while the rate of cigarette use has been increasing on a world-wide basis, the use of tobacco in other forms (snuff and chewing tobacco) has fallen off rapidly (Horn 1968). Such data cannot possibly be explained solely by reference to the biophysical properties of the substances in question.

I shall argue below that what makes tobacco use a fruitful topic for anthropological investigation is that it is highly suited to incorporation within people's socially constructed and maintained symbolic and moral worlds. Building on Becker (1963) and MacAndrew and Edgerton (1969), I shall attempt to explain not only the details of Tobian tobacco use but also what Hull has called "the charm which tobacco has for those accustomed to its use" (quoted in Dunn 1973:41).

ETHNOHISTORY OF TOBIAN TOBACCO USE

If, as Rublowsky claims (1974), Magellan and his crew introduced the cultivation of tobacco to Guam in 1521, then Micronesia was one of the very first areas outside the Western Hemisphere to acquire the New World tobacco complex.⁴ Given the rudimentary state of ethnohistorical research in Micronesia, the story of the introduction of tobacco to this region can only be dimly glimpsed. We do know that it became an item of interest and trade and diffused south from Guam into the central Carolines over the next few centuries. Apparently it reached Tobi sometime between 1833, when Horace Holden, a shipwrecked American seaman, escaped the island, and 1901, when a German expedition arrived to raise the flag and incorporate Tobi within the expanding Südsee empire.

Holden was an observant (if unwilling) participant in Tobian daily life during his three-year stay; he does not mention either tobacco or smoking in any of the records of his sufferings (Anonymous 1836; Holden 1979[1836]; Lyman 1902; see also Bernard 1966[1833], 1980; Browning 1885, n.d.; Ward 1966:410-54). This can be taken as very strong negative evidence that the Tobians, only recently contacted for the first time, had not yet begun to use tobacco. Seventy years later, in his account of the German landing, Senfft (1901) laconically noted that the Tobian "desire for Tobacco was quite strong."

That this is something of an understatement is indicated by the report made by Fritz, another German official, who visited Tobi in 1906. Fritz found the island devastated by a typhoon and he tried to remove what he felt was the surplus population. He reports considerable opposition to this scheme and says that he was forced to give eight sticks of tobacco (to whom?) for each of the fifty people he "rescued"

(Fritz 1907). It is extremely unclear precisely what was going on in this interchange; it is probably noteworthy that shortly afterward a number of Tobians began working in the newly opened phosphate mines in Anguar, a German-controlled island in Palau. What is clear, however, is that by this time tobacco had become a very valuable commodity on Tobi.

The Tobian account of the arrival of tobacco (tabaka) is one of a number of tales dealing with the acquisition of new items of material culture. Like all these stories, it details mistakes and confusions in the initial borrowing. It is said that the first person to own tobacco on Tobi was ignorant of its use. He had obtained it in trade from a passing ship, convinced it was valuable by the amount of his island's produce for which it was offered. When it proved inedible he hid it away. Years later he asked one of the first Tobians who returned from working for the Europeans just what this (by now moldy) substance was. Much to his chagrin he learned that tobacco is a very fine thing and makes people "happy" when they "inhale" it. Unfortunately the returnee was not quite as sophisticated as he thought, for he did not know that moldy tobacco could be salvaged. The first tobacco on Tobi was thrown away, unsmoked.

The core of this story probably represents historic truth; tobacco was introduced to Tobi through trade with passing ships. It also seems probable that, like metal and cloth, tobacco soon became a basis of wealth and prestige. Sorcerers who claimed the power to divert ships to the island demanded payment in these three media, and the folk history of this era of the Tobian past is filled with stories of canoe-loads of men approaching foreign vessels shouting "Tabaka! Tabaka!" (see Marshall and Marshall 1976:146).

These initial transactions contained the seeds of the transformation of Tobian society and culture from a self-sufficient and autonomous human community to one that is politically encapsulated and ever more economically dependent. The desire for tobacco played a major role in the motivations of the Tobians to engage in those transactions. Thus tobacco was probably the strongest 'hook' that drew Tobi into the web of relations that make up the contemporary world political-economic system.

The three main imports during the early period (metal, cloth, and tobacco) all shared an important feature that made them particularly suitable for transaction across the great cultural and technological divide separating traditional Tobian society from that of the men who passed by on ships. All three (the first two literally and the third metaphorically) could be shaped into forms useful and sensible to the Tobians. Bits of nails and other scrap metal were heated and pounded into adze heads to replace cumbersome and fragile clam-shell adze heads. Metal wire was turned into fishhooks to replace indigenous and much more fragile hooks of bone, turtle shell, and wood (see Holden 1836; Johannes 1981:194-99). Trade cloth replaced loincloths and skirts laboriously woven from hibiscus and banana fiber and (by all accounts) uncomfortable to wear. The new cloth could also be cut and sewn into sails, to replace the relatively inefficient pandanus-mat sails that before this time had been the best their technology had to offer Tobian canoemen.

Lacking such practical applications, what made tobacco such an attractive commodity? As an approach to an answer, tobacco lent itself rather easily to Tobian

symbolic organization because it did not come with highly culture-specific, complex, or inescapable symbolic meanings. In other words tobacco, like cloth and metal, came with very little of what we might call symbolic specificity. Such items are more likely to be attractive in the initial stage of contact than those which are highly culture-specific, such as books. Tobacco could be borrowed by the Tobians more or less in isolation from other elements of the culture from which it sprang.

TOBIAN TOBACCO IMPORTS

Today the islanders are at least as avid smokers as their grandparents, and they still receive almost all their tobacco from people on passing ships. (The only exceptions are those packs of cigarettes that, as I shall describe later, once in a great while fall from the sky.) Fortunately for the Tobians, however, they no longer have to chase passing vessels; their island now gets six to ten ship visits a year. Each ship spends from thirty minutes to all day steaming back and forth off the reef, while various sorts of businesses are conducted ashore. Tobians have learned to extract tobacco from people on all the ships that stop at their remote island, regardless of linguistic or cultural barriers.

The bulk of their tobacco comes ashore from the so-called field-trip ship, which is the U.S. government vessel that visits the island from the administrative center of Koror in Palau, almost four hundred miles to the north. Three or four times a year this small ship brings a party of government officials, commercial traders, usually a missionary, and sometimes even an adventurous tourist or two to visit Tobi and the other three Southwest Islands of Palau.

During the three or four hours the ship usually stays, the traders buy the islanders' copra and sell them essential supplies, not the least of which is tobacco. Most of this tobacco is in the form of what is called twist (Tobian uair), that is, sticks of rough-cut tobacco. Each stick is six and one-half inches long, one inch in width, and one-quarter inch in thickness. They are sold all over the Pacific, either singly or in eight-pound boxes. People also buy a few cartons of American manufactured cigarettes. These purchases, which are made primarily with copra money, provide the great bulk of the imported tobacco. The amount bought from any one field trip varies considerably and depends upon who is on the island as well as the price of copra. In addition some tobacco (always manufactured cigarettes) arrives as gifts from friends and relatives in Koror. People who arrive on the ship to stay on the island always bring tobacco with them, Furthermore many transactions with ship personnel are marked by the islanders getting packs of cigarettes as gifts or in exchange for goods (such as handicrafts) or services (such as assisting at some task). All this tobacco-purchased, bartered, and given as presents-amounts to a substantial quantity; yet it is never enough to last until the next field trip.6

Another source of tobacco is the U.S. Navy, whose ships routinely patrol Micronesia's vast waters. Once or twice a year, a Navy ship stops for a few hours at Tobi. A lively barter in handicrafts always springs up as soon as the landing party comes ashore, and Tobians manage in this way to replenish their tobacco supplies.

The other branch of the American armed forces that occasionally supplies the island with tobacco is the U.S. Air Force. Every year in December or January,

"Operation Santa Claus" is launched from Anderson Air Force Base on Guam. Planes from this giant military complex head out for all the isolated islands in the Trust Territory, onto each of which they parachute a huge box of gifts. On Tobi, as elsewhere, the holiday season is punctuated by this air drop. Down drops the wooden crate, filled with some toys and candy, but mostly with two of the same three items that the nineteenth-century Tobians traded from ships—metal (in this case axes, hammers, and machetes) and cloth (skirts, shorts, sweaters, and shirts). Every few years someone in Guam slips a carton or two of cigarettes into the crate, delighting the Tobians and completing the historic trinity of trade goods.

The only other ships to visit Tobi are tuna-fishing boats from Taiwan, Japan, Indonesia, and the Philippines. Two or three times a year, on the average, one of these tiny ships comes to the small island to renew its supplies of fresh water and pick up some coconuts and a chicken or two. In return it yields a few packs of cigarettes.

Virtually every contact between Tobi and the outside world is organized to provide tobacco. As we shall see, tobacco also plays an important role in relations within Tobian society.

TOBACCO AND TOBIAN SOCIETY

Small in scale though it is, Tobian society is far from simple. Among its features are matrilineal exogamous clans; flexibly organized extended families; broad groupings based on gender, age, and special interests; and a variety of other units. Each able-bodied adult engages in subsistence activities, a health aide and a school teacher attempt to serve both the island and the bureaucracies in Koror that employ them, and a traditional chief and an elected magistrate share leadership responsibilities.

Tobian social relations are organized into complex networks of deference, power, responsibility, and obligation, which I call the "in-charge system" and which I have described elsewhere (Black 1982). Tobacco plays an important role in almost all these social arrangements. Each autonomous adult Tobian (almost always a senior man) is responsible for securing tobacco for his or her own consumption and for his or her dependents. At any one time there are between five and ten senior men on the island. They are distinguished principally by their control of functioning kitchens (ground ovens and assorted out-buildings). Through his control of the labor of people of both sexes, a senior man can ensure that at least once a day a culturally mandated complete meal, consisting of male-produced fish and coconut and female-produced taro or sweet potato, will be served at his kitchen. To such a meal (believed by Tobians to be necessary for continued good health; Black 1981) come other people who for one reason or another do not own an active kitchen. These people also contribute the fruits of their labor to the kitchen. After every meal the senior man passes around tobacco. Most, if not all, of the people at one of these meals will be part of the senior man's in-charge network, i.e., part of the chain of transitive dyads between junior and more senior people that has infants at its bottom and senior men at its top.

The cultural ideology of such relationships is that the senior person in any dyad is "in charge" (Tobian hosuar) of the junior. The premises behind this system of

in-charge relationships have to do with the islanders' view of human (or at least Tobian) nature. They hold that only middle-aged men (from about forty to about seventy years of age) are capable of the kinds of intelligent self-control necessary for personal autonomy. Everyone else in what Tobians see as a society made precarious by their own antisocial tendencies needs someone "older and wiser" in charge of them. These premises are germane here, because the possession and management of tobacco is an important marker of the status of a senior person in an in-charge dyad and because the presence or absence of tobacco has important effects on the tenor of the interaction within these crucial relationships.

TOBACCO AND THE IN-CHARGE SYSTEM

The management of a cache of tobacco requires considerable skill, immense social knowledge, and a good deal of self-control, forethought, and social autonomy. All these are qualities that only middle-aged men are thought to possess completely. In fact the possession of these qualities is the folk psychological justification for the position of these men at the top of the in-charge system. These attributes are necessary in managing tobacco resources because of the periodic tobacco famines that are a feature of life on the island and because of the Tobians' deeply held ethic of sharing, typical of societies such as theirs with exchange systems characterized by generalized reciprocity. The central problem in the management of a stock of tobacco is how to postpone its inevitable exhaustion, while still complying with that ethic of sharing.

On the day of the field trip, large amounts of tobacco come into the hands of the senior men who control the island's copra production. They put aside the bulk of this tobacco and give out the remainder to those who are junior to them. Other individuals, who acquire smaller amounts, do the same. Usually twist is put aside, while packs of manufactured cigarettes are distributed. For a week or so there is plenty of tobacco available and smokers (aside from young people learning to smoke) do not need to turn to one another to supply their habit. But then, those who only received a small quantity on ship day begin to run out. As more and more people smoke up their supplies, rumor directs social attention toward those still believed to possess large amounts. It is now that the attributes of full maturity ascribed to mature men come into play. It is also at this time that the kitchens controlled by senior men start attracting wider participation.

Each smoker in an in-charge chain receives tobacco from those above him or her and distributes it to those below. Typically these transactions occur after the day's big meal. The senior man or his female partner—the woman who provides the bulk of the taro or sweet potatoes consumed at the meal and who supervises the cooking—disappears into the house and comes out with tobacco. All the smokers present share a cigarette or two (either manufactured or rolled from twist). Older adults are also quietly slipped a pack of cigarettes or a stick of twist, which they will take home and share with their dependents. As the weeks go by, the amount of tobacco distributed to each person decreases, as the senior people try to conserve their supplies. Instead of whole sticks of twist, visitors are given portions of a stick and finally, as the days pass, simply a hand-rolled cigarette.

In this system of distribution, a junior person's initial supply declines at a slower rate than a senior person's, because he or she passes along a much smaller portion of it in the initial distribution and because he or she is being continually resupplied during the initial month or two by the man at the top of the in-charge chain. Finally, since they have been saving a portion of the daily gifts of tobacco they have received, there comes a time when junior people have about the same amount stored up as do seniors. This usually occurs during the second month after the field trip and after any reroofing parties (see below) are completed. Now begins a period when people no longer smoke whenever they feel like it. Instead they try to restrict themselves to special times: early in the mornings, during a break from work, after the big meal of the day, and later at night. Eventually there is no more unused tobacco available and people begin recycling the butts of cigarettes they smoked in earlier, more plentiful times. (No one casts a cigarette butt aside on Tobi: people carry a small container with them, usually a baby food jar, in which they place the unsmoked portion of their cigarettes.) Finally, though, there is no more tobacco of any kind available. This bleak day has been put off and delayed as long as possible by a variety of strategies, most of them employed by the senior people.

It is a measure of the strength of the sharing ethic and of the multiplicity of the island's social ties that this day arrives almost simultaneously for all the smokers, junior and senior, men and women, young and old. Given the intense pressure that the universal craving for tobacco creates and the initial disparity in supplies, it is only by exercising social skill, forethought, and self-control that the senior men have managed to engineer the situation in such a way that all run out together. Nevertheless there are always disgruntled people who invent and pass along half-believed rumors of hidden tobacco hoards and secretive smoking. In my experience these rumors have never proven true. Yet they point to a major feature of tobacco use on Tobi—the threat it continually poses to social harmony.

TOBACCO AND HOSTILITY

As a corollary to the ethic of sharing, stinginess is strongly disvalued. Tobians call such behavior mwih. Although this word can be applied to a variety of nonsharing behaviors, it is stereotypically defined by reference to tobacco. "If we know that someone has some tobacco in his house, but he tells everyone he is out and only smokes it when he is all alone, then we say he is mwih."

Bitter gossip results whenever stinginess is suspected, typically during times of tobacco scarcity. As with all Tobian negative gossip, it is characterized by great indirection and extremely rapid diffusion. It is always some unnamed third party who is said to have seen someone smoking in his canoe or in her garden. Sometimes only a footprint on the beach where a glowing ember had been seen the night before is cited as 'evidence.' Such talk provides a powerful incentive to share tobacco, for even the much-treasured autonomy of senior men is qualified by a desire to avoid gossip. Despite their stance as independent, powerful people, accountable to no one, their fear of gossip plays an important role in ensuring that these men comply with important norms—not least of which is the prohibition against hoarding tobacco.

The importance of tobacco hoarding can perhaps best be seen in a characteristic of one of the most interesting supernaturals on the island, a certain male ghost who is occasionally sighted in the interior. Like all Tobian ghosts, he is both hated and feared, belonging as he does to the only class of beings for whom it is acceptable to feel these emotions. On Tobi, as on Ifaluk, ghosts (inherently evil) play a crucial role in the management of such feelings (Black 1978, 1985; Spiro 1952). What makes this particular ghost (one of the few whose personal appearance is known in some detail) relevant in this context is his habit of simultaneously smoking anywhere from three to ten cigarettes. This tall, frightening figure can be seen from afar at night, his presence betrayed by the row of glowing cigarette tips ten or twelve feet above the ground. The symbolic expression of the evilness of hoarding tobacco, he is seen most often during times of tobacco famine. The linking of the inherent evil of a ghost to tobacco hoarding points toward the seductiveness of such behavior; supernatural figures such as ghosts can be used to project desired but antisocial behavior. Part of the motivation for avoiding hoarding is that no one wants to be thought ghostlike. Finally the ghost draws attention to the importance of hoarding tobacco as a social issue and possible threat to social harmony. Although there are a variety of immoral acts of self-indulgence, it is tobacco hoarding that provides a potent metaphor for such behavior. The periodic tobacco famine and the suspicions of tobacco hoarding that accompanies it cyclically recreates an occasion for envy, hostility, malice, and anger. One of the remarkable things about Tobian culture is the way these and other threatening emotions (as well as the many disputes associated with them) are successfully managed. Paradoxically tobacco not only helps to generate ill-feelings, it plays a very important role in their management.

TOBACCO AND POSITIVE INTERACTION

Tobian society is characterized by a large number of sub-rosa, interconnected, multigenerational disputes. These disputes divide and subdivide the population so finely that it is scarcely an exaggeration to say that each person is opposed to every other person in one or more disputes. At the same time, since alliances are a major feature of these conflicts, it is also true that almost everyone is allied with almost everyone else. Most disputes have land, political office, or marriage at their center. The disputes and especially their associated negative feelings are thought by the Tobians to pose a constant danger to social harmony. A variety of social mechanisms (only some of which are recognized by the Tobians themselves) function to prevent their eruption into overt and direct confrontation (Black 1983). Tobians use all these mechanisms (either consciously or otherwise) to generate a daily social life that stands in marked contrast to the hidden conflicts and antagonisms.

Daily life on Tobi Island is characterized by high good humor, friendly cooperation, and mutual sharing. People achieve extraordinarily pleasant interactions with one another despite the genuine bitterness associated both with disputes and with the inevitable animosities that arise out of their very small scale and intimate society. This pleasantness is deeply treasured by the islanders and results in great measure from the skill with which people structure interactions. Along with such techniques as joking and avoiding anything that could produce shame or anger, tobacco is used

to create a pleasant social tone. Here too there is a cyclical pattern, punctuated by the arrival of quantities of tobacco on the field-trip ship. When tobacco is plentiful, there is much interhoushold socializing. In the evening people gather in a few favorite spots; games are played by the youngsters, stories are told by the elders, and all the adults smoke. Each such encounter begins with one person preparing and lighting a cigarette, which is then passed from hand to hand until it is finished. Anyone passing by is asked to stop, chat, and smoke. Cigarettes are used as markers in these interactions to symbolize the easy affability which this culture sets as the norm for relationships between people.

This type of smoking, known to Tobians as hachuchuh, in which one cigarette at a time is smoked by a group, is by far the most frequent style of Tobian smoking. The literal meaning of the term is difficult to render into English. It is used for joint consumption of a fish, a coconut, and other food and drink—as, for example, drinking liquor from a single cup. It is also used in referring to money, if each person contributes whatever he or she can toward some desired amount, which will then be spent on some item the group desires. Maybe the best way, then, to express hachuchuh in English is by some such phrase as "collective effort toward a pleasurable end." When people share tobacco in an interaction, this hachuchuh signifies to each of the parties involved (and to any observer) that at least the surface of the relationship is unexceptionable. Lepowsky (1982) and Schwimmer (1982) both describe a similar use of betel nut in Papua New Guinea. The former also provides a description of tobacco use.

As the number of weeks grow since the last ship departed, the frequency of interhousehold interaction begins to drop off. The new gossip is by now already known to all, the liquor that came on the ship has all been drunk, there is little if any coffee left, and most important of all, the tobacco supply has declined. Fewer and fewer people appear at the nightly gatherings, and invitations to stop and smoke are less frequently heard and less frequently accepted. In speaking of these periods of waiting for a ship, people quite accurately say, "when we are out of tobacco we are angry and just stay in our houses."

The reason for this decline in interhousehold sociability is not hard to find. The experiments reported by Schechter and Rand (1974) suggest that one of the psychopharmacological effects of tobacco deprivation in chronic smokers is increased irritability. Given the Tobian practice of preventing the direct expression of interpersonal hostility through the exercise of self-control, it may be that in times of tobacco famine they avoid interaction by staying home because they are aware of an increased susceptibility to anger.

During this time group activities that require the participation of people from a number of different households decline in both size and frequency. Attendance at the big daily meal declines as the amount of tobacco distributed by the host gets smaller and smaller. Copra production, which began a few weeks after the ship's visit, begins to drop off as the senior men are able to attract fewer and fewer coworkers. Fewer fishing expeditions, which require five or six men to work together in the same canoe, are launched. Women, who during times of tobacco plenty work in groups in their taro gardens, now work mostly alone or in groups of two or three close relatives. And the nightly recreational groups are much smaller. Perhaps most

impressive, there are simply many fewer people out and about on the island's paths during the day.

Consider the problem of two people accidentally meeting on a remote path (or a path as nearly remote as is possible on such a small island). Etiquette demands that they stop and gossip. However, neither can offer a cigarette to share because both are out of tobacco. Each knows that the other may suspect him or her of having a secret cache stashed away. Under such circumstances, it is nearly impossible to achieve the easy affability that is so highly valued on the island.

On Tobi there is no substitute for tobacco as a symbol of sociability. When it is unavailable, none of its nearest equivalents is at all suitable in casual interactions. One must either offer nothing (too little) or invite the other home to partake of some food (too much). To offer nothing would only exacerbate the tension and suspicion. Commensality among households is an important pattern on Tobi and is appropriate to much more important occasions than chance encounters. Faced with the dilemma of having to do too much or too little every time they meet someone, it is little wonder that Tobians stay home during times of tobacco shortage.

TOBACCO AND TWO COMMUNAL ACTIVITIES

Until recently, and through my last visit to the island, almost all buildings on Tobi were roofed with palm-frond thatch. Such a roof has many advantages: it is highly appropriate to the Tobian climate, keeping buildings relatively cool during the day and warm at night; it requires no maintenance; and perhaps most important, all its components can be acquired locally. Roof thatch is woven by women from dried coconut fronds, which are extremely plentiful. The other material used in a roof is sennit, or coconut fiber cord. Huge balls of this cordage are slowly assembled by men and stored away. Sennit about one-eighth inch thick is needed for thatching.

A continual supply of thatch and sennit is necessary because thatch roofs wear out after six or seven years. The thatch fringe, which is left exposed, slowly breaks off and rots away, and the roof begins to leak. Also, the growing insect population inhabiting the roof eventually makes life miserable for the human inhabitants of the house. Repairing a roof of any size requires the cooperation of all adults on the island, for which Tobians think tobacco must be available. According to them it is necessary as an incentive to get people to come to a rethatching session and also to keep the workers in a cooperative mood in order to make a good, solid roof.

The actual reroofing, which can take either one or two days, depending on the size of the building, is only the final step of a long process that occasionally stretches out for a year or longer. It is organized by the senior man with rights to the building. At an appropriate time before his roof is due to fail, he should begin making preparations, which involve amassing enough thatch and cord to redo the roof and making sure that everyone will show up to help. (Of course, it sometimes happens that for one reason or another preparations are not begun in time, and in such cases the senior man has to endure not only a leaky roof but complaints from everyone else using the structure).

The old women of the household are among the first people the senior man tells of his thatching plans. They step up their production of thatch and also organize

their gardening so that on the appointed day a large amount of taro will be available. At this time the senior man will also check his supply of sennit. If he does not have enough and if he is not one of the few coir makers on the island, he will begin figuring out how to accumulate more. He will also begin to increase copra production, so that he can purchase the necessary amount of tobacco. During this time of preparation he and his people must attend closely to the rumor network, in order to learn if anyone else is also planning a rethatching.

Shortly after the departure of the field ship, when it is clear just who will be on the island and available to help, and tobacco supplies are highest, the senior man tentatively sets a date. The announcement is usually made in conversation at one of the big meals he sponsors. Word of this immediately diffuses throughout the gossip network, including the planned date and the amount of tobacco he has purchased specifically for use in the rethatching. The senior man and his dependents listen carefully over the next week or so to learn whether there is another rethatching set for the same date. If this is the case, then he and the other senior man "negotiate" through the rumor network so that their rethatchings do not overlap. If people are rumored to be planning to refuse to help, the rethatcher uses gossip to rectify his relations with them. Finally the day dawns on which the long-awaited rethatching is to take place. All during the previous day, the senior active woman of his house has been preparing food, assisted by other women of the household and close relatives. The men have spent the previous evening and a good part of the night fishing and may go out again before dawn in hopes of landing tuna, barracuda, or any of the other large pelagic fish that are so highly prized.

As soon as he returns from fishing, the houseowner begins cutting the old thatch free from the wooden framework to which it is tied. This does not take long, and since he has already checked the framework for its soundness, there should be no unpleasant surprises. People start arriving, men to help with the rethatching, women to help with the cooking, and children to watch, play, and do chores. This is the time to replace roof poles if necessary. Most of the men then start to tie the new thatch into the roof. One or two men stay on the ground to throw pieces of thatch up to those perched in the rafters. The owner of the house also stays on the ground. He supervises the boys who carry out the new thatch to be tossed up to the thatchers. He also watches over the women cooking the food for the postthatching feast. His primary activity, however, is to supply the thatchers with cigarettes and drinks—sugar water, cold tea with milk, or coconuts. There is usually a small boy who actually distributes these items.

The major problem facing the houseowner at this point is to make sure that the thatchers receive enough cigarettes while they are working to keep them content. At the same time he has to make sure that his supply of tobacco does not run out before the postthatching feast, at which it is customary to pass out at least one pack of cigarettes to each man who has worked on the job. If it were up to the thatchers they would chain-smoke until all the tobacco was gone; the houseowner never has enough tobacco for them. The management of his supply is therefore no easy task.

The use of an intermediary (usually the rethatcher's son) allows the owner to withhold tobacco as long as possible. The child doles out cigarettes only on the

owner's express order, but delays can easily be blamed on the child. When the thatchers become anxious the homeowner shouts, "Can't you see these men need cigarettes?" or "What's the matter with your head that you are just sitting there when these hard-working people need to rest and smoke?" His message to the thatchers (which fools no one) runs: "Don't be mad at me because you are not getting enough to smoke, it is this small boy's fault." If he is too miserly with the cigarettes, the men working on his house will embarrass him by setting up a loud chant, "Tabaka, tabaka, give us tabaka." Hearing this he will turn on his young son and begin berating him in earnest.

Most often, though, the distribution of tobacco to the thatchers is triggered by a quarrel among them. Such quarrels monotonously punctuate all rethatchings. They arise out of the volatile social mix up on the rafters of men who are either too young or too old to work in intimate cooperation with one another. Elsewhere I have detailed the origins and characteristics of these rooftop quarrels (Black 1977:205-10) and I shall not repeat that material here. It is enough to point out that quarrels frequently arise among the thatchers, and the houseowner must intervene, because the thatching itself requires close cooperation to produce a water-tight roof. It would be relatively easy for a dissatisfied thatcher to secretly sabotage the work in such a way that the new roof could begin to leak not in six or seven years but in six or seven months. Therefore each of the many quarrels that erupt poses a threat to the new roof. The houseowner acts to terminate them in exactly the same way that he meets the shouts of "tabaka, tabaka." He angrily orders the small boy to provide the thatchers with cigarettes. As the cigarettes make their way up the roof from hand to hand, the quarrel subsides as rapidly as it began and, after a few minutes of relaxed smoking, the work begins again.

Finally the job is done and it is time for the house feast, pauurimw. All the men who have worked on the project gather next to the newly roofed house. The food that the women of the house have spent the day preparing is served. After a short prayer by the houseowner or the island's chief, if he is present, everyone eats—the men in an inner circle and the women and children in the background. When the meal is over, the houseowner passes out a last cigarette to each of the men. This time the women are each given one. (Prior to this the women have smoked in the ordinary manner—during breaks from their work, taking turns preparing cigarettes from their personal supplies and passing them around.) As the party breaks up, the houseowner gives each man who helped a pack or two of manufactured cigarettes or, if none are available, several sticks of twist.

This final gift of cigarettes is thought to be an expression of the houseowner's gratitude, and people value it as such. After one rethatching, when it came time to give out the final tobacco, the owner gave more tobacco to those who worked hardest and longest than he did to the others. People were very upset by this, as they told me at the time. "Maybe in Palau you get paid to work, but on this island people help each other." The innovation failed, and to my knowledge it was never attempted again. This episode also illustrates the islanders' resistance to the transformation of their society from one characterized by wide-spread sharing and generalized reciprocity to one in which direct reciprocity or even market behavior is appropriate.

Despite the many crises he has endured in planning the new roof, culminating in the numerous quarrels among the people who came to help him, the homeowner

now has a thatch roof good for another six or seven years. The roof is both result and manifestation of the successful mobilization of the Tobian population for communal work, despite all the deep-seated antagonisms and interpersonal frictions that make such cooperation difficult. A major reason for that success, at least in the Tobian view of things, is tobacco. Its role is highlighted when rethatching is contrasted with efforts to clean up the island, the other (but much less successful) communal task periodically embarked upon by the Tobians.

Everyone agrees that life on the island is much improved when the fronds and other trash that rain down from its many palm trees are regularly swept from the village and the paths and burned. Not only is the island more pleasing to the eye (presenting a park-like atmosphere to the casual visitor and a cherished, domesticated look to its inhabitants), but it is much easier for people to get around if it has been kept 'clean.' Otherwise the main path that circles the island becomes almost impassable, and the chore of bringing back coconuts and other produce from the far side of the island becomes more arduous than it need be.

Once or twice a year pressure mounts up to clean the island. It may originate in a directive from the government department in Palau charged with mosquito control, or it may start with some of the old people, who are sick of stumbling through knee-deep coconut fronds as they harvest their coconuts. A meeting will be called and unanimous agreement will be reached to begin a weekly clean-up of the island. The first clean-up is the most difficult; once it has been accomplished, a weekly patrol of less than two hours is all that will be needed to maintain the valued neatness. Everyone must know, however, that this is not likely to happen, for this plan has been adopted many times in the past and has always failed. Indeed, the litter that has necessitated the meeting is irrefutable proof of the failure of the previous implementation of this scheme.

On the appointed day (generally a Saturday), people appear at the designated starting point with rakes and machetes. Under the direction of the magistrate, the organization of the task can vary from one episode to the next. The entire group may start at one end of the village and work toward the other, or each house site may be made the responsibility of the people who live there. Sometimes the work gang is divided into two, with one group working south from the village along the perimeter path, and the other working toward the north. Or the group as a whole may work its way around the island. Whatever the internal organization of the task, it is never completed on the first day.

The work is strenuous, involving dragging, chopping and burning palm trash, sorting and stacking fallen coconuts, and much raking and sweeping. Nevertheless, people seem to enjoy themselves, joking, laughing, and singing snatches of songs. They need not worry about changes in the weather, as they must at a reroofing. Young people and old are not forced into intimate cooperation as they are on a roof. The workers take occasional breaks, during which (of course) they smoke, and eat whatever bush food (mostly coconuts) is at hand. By the end of the day, more than half the job will be done, and as people walk home they tell one another that next week they will finish the job.

The next Saturday, however, far fewer people appear. If they are lucky, they might finish half the remaining uncleared area. The following Saturday only the

magistrate and a few of his dependents appear; by working all day they usually manage to finish the job. The island has been cleared, but the impetus that launched the clean-up drive has been spent, and there will be no further cleaning of communal areas until the cycle repeats itself, six months or more later.

Even during the first, best attended, day of the clean-up, a few people do not show up. Their absence is noted and criticized by those who do take part. Tobians intensely dislike being exploited, which is how the absence of others, however justified, is understood. Those who do not help receive the advantages of having a clean island without contributing any labor. The resentment that this interpretation generates explains the rapid decline in the size of the clean-up crew over the next several weeks. More and more people find one excuse or another to avoid being exploited in this fashion. Why do Tobians fail repeatedly to achieve the rather minimal communal mobilization necessary to achieve a universally desired end? The answer to that question can be found in the absence of tobacco gifts at these occasions: such gifts are necessary to overcome centrifugal tendencies inherent in Tobian society.

Tobacco gifts provide immediate rewards for those who do work, rewards they need to self-justify their presence. In rethatching parties that reward is provided by gifts to the workers from the host. There is no "host" in this sense for the clean-up parties, and there are no packs of cigarettes awaiting those who labor. Such a reward may seem minimal; but when the interrelationship between Tobian understandings of tobacco and Tobian understandings of the self are taken into account, its importance can be understood.

TOBACCO AND THE TOBIAN SELF

Tobacco permeates Tobian living patterns in a host of different ways, only some of which have been detailed here. I have not described its very important place in funerals, or its role in the inevitable bankruptcy of the small cooperative stores that are set up on the island every few years. I have not explained why only one person ever planted any, even though it is known that tobacco grows very well on Tobi, or why the grower quit after his first harvest. Yet it is clear that tobacco has come to play an important, if not essential, role in the Tobian sociocultural system and consequently in the organization of relations between Tobi and the rest of the world, a role derived from the interaction of Tobian understandings about tobacco with Tobian understandings of the self.

Most of the relevant folk psychology has been presented above. It will be remembered that only senior men are without someone in charge of them. Only they are said to have the necessary attributes to be granted this kind of autonomy: self-control, intelligence, and social competence. These attributes are important in the management of anger and hostility. Such management, in turn, is very important in the creation of social relations whose surfaces, at least, are smooth, even, and pleasant. Through their management of kitchens, in-charge networks, and most of the island's copra production, the senior men act to insure that daily life is not disrupted by the many sub-rosa disputes, that the daily work of the island is accomplished, and that the importation of important commodities is achieved. Among those commodities tobacco ranks very high.

Tobacco is an important commodity in part because it marks a status nearly everyone claims, that of a competent person. The status "senior person" is simply the most highly developed expression of the competence that is prerequisite to participation in the full range of sociopolitical action. Some of the wide range of symbols used to mark a person as competent is restricted to specific age and gender categories. Competent men possess adzes and competent women have cooking utensils, for example. Other symbols are applicable to all competent adults; tobacco is prominent among this latter class of markers. To Tobians, the humor of the story of the first tobacco on the island lies in the fact that the man who had returned from working for the Europeans was not nearly as competent in dealing with their material culture as he claimed. The first supply of tobacco was thrown away, but today every competent smoker knows that moldy tobacco can be salvaged by scraping and slow drying. Tobacco's association with competency is part of the reason the senior men derive a considerable proportion of their power through their control of the bulk of tobacco supplies (see Marshall and Marshall 1976:156).

Furthermore, the Tobian understanding of tobacco as an indicator or component of the status of a competent person makes it highly attractive to children who want to join that category. It is not an easy process to become an adult on Tobi. The labor of nonadults is at the disposal of adults, who are reluctant to lose it. Self-control (especially of antisocial impulses) is thought to be an acquired skill and is only slowly and grudgingly attributed to a maturing young person. The mobilization of the social and economic resources that are an important feature of adulthood is inevitably disruptive. Young people have a long and difficult struggle establishing themselves as fully mature, competent people, although the fact that their muscles are crucial to their society gives them a certain amount of leverage. The process of achieving adulthood takes a number of years, and requires careful maneuvering during an extended, incremental progress. One of the first steps in this progress is successful establishment of the identity of smoker (see Marshall 1979:65, 85 for the Trukese case).

From an early age, children are socialized to be tobacco sharers. People hoping to obtain cigarettes frequently send their small children to the house of someone thought to have tobacco, in hopes that the child will return with the gift of a cigarette. This pattern is also evident for both tobacco and betel nut in Vanatinai, Papua New Guinea (Lepowsky 1982:335, 341). Children also carry the cigarette being smoked by a group from one person to the next, when the smokers are sitting too far apart to hand it to one another. In these ways children learn the sharing component of smoking behavior.

The first cigarettes, smoked sometime in early adolescence, are almost always stolen. The drinking parties that begin on ship day often provide the occasion for tobacco theft. This tobacco is smoked off in some hidden corner by the thief and his or her peers. For the next few years, the novice smoker continues to smoke whenever he or she can obtain tobacco.¹⁰ The secret gradually becomes known to more and more people until finally, in late adolescence, an adult openly offers a cigarette, typically during a work break. This is a crucial event in the career of a smoker and would-be adult. It allows him or her to openly display this mark of competent adulthood. It brings him or her into the network of tobacco sharing

controlled by the senior men. The new smoker can now begin to plan ways to acquire his or her own supplies of tobacco; by so doing, he or she will begin enacting an important component of the role of competent person.

The new smoker will also begin using that tobacco to create or maintain "happiness." Tobians say that smoking gives people "happy feeling" (Tobian kehe tip or moho tip). Producing happiness in others and manifesting it in one's own behavior is a fundamental obligation incumbent on all responsible Tobians. Although largely unstated, this obligation is a moral prerequisite for all behavior. Compliance with it constitutes what may be thought of as the first law of Tobian interaction and the islanders' first line of defense against the dark side of their social life. Tobians exhibit a high degree of skill in organizing interaction in conformity with this obligation. Although some people are more skilled than others, and those who can best defuse a tense moment with a joke or a story are highly respected, everyone has mastered techniques for ensuring pleasant social interaction. The continual offering and acceptance of happiness-producing cigarettes is one of the most important of these techniques.

There is one further point to be made in this connection, with respect to rethatching parties. Considering the periodic and universal need to replace roofs and the high value placed on cooperation, the participation of every able-bodied person in each rethatching does not seem especially problematic. Considerations of kinship, mutual obligation, future reciprocity, and reputation would seem reason enough to explain why it is that each reroofing is successful. Yet according to the Tobian "native point of view," this is not the case.

Personal autonomy is highly valued and continually sought after by Tobians. In their view people act to protect and increase their autonomy; their predisposition is to view behavior as primarily goal directed. Therefore, when asked why a man helped his bitter enemy to repair his roof, the typical response is that he joined in the work because he wanted to get tobacco. Apparently the general and quite diffuse factors of mutual obligation and social reputation (of which they are well aware) are not considered sufficient to overcome what they view as people's tendencies to act only for their own ends. Sometimes the food and tobacco given away at a rethatching are called "bait." Conceptions about tobacco are successfully mobilized to overcome centrifugal tendencies within Tobian society.

TOWARD AN UNDERSTANDING OF TOBACCO USE

A complete understanding of human involvement with tobacco must address itself to three separate but related issues: (1) the psychobiological response to the ingestion of tobacco; (2) the act of smoking and its psychological correlates; and finally, (3) the sociocultural ecology of tobacco use. Although most of the material in this paper has focused on the third of these topics, I now wish to suggest some useful directions for research into the first two.

There is a large and rapidly expanding body of research into the physiological and psychobiological effects of tobacco ingestion (see Moss and Prue 1982 for a recent survey). Apparently nicotine is the main active agent. Among nicotine-related responses characteristic of all smokers are an increase in heart rate (Schacter 1973), a depression of spinal reflexes, and a stimulation of the central nervous sytem

(Murphree 1974). Many researchers have focused on the role of nicotine as a powerful stimulus for the release of epinephrine, an adrenal hormone responsible for these effects (Gillman, Goodman, and Gillman 1980; Hudson 1979; Jarvik 1973; Russell and Feyerabend 1978; Spohr et al. 1979).

Twenty years ago Schacter and Singer (1962) reported experiments with epinephrine that may go a long way toward explaining the universal appeal of tobacco to people of widely different sociocultural systems. 11 Subjects in the first of three groups were injected with epinephrine, without being told that this was a drug that would produce arousal. Subjects in the second group were injected with a placebo; while those in the third group were given epinephrine and an explanation of what it would do to them. Each subject waited in a room with an accomplice of the experimenters, who attempted to induce emotional reactions in the subject. Groups two and three reported feeling little emotion, but those who had been injected with epinephrine without being informed of its nature reported emotional reactions. The accomplices were instructed to try to induce either euphoria or anger in the subjects; to a large extent they succeeded with those from the first group but not with the others. By varying the social context in which the epinephrine-induced arousal took place, subjects could be brought to "feel" what are usually thought to be contradictory emotional states, even though the internal arousal was identical from one person to the next.

Epinephrine apparently predisposes an individual to experience emotion, but the quality of that emotion will depend upon the individual's interpretation of environmental clues as to what he or she should be feeling (see Ashton et al. 1974). Since the interpretation seems to depend on an interaction of personal history with sociolinguistic and cultural rules, it is socially influenced and thus will differ from one society to another.

It is here that Schacter and Singer's work offers a clue to tobacco's appeal. Since nicotine triggers epinephrine, it seems to me that the process of social definition probably occurs when tobacco is ingested. The physiological arousal associated with tobacco then becomes available for social processing in the same manner as do the effects of alcohol (MacAndrew and Edgerton 1969). It would be interesting to survey a number of societies for their characteristic way of coding internal response to tobacco ingestion; one would suspect that most, if not all, societies would select one or two possible interpretations that would make sense in terms of that society's social and cultural processes. On Tobi the central yet problematic state of "happiness" is the key interpretation. Perhaps "calmness" and more recently "guilt" and "anxiety," characteristic responses of American smokers, are culturally apt understandings of epinephrine-induced internal arousal associated with smoking in this society. 12

In addition to the social utilization of nicotine-induced arousal, the physical act of smoking can also be made to serve a variety of psychological ends. The simple behavior of lighting and smoking a cigarette becomes an enduring, characteristic, and repetitive act, a conditioned "habit." It must link up with other such behaviors and the psychological structures that underlie them. It is for this reason that psychologists have turned their attention to tobacco use.

Unfortunately, it is difficult to apply the insights of psychology to Tobian tobacco use. On Tobi smoking is almost always a social act and is used for interactional ends—to establish and maintain socially appropriate relationships. However, most psychological research is focused on isolated individuals. This is understandable since academic psychology is a product of the Western cultural preoccupation with the highly individualistic, autonomous self as object of study; but such studies are of questionable value in understanding correlates of tobacco smoking in many non-Western societies.

There is an additional drawback to applying existing psychological research on tobacco use to Tobian smoking. Most such research has attempted to identify some trait or complex of traits that discriminates smokers from the rest of the population. But on Tobi all adults smoke as much as they can whenever they can, so no such differentiation can be expected. Such a situation means that it is not possible to apply to Tobian smokers the results of studies that have found smokers to exhibit, for example, greater extroversion, neuroticism, and psychosomatic complaints than nonsmokers (Faust and Mensen 1974; Green 1977; Haines, Imeson, and Meade 1980). This type of substance use fits the conditions for what has been called an "endemic toxicomania" (Bajerot 1970:100).

Nevertheless, anyone wishing to understand Tobian (or any other society's) tobacco use must be aware of psychological variables, in particular what Kety (1973:291) calls the "huge perisphere of symbolic associations" surrounding the behavior. On Tobi that symbolic perisphere contains social factors, such as adulthood and sociability, but it undoubtedly contains other, less well verbalized elements that are still unknown. It seems likely that these subtler symbolic associations are related to aspects of the self conventionally regarded as psychological variables. Without further investigation there is no way to say just what those variables might be, nor how much uniformity there may be across the whole population.

Finally, there is that aspect of tobacco use that is stressed in this paper—the sociocultural setting in which smoking takes place. A consideration of the historic, economic, and social features of tobacco use in a given society allows for a contextual understanding of the smoking (or chewing or snuffing) behavior of its members. Such a procedure may free the investigator from implicit assumptions about tobacco use characteristic of his or her own culture, and may bring out the many connections existing between the trait and the rest of the culture. Once enough such studies have been completed, comparative studies can be carried out.

At this early stage of research in this field, three hypotheses emerge from my discussion of the Tobian material. First, given the ease with which tobacco can be incorporated into indigenous sytems of meaning, I suggest that ethnohistorical studies of early contact situations should reveal that tobacco played a very important role in the expansion of world capitalism and that it was a major vehicle for the incorporation of previously isolated economies into the world trading system. Second, I suggest that no matter what the characteristics of its initial penetration into a society, once tobacco has become accepted, it becomes organized along psychological and social lines intelligible to that society. Third, I suggest that since tobacco can so easily be made into a social good, the economy of this product will parallel the general economy of the society. Following Polanyi's typology of

exchange systems, as refined by Sahlins (Polanyi 1959; Sahlins 1965), one would expect the distribution of tobacco as a commodity within a society to be organized in a way characteristic of the general distribution system. More interesting perhaps is the corollary idea: in those numerous societies in which tobacco is exchanged as a token of sociability, these exchanges also will be patterned in ways characteristic of the economy as a whole (but cf. Sahlins 1972:299; Watson 1983). It is impressive to see three Tobians on the day after the ship has arrived, each with a pack of cigarettes in his or her pocket, lighting one cigarette at a time and passing it around the group until it is finished.

Finally, as a direction for further research, it would be productive to consider tobacco use as a part of a larger cultural complex involving other drug substances. On Tobi that complex includes coffee and alcohol (and if a recent rumor is to be credited, marijuana is in the process of being added to this list). In other societies different substances may be joined together with tobacco to form what might be called "recreational drug complexes." It would be interesting to investigate the internal relationships, symbolic organization, and social use of such complexes in a variety of societies.

There are a number of reasons why a holistic, anthropologically oriented investigation of tobacco use is a worthwhile enterprise, with both practical and theoretical benefits. The outer islands of the western Carolines, for example, have extremely high rates of chronic respiratory and bronchial diseases. In their investigation of this public health problem, researchers have tended to assign tobacco only a small place in the etiology of the situation (Brown 1978; Brown and Gajdusek 1978; Brown, Sadowsky, and Gajdusek 1978). The reason for this is that the adult nonsmokers on the islands they investigated exhibited the same symptoms as the smokers. On the basis of the Tobian material, without full histories of tobacco use from each person it is too early to rule out smoking as a contributing cause of health problems even in those islanders who claimed not to be smokers at the time of the research. Furthermore, given the Carolinian practice of a number of smokers sharing the same cigarette, one would expect tobacco use to play an important role in the transmission of communicable diseases.

It is also possible to use an understanding of the importance of tobacco on Tobi in reevaluating the desire for tobacco as a motivation for various activities throughout the Carolines. ¹³ I have in mind the famous long distance voyages still undertaken by navigators and crews from such islands as Puluwat and Satawal. Gladwin's East is a Big Bird (1970), contains the most extensive ethnographic information about these voyages. He provides a thorough description of the canoes, the indigenous navigational system, and other features of this extraordinary element of Carolinan culture. Yet when he turns to why the islanders make these long and dangerous voyages, he dismisses the reasons they gave him as "trivial, certainly not enough alone to warrant the great amount of effort involved. Trips of one hundred and thirty miles are made to Satawal and one hundred and fifty miles to Truk just to get special kinds of tobacco..." (1970:37). Given what we know about the role of tobacco on Tobi, a sister island to Puluwat, there is no more reason to label the voyagers' desire for tobacco as trivial than there is to give the same label to the desire that brings Tobian men together to rethatch roofs. The peculiar properties

of tobacco, as manifested in the generation of a physiological state to which the individual assigns culturally constituted meaning, in the highly repetitive and stereotypic behavior with which it is ingested, and in its penetration of social patterns, make it an extremely potent substance. It is capable of leading humans to all kinds of important behaviors. Whether it is thought of as a "hook," as in the American idiom, or as "bait," as in the Tobian, it is well worth anthropological attention.

POSTSCRIPT

Since I began this paper on a personal note, it seems fitting to end it on another. I was a heavy smoker when I went to Tobi. Like many other Americans, I wanted to give up the habit. As I was getting ready to go to the island for the first time, it seemed to me that it would prove the perfect location for what I feared was going to be a painful struggle to quit what was by then a long-established and deeply engrained behavior. After all, there was no store on the island, and supply ships came only every three months or so. Therefore, when I ran out of tobacco, I would be forced to quit. I dismissed the thought that I could borrow cigarettes from the Tobians, since I did not want the reputation of being one who "bums" tobacco. It is a measure of my ambivalence about my plan to quit smoking that I took a carton or two of cigarettes with me. Nevertheless, I announced to one and all that I wanted to quit, a goal that must have been incomprehensible to the Tobians. In fact, they would not let me do it.

Given their understandings of tobacco, happiness, and anger, it is no wonder that they did not want this alien member of the colonial elite (physically larger than anyone else on the island) sitting in his house brooding about tobacco while everyone else was smoking. All that first day after my supply had run out, I was visited by a stream of people, each of whom insisted I share a smoke or two with them. Some of them (the senior people in the family I was affiliated with) actually gave me some sticks of twist or packs of cigarettes. Eventually, I smoked up this new supply. The same thing happened again. By the third time I ran out, everyone was running low and the subsequent tobacco renewal day generated a much smaller amount than the first two. But even during the following weeks, as tobacco famine loomed nearer and nearer and as people drastically cut their consumption, I was still being supplied. During the last week or so before the complete exhaustion of supplies, when almost all smoking was a solitary and private behavior, one old man used to invite me to share his daily recycled cigarette, early in the morning under a tree next to his house. Unfortunately these early morning smokes merely served to keep me "hooked," without satisfying my craving for tobacco. Finally, there was no more tobacco on the island and we all did without until the ship came. Still somewhat bewildered by the Tobians' refusal to allow me to stop smoking, I purchased a generous supply of tobacco, knowing that I would give most of it away and smoke up the rest. The early part of my socialization to Tobian society was complete. I, too, would use cigarettes to express my status within Tobian society and to keep myself and other people happy.

1. The field research upon which this paper is based was financed in 1972 and 1973 by a NIMH grant (UPHS 5 TO1 MH 12766). Thirteen months were spent with the Tobians—a little over three months in Eang, the Tobi village in Palau, and the remainder on the island. I spent an additional thirteen months with the people as a Peace Corps volunteer from 1967 to 1969. All but one of these earlier months were spent on the island.

Portions of this paper were presented at the 1976 meetings of the Southwestern Anthropological Society, the 1979 meetings of the Society for Medical Anthropology, and the 1984 meetings of the Association for Social Anthropology in Oceania. Useful comments have been provided by Ralph Bolton, Geoffrey White, Kevin Avruch, Louis Golomb, Shepard Krech, Pam Watson, and Eleanor Gerber. Mac Marshall, a pioneer in the renewal of anthropological interest in drug use in Oceania, has given me much needed help and guidance as I developed the ideas reported here; for that assistance I am very grateful. I thoroughly agree with his comment that "serious, scholarly research on all aspects of tobacco use in Oceania is long overdue" (1981a). Otong Emilio aided me with information as I worked on this paper, especially in the translation of Tobian terms.

- 2.Other anthropological work on tobacco use includes Broughton (1972), Engelbrecht (1975), Ethridge (1978), Laufer (1924a, 1924b, 1931), Lewis (1924, 1931), Linton (1924), Lowie (1919), Mason (1924), Robicsek (1978), Springer (1981), and D. Thompson (1939).
- 3. See Marshall (1979) for an application of MacAndrew and Edgerton's approach to alcohol use in a Micronesian society; Allen (1981) for the symbolism of coca use in the Andes; Zimmerman and Weider (1977) as well as Rubin and Comitas (1976) for further work on marijuana. See Schacter, Kazlowski, and Silverstein (1977) for an explanation of smoking in which the "mind" plays no role.
- 4. See Marshall (1981a, 1981b) for a useful survey and bibliography of the history and extent of tobacco use in Oceania. Other sources are Feinhandler, Fleming, and Monohon (1979), Finau, Stanhope, and Prior (1982), Haddon (1947), Laufer (1931), Lewis (1924, 1931), Merrill (1930), Sprecht (1975), and

Zimmer (1930). See Tindale (1975) for tobacco use in precontact Australia.

- 5. None of the earlier German accounts of visits to Tobi that I have been able to locate mention tobacco; see Jost 1888; Kraeft 1885; Walsen 1898.
- 6. A rough estimate of the tobacco arriving on any one field trip can be made by assuming forty smokers on the island (an average population of adults), ten copra makers, and ten returning residents from Koror. If each smoker extracts three packs from the crew and visitors and receives two packs of gift cigarettes from friends and relatives in Koror, each new resident brings ten packs and 8 pounds of twist, and each copra producer purchases twenty packs and 8 pounds of twist, then something on the order of five hundred packs of cigarettes and 160 pounds of twist come onto the island with each field trip. I did not obtain actual figures for tobacco imports during my field research. being at that time one of those ethnographers who slight tobacco use.
- 7. There are interesting parallels between tobacco use and the use of alcohol and coffee on Tobi. Almost all the liquor that comes on the ship is drunk up in the days immediately following its visit. Occasionally some coconut toddy is brewed; this too is drunk up as soon as it is available. Compare this to alcohol patterns in Chichicastenango, Guatemala, for example, where people use liquor in everyday encounters the way Tobians use tobacco (Bunzel 1940). Coffee is eked out as long as possible. It is mostly drunk in the evenings by groups gathered to tell stories, etc., but the instant coffee powder is not redistributed the way sticks of twist and cartons of cigarettes are. Unlike some other Micronesians, Tobians do not chew betel
- 8. Compare this to the statement reported by Chagnon, LeQuesne, and Cook, from the Yanomamo: "When we are out of tobacco we crave it intensely, and we say we are . . . in utter poverty" (1971:73). See also Marshall (1981b), where Trukese are reported to say that they feel "weak" if they are out of tobacco, and Marshall (1979:142n.17).
- 9. Actual ownership of the building may be vested in someone else farther down the senior man's in-charge network. Sometimes the senior man delegates responsibility for the rethatching

to a male friend or dependent. In such a case, which usually happens when the senior man has to be in Palau when the actual work needs to be done, he furnishes his delegate with the necessary supplies, including tobacco.

- 10. During these years the child is likely to spend time in Palau, attending school. The opportunities there for acquiring cigarettes and smoking them without adults finding out are much greater than on Tobi. When they return from Palau, young people have a rather rough time of it if they have not yet succeeded in establishing themselves as publicly known and approved smokers.
- 11. For recent discussions of these experiments in relation to work on emotion see Grings and Dawson (1978:5) and Lyons (1980: 120-26). See also Moerman (1979) for an interesting discussion of the relationship between physiology and symbolism. Further insight into the mechanisms of human tobacco use can be gained by the consideration of two phenomena reported in the literature. Many studies of the health consequences of smoking use nonhuman primates as subjects. However, it is quite difficult to train these animals to smoke; various devices and strategies have had to be invented for this purpose (see, for example, Ando and Yanagita 1981; Glick, Canfield, and Jarvik 1970). Other researchers (e.g., Jarvik 1973) have found that nicotine-free cigarettes do not satisfy chronic human smokers.

These two facts lead one to the tentative conclusion that nicotine is a necessary component of tobacco addiction, but that the unique symbolizing properties of the human mind must also be present.

- 12. On calmness and stress, see Selye (1973) and Schacter (1973). On guilt and anxiety, see McCrae, Costa, and Bosse (1978). For other information on American views of smoking, see Shor et al. (1981). For an interesting survey of the smoking behavior of American scientists, see Bryson and Dicken (1981).
- 13. Brown reports that the adults on Mogmog and Falalop islands of Ulithi Atoll and Ifaluk Atoli, respectively, almost universally smoke an average of one pack a day (1978:326). For Ifaluk tobacco use see Bates and Abbott (1958:95-96); for Ulithi and Lamotrek see Lessa (1977). For the role of tobacco in interisland trade, see Alkire (1965). See Marshall and Marshall (1976) for comments by some early observers of Micronesia. Their paper contains a thorough discussion of the use by nineteenth-century American Protestant missionaries in eastern Micronesia of tobacco (and alcohol) abstinence as a key symbol in their effort to differentiate themselves from the other Europeans on those islands, as well as in their struggle to reorganize the societies of the region. So far, at least, Tobians have not had to contend with religious prohibitions on smoking.

REFERENCES CITED

Alkire, W.H., 1965, Lamotrek Island and Inter-Island Socioeconomic Ties. Urbana: University of Illinois Press.

Allen, C.J., 1981, To Be Quechua: The Symbolism of Coca Chewing in Highland Peru. American Ethnologist 8:157-71.

Ando, K., and T. Yanagita, 1981, Cigarette Smoking in Rhesus Monkeys. Psychopharmacology 72:117-27.

Anonymous, 1836, Horace Holden's Narrative. (A Review of Holden's Book, Supplemented with Information Given by Holden in Conversation with the Author.) North American Review 43:206-26.

Anonymous, 1982, Output and Trade Higher in 1981. Tobacco Report (Sept. 1982): 41-44, 48.

Ashton, H., J. Milman, R. Telford, and J.W. Thompson, 1974, The Effect of Caffeine, Nitrazepam and Cigarette Smoking on Contin-

gent Negative Variation in Man. Electroencephalography and Clinical Neurophysiology 37:59-71.

Bajerot, N., 1970, Addiction and Society. Springfield, Ill.: Charles C. Thomas.

Bates, M., and D.P. Abbott, 1958, Coral Island: Portrait of an Atoll. New York: Charles Scribner's Sons.

Becker, H.S., 1963, Becoming a Marihuana User. Pp. 41-58 in Outsiders: Studies in the Sociology of Deviance (by H.S. Becker). New York: Free Press.

Bernard, Capt. E.C., 1966[1833], Loss of Ship Mentor. Boston Daily Advertiser and Patriot, 12 August, p. 42. Reprinted in American Activities in the Central Pacific 1790-1870, 5:410-21 (ed. by G. Ward). Ridgewood, N.J.: Gregg.

Bernard, Capt. E.C., 1980, "Naked and a Prisoner": Captain Edward C. Bernard's Narrative of Shipwreck in Palau 1832-1833 (ed. by V.R. Martin). Sharon, Mass.: Kendall Whaling Museum.

Black, P.W., 1977, Neo Tobian Culture: Modern Life on a Micronesian Atoll. Ph.D. diss., University of California, San Diego.

Black, P.W., 1978, The Teachings of Father Marino: Aspects of Tobian Catholicism. Pp. 307-56 in Mission Church and Sect in Oceania (ed. by J. Boutilier, D. Hughes, and S. Tiffany). Ann Arbor: University of Michigan Press.

Black, P.W., 1981, Fishing for Taro on Tobi. Pp. 25-36 in Persistence and Exchange (ed. by R. Force and B. Bishop). Honolulu: Pacific Science Association.

Black, P.W., 1982, The 'In-charge Complex' and Tobian Political Culture. Pacific Studies 6:52-70.

Black, P.W., 1983, Conflict, Morality and Power in a Western Caroline Society. Journal of the Polynesian Society 92:7-30.

Black, P.W., 1985, Ghosts, Gossip, Suicide: Meaning and Action in Tobian Folk Psychology. In Persons and Selves: Explorations in Pacific Ethnopsychologies (ed. by G. White and J. Kirkpatrick). Berkeley: University of California Press.

Borgatta, E., 1968, Some Notes on the History of Tobacco Use. Pp. 3-11 in Smoking, Health and Behavior (ed. by E. Borgatta and R.R. Evans). Chicago: Aldine.

Broughton, P.L., 1972, Pipes and Smoking Customs of the Plains Amerindians. Anthropological Journal of Canada 10:11-25.

Brown, P., 1978, Respiratory Disease in the Western Caroline Islands of Micronesia. Papua New Guinea Medical Journal 21:323-28.

Brown, P., and D.C. Gajdusek, 1978, Acute and Chronic Pulmonary Airway Disease in Pacific Island Micronesia. American Journal of Epidemiology 108:266-73.

Brown, P., D. Sadowsky, and D.C. Gajdusek, 1978, Ventilatory Lung Function Studies in Pacific Island Micronesians. American Journal of Epidemiology 108:259-65.

Browning, R.L.W., 1885, The Cruise of the United States Sloop of War "Vincennes," Circumnavigating 1833-36 (Part 4). The United Service, A Review of Military and Navy Affairs (March):265-78.

Browning, R.L.W., n.d., Notes on the South Sea Islands by R.L. Browning, Lt. USN, on Board the Ship "Vincennes," Circumnavigating in 1835-36. J.H. Aulick Comm.: in Browning Family Papers, Library of Congress

Box 141:405, A-102, 4, 224.

Bryson, R., and C. Dicken, 1981, Smoking Behavior of Scientists. Psychological Reports 49:55-62.

Bunzel, R., 1940, The Role of Alcoholism in Two Central American Cultures. Psychiatry 3:361-87.

Chagnon, N.A., P. LeQuesne, and J.M. Cook, 1971, Yanomamo Hallucinogens: Anthropological, Botanical and Chemical Findings. Current Anthropology 12:72-74.

Damon, A., 1973, Smoking Attitudes and Practices in Seven Preliterate Societies. Pp. 219-30 in Smoking Behavior: Motives and Incentives (ed. by W. Dunn). Washington, D.C.: H.V. Winston and Sons.

Douglas, M., and B. Isherwood, 1979, The World of Goods: An Anthropologist's Perspective. New York: Basic Books.

Dunn, W., 1973, Introduction. Pp. xi-xii in Smoking Behavior: Motives and Incentives (ed. by W. Dunn). Washington, D.C.: H.V. Winston and Sons.

Eckholm, E., 1978, The Deadly Pleasure: Can the World Kick the Tobacco Habit? The Futurist 12:261-69.

Eiser, J.R., 1978, Discrepancy, Dissonance and the "Dissonant" Smoker. International Journal of Addiction 13:1295-305.

Englebrecht, W., 1975, Smoking Technology of Aborigines of the Iroquois Area of New York State. American Anthropologist 77:453-55.

Ethridge, R.F., 1978, Tobacco among the Cherokee. Journal of Cherokee Studies 3:76-86.

Faust, V., and H. Mensen, 1974, Zur Psychologie des Rauchens. Hippokrates 45:210-25.

Feinhandler, S.D., H. Fleming, and J. Monohon, 1979, Pre-Columbian Tobaccos in the Pacific. Economic Botany 33:213-26.

Festinger, L., 1957, A Theory of Cognitive Dissonance. Evanston, Ill.: Row Peterson.

Finau, S., J. Stanhope, I. Prior, 1982, Kava, Alcohol and Tobacco Consumption among Tongans with Urbanization. Social Science and Medicine 16:35-41.

Fritz, 1907, Eine Reise nach Palau, Sonsol, und Tobi. Deutsches Kolonialblatt, p. 666.

Furst, P.T., 1976, Tobacco: Proper Food of the Gods. Pp. 23-32 in Hallucinogens and Culture (by P.T. Furst). San Francisco: Chandler and Sharp.

Gehman, J.M., 1943, Smoke over America. Patterson, N.J.: Beoma Publishing House.

Gillman, A., L. Goodman, and A. Gillman,

1980, Goodman and Gillman's Pharmacological Basis of Therapeutics. New York: MacMillan.

Gladwin, T., 1970, East is a Big Bird: Navigation and Logic on Puluwat Atoll. Cambridge, Mass.: Harvard University Press.

Glick, S.D., J. Canfield, and M.E. Jarvik, 1970, A Technique for Assessing the Strength of a Smoking Preference in Monkeys. Psychological Reports 16:707-10.

Golomb, L., 1978, Brokers of Morality: Thai Ethnic Adaptation in a Rural Malaysian Setting, Honolulu: University of Hawaii Press.

Green, D.E., 1977, Psychological Factors in Smoking. National Institute of Drug Abuse Research Monograph Series 17:149-56.

Grings, W.W., and M.E. Dawson, 1978, Emotions and Bodily Responses: A Psychophysiological Approach. New York: Academic Press.

Haddon, A.C., 1947, Smoking and Tobacco Pipes in New Guinea. Philosophical Transactions of the Royal Society of London, Series B, vol. 232. London: Cambridge University Press for the Royal Society of London.

Haines, A.P., J.D. Imeson, and T.W. Meade, 1980, Psychoneurotic Profiles of Smokers and Non-Smokers. British Medical Journal 280: 6229, p. 1422.

Harrington, J., 1932, Tobacco among the Karuk Indians of California. U.S. Bureau of American Ethnology, Bulletin 94.

Holden, H., 1979[1836], A Narrative of the Shipwreck, Captivity and Sufferings of Horace Holden and Benjamin Nute, Who Were Castaway in the American Ship Mentor on the Palau Islands . . . Fairfield, Wash.: Ye Galleon Press.

Horn, D., 1968, Some Factors in Smoking and Its Cessation. Pp. 12-21 in Smoking, Health and Behavior (ed. by E. Borgatta and R.R. Evans). Chicago: Aldine.

Hudson, R.D., 1979, Central Nervous System Response to Cigarette Smoke Inhalation in the Cat. Archives for International Pharmacodynamic Therapy 273:191-212.

Jarvik, M., 1973, Further Observation on Nicotine as the Reinforcing Agent in Smoking. Pp. 33-49 in Smoking Behavior: Motives and Incentives (ed. by W. Dunn). Washington, D.C.: H.V. Winston and Sons.

Jost, 1888, Feindseliges Verhalten der Bewöhner der Insel Tobi (Lord North Insel). Annalen für Hydrographie und Maritimen Meterologie 16:148.

Kety, S., 1973, The Motivational Factors

in Cigarette Smoking: A Summary. Pp. 287-95 in Smoking Behavior: Motives and Incentives (ed. by W. Dunn). Washington, D.C.: H.V. Winston and Sons.

Kraeft, E., 1885, Aus dem Reisebericht des Kapt. E. Kraft, Führer der Deutschen Barke "Karl." Die Bewöhner der Tobi-Insel. Annalen für Hydrographie und Maritimen Meterologie 13:205-8.

Laufer, B., 1924a, Tobacco and Its Use in Asia. Field Museum of Natural History Leaflet 18. Chicago: Field Museum.

Laufer, B., 1924b, The Introduction of Tobacco into Europe. Field Museum of Natural History Leaflet 19. Chicago: Field Museum.

Laufer, B., 1931, Tobacco in New Guinea: An Epilogue. American Anthropologist 33:138-40

Lepowsky, M., 1982, A Comparison of Alcohol and Betelnut Use on Vanatinai (Sudest Island). Pp. 325-42 in Through a Glass Darkly: Beer and Modernization in Papua New Guinea (ed. by M. Marshall). Boroko, Papua New Guinea: Institute of Applied Social and Economic Research.

Lessa, W.A., 1977, Traditional Uses of the Vascular Plants of Ulithi Atoll with Comparative Notes. Micronesica 13:129-80.

Lévi-Strauss, C., 1973, From Honey to Ashes: Introduction to a Science of Mythology, 2 (trans. by J. and D. Weightman). New York: Harper and Row.

Lewis, A.B., 1924, Use of Tobacco in New Guinea and Neighboring Regions. Field Museum of Natural History Leaflet 17. Chicago: Field Museum.

Lewis, A.B., 1931, Tobacco in New Guinea. American Anthropologist 33:134-38.

Linton, R., 1924, Use of Tobacco among North American Indians. Field Museum of Natural History Leaflet 15. Chicago: Field Museum.

Lowie, R.H., 1919, The Tobacco Society of the Crow Indians. Anthropological Papers of the American Museum of Natural History 21(2):103-99. New York: American Museum of Natural History.

Lyman, H.S., 1902, Recollections of Horace Holden. Oregon Historical Quarterly 3:164-217.

Lyons, W., 1980, Emotion. Cambridge, Eng.: Cambridge University Press.

MacAndrew, C., and R. Edgerton, 1969, Drunken Comportment: A Social Explanation. Chicago: Aldine. McCrae, R.R., A.T. Costa Jr., and R. Bosse, 1978, Anxiety, Extroversion and Smoking. British Journal of Social and Clinical Psychology 17:269-73.

Marshall, M., 1979, Weekend Warriors: Alcohol in a Micronesian Culture. Palo Alto: Mayfield.

Marshall, M., 1981a, Tobacco. Pp. 288-89 in Historical Dictionary of Oceania (ed. by F. King and R. Craig). Westport, Ct.: Greenwood Press.

Marshall, M., 1981b, Tobacco Use and Abuse in Micronesia: A Preliminary Discussion. Journal of Studies on Alcohol 49:885-93.

Marshall, M., and L. Marshall, 1976, Holy and Unholy Spirits: The Effects of Missionization on Alcohol Use in Eastern Micronesia. Journal of Pacific History 11:135-66.

Mason, J.A., 1924, Use of Tobacco in Mexico and South America. Field Museum of Natural History Leaflet 16. Chicago: Field Museum.

Maxwell, J.C., Jr., 1982, The Maxwell Report: Cigarette Sales Rose 2.6% Last Year. Tobacco Reports (March 1982):42-43.

Merrill, E.D., 1930, Tobacco in New Guinea. American Anthropologist 32:101-5.

Moerman, D.E., 1979, Anthropology of Symboic Healing. Current Anthropology 20:59-66.

Moss, R.A., and D.M. Prue, 1982, Research on Nicotine Regulation. Behavior Therapy 13:31-46.

Mougne, C., R. Maclennan, and S. Atsana, 1982, Smoking, Chewing and Drinking in Ban Pong, Northern Thailand. Social Science and Medicine 16:99-106.

Murphree, H.B., 1974, Electroencephalographic Effects of Caffeine, Nicotine, Tobacco Smoking and Alcohol. Modern Problems of Pharmacopsychiatry 8:22-36.

Pathmanathan, I., 1974, Tobacco Smoking Patterns in a Rural Community in Negri Sembilan. Medical Journal of Malaysia 29:34-39.

Polanyi, K., 1959, Anthropology and Economic Theory. Pp. 215-38 in Readings in Anthropology (ed. by M. Fried). Vol. 2. New York: Thomas Y. Crowell.

Robicsek, F., 1978, The Smoking Gods: Tobacco in Maya Art, History and Religion. Norman: University of Oklahoma Press.

Rubin, V., and L. Comitas, 1976, Ganja in Jamaica: The Effects of Marijuana Use. Garden City, N.Y.: Doubleday.

Rublowsky, J., 1974, Tobacco: The

Golden Weed. Pp. 74-90 in The Stoned Age: A History of Drugs in America (by J. Rublowsky). New York: G.P. Putnam and Sons.

Russell, M., and K. Feyerabend, 1978, Cigarette Smoking: A Dependence on High-Nicotine Boli. Drug Metabolism Review 8:29-57

Sahlins, M.D., 1965, On the Sociology of Primitive Exchange. Pp. 139-236 in The Relevance of Models for Social Anthropology (ed. by M. Banton). London: Tavistock.

Sahlins, M.D., 1972, Stone Age Economics. Chicago: Aldine.

Sapolsky, H.M., 1980, The Political Obstacles to the Control of Cigarette Smoking in the United States. Journal of Health Politics, Policy and Law 5:277-90.

Schacter, S., 1973, Nesbitt's Paradox. Pp. 147-55 in Smoking Behavior: Motives and Incentives. Washington, D.C.: H.V. Winston and Sons.

Schacter, S., L. Kazlowski, and B. Silverstein, 1977, The Effects of Urinary pH on Cigarette Smoking. Journal of Experimental Psychology 106:13-19.

Schacter, S., and J. Singer, 1962, Cognitive, Social and Physiological Determinants of Emotional States. Psychological Review 69:379-99.

Schechter, D., and M.J. Rand, 1974, Effects of Acute Deprivation of Smoking on Agression and Hostility. Psychopharmacologia 35:19-28.

Schwimmer, E., 1982, Betelnut: The Beer of the Orokaiva. Pp. 319-23 in Through a Glass Darkly: Beer and Modernization in Papau New Guinea (ed. by M. Marshall). Boroko, Papua New Guinea: Institute of Applied Social and Economic Research.

Selye, H., 1973, Some Introductory Remarks. Pp. 1-3 in Smoking Behavior: Motives and Incentives (ed. by W. Dunn). Washington, D.C.: H.V. Winston and Sons.

Senfft, A., 1901, Flaggenhissung auf der Insel Tobi und dem Helen Riff (Westerkerolinen). Deutsches Kolonialblatt 12:545-46.

Shor, R.E., D.K. Williams, L.K. Cannon, R.M. Latta, and M.B. Shore, 1981, Beliefs of Smokers and Never Smokers about the Motives that Underlie Tobacco Smoking. Addictive Behaviors 6:317-24.

Sobel, R., 1978, They Satisfy: The Cigarette in American Life. Garden City: Doubleday.

Social Systems Analysts, 1978, Field Manual for the Study of Tobacco Related Behavior. Watertown, Mass.: Social Systems Analysts.

Spence, J., 1975, Opium Smoking in Ching China. Pp. 143-73 in Conflict and Control in Late Imperial China (ed. by E. Wakeman, Jr., and C. Grant). Berkeley: University of California Press.

Spiro, M.E., 1952, Ghosts, Ifuluk and Teleological Functionalism. American Anthropologist 54:497-503.

Spohr, U., K. Hoffman, W. Steck, J. Harenberg, E. Walter, N. Hengen, J. Augustin, H. Morl, A. Koch, A. Horsh, and E. Weber, 1979, Evaluation of Smoking-Induced Effects on Sympathetic, Hemodynamic and Metabolic Variables with Respect to Plasma Nicotine and COHB Levels, Atherosclerosis 33:271-83.

Sprecht, J., 1975, Smoking Pipes and Culture Change on Buka Island. Journal of the Polynesian Society 84:356-64.

Springer, J.W., 1981, An Ethnohistorical Study of the Smoking Complex in Eastern North America. Ethnohistory 28:217-35.

Thompson, D., 1939, Notes on the Smoking Pipes of North Queensland and the Northern Territory of Australia. Man 5:39-76.

Thompson, J.E., 1970, Maya History and Religion. Norman: University of Oklahoma Press.

Tindale, N., 1975, Aboriginal Tribes of Australia. Berkeley: University of California

Tobacco Institute, 1982, Tobacco Industry Profile 1982. Washington, D.C.: Tobacco Institute.

Todd, G.F., 1978, Cigarette Consumption

per Adult of Each Sex in Various Countries. Journal of Epidemiology and Community Health 32:289-93.

U.S.D.A. (U.S. Department of Agriculture, Foreign Agricultural Service), 1982, World Tobacco Situation. Foreign Agriculture Circular 9-82.

Van Der Burgh, C., 1979, Smoking Behavior of White, Black, Coloured and Indian South Africans: Some Statistical Data on a Major Public Health Hazard. South African Medical Journal 55:975-78.

Walsen, A., 1898, Aus dem Reisebericht des Kapt. A. Walsen, Führer der Viermastbark "Paul Rickmers." Annalen für Hydropraphie und Maritimen Meterologie 6:209-11.

Ward, G., 1966, American Activities in the Central Pacific 1790-1870. Vol. 5. Ridgewood, N.J.: Gregg Press.

Watson, P., 1983, The Precious Foliage. Sidney: Oceania Press.

Wilbert, D., 1972, Tobacco and Shamanistic Ecstasy among the Warao Indians of Venezuela. Pp. 52-83 in Flesh of the Gods: The Ritual Use of Hallucinogens (ed. by P. Furst). New York: Praeger.

Wissler, C., 1966, Indians of the United States (rev. by L.W. Kluckhohn). Garden City, N.Y.: Doubleday.

Zimmer, G.F.W., 1930, A New Method of Smoking Tobacco in Papua. Man 30:133-34.

Zimmerman, D.H., and D.L. Wieder, 1977, You Can't Help But Get Stoned: Notes on the Social Organization of Marihuana Smoking. Social Problems 25:198-207.