

Chapter 5

Alcohol Control Policies and American Indian Communities

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An economist's first pathway to approach policy about a commodity such as alcohol might be to view the landscape in terms of supply and demand. The demand for alcohol refers to the amount that people want to drink (per unit of time) under any prevailing set of price and availability conditions. The supply of alcohol refers to the amount that becomes available for people to consume under a prevailing price and regulatory regime. Individual choices—people choosing what to do given the incentives around them—ultimately determine the demand and supply conditions. Markets produce incentives in the form of prices—whether sales are legal or

not—to bring demand and supply into balance.

Alcohol control policies such as taxation, restricting access by youth, or outright prohibition change the supply conditions for alcohol. That is, they aim to reduce the amount that becomes available for people to consume at whatever price level. Alternatively, they may be seen to raise the cost to consumers for obtaining any given quantity (figure 1). The figure shows that a control policy such as a tax on alcohol would raise the cost to consumers and therefore reduce consumption.

Although this simple supply-demand model has a certain theoretic-

ALCOHOL USE AMONG AMERICAN INDIANS AND ALASKA NATIVES

Multiple Perspectives on a Complex Problem

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has investigated the relationship between individual incentives and alcohol consumption or behavior. Much of this research assumes the basic link between the consumer cost of alcohol and alcohol consumption modeled in figure 1. Health outcomes follow from an assumed simple relationship between aggregate consumption and alcohol abuse.¹

Janes and Gruenewald (1991) divided alcohol control mechanisms into two categories: economic availability, or market regulation with taxes, price controls, and advertising restrictions, and physical availability, or restrictions on legal access. In this section, I first review studies that measure the response of drinking behavior to potential market regulation and then review studies that measure effects of policies that restrict physical access to alcohol.

EFFECTS OF MARKET REGULATION

Much of the empirical research that estimates effects of alcohol price on consumption compares alcohol price variations with either cross-section or time-series data on aggregate consumption rates in North America, Australia, and northern European countries. Many of these studies estimate separate relationships for beer, wine, and spirits. The results differ widely depending on the data source and specification (Osterberg 1993). Economists generally use the price elasticity of demand to measure the sensitivity of consumption to price. The elasticity of demand is defined as the percentage change in the amount consumers want to buy divided

by the percentage change in the price. A negative elasticity indicates that consumers want to buy less as price rises. The larger the negative number, the more sensitive is consumption to the price. Most studies find aggregate price elasticities of -0.2 to -0.4 for beer, with somewhat larger negative numbers for wine and spirits (Ornstein and Levy 1983; Ornstein and Hanssens 1985; Selvanathan 1991). Researchers generally find wine consumption the most sensitive to prices.

More recent studies have been able to obtain a substantial improvement in statistical precision, as well as allow better observation of substitution patterns among different alcoholic beverages, by using individual consumption data. Studies of individual consumption also allow researchers to account explicitly for those who do not drink any alcohol. Gao and colleagues (1995) estimated price elasticities from survey data ranging from -0.2 for beer and -0.3 for spirits to -0.7 for wine. Yen (1995) found that an alcohol price index had no significant effect on whether or not U.S. Department of Agriculture 1987–88 National Food Consumption Survey respondents consumed any alcohol during the survey week. However, the price elasticity of total alcohol consumption for those who did drink was -0.34 .

¹ As Saffer (1995) noted, "The public health issue is alcohol abuse rather than alcohol consumption. However, many researchers assume that in an alcohol consumption distribution function there is a proportionate relationship between the mean and the upper tail. If this assumption is true, then per capita consumption is a good proxy for alcohol abuse." (p. 83)

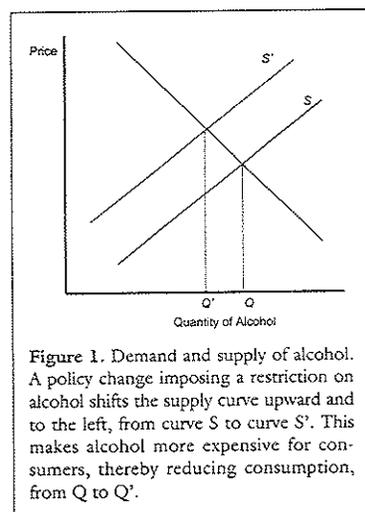


Figure 1. Demand and supply of alcohol. A policy change imposing a restriction on alcohol shifts the supply curve upward and to the left, from curve S to curve S' . This makes alcohol more expensive for consumers, thereby reducing consumption, from Q to Q' .

cal appeal, I would be the first to caution that it does not adequately address the complexity of alcohol policy concerns for any group of people. However, it does illustrate two important propositions that serve as starting points for this chapter. First, policy can make alcohol illegal, but true prohibition is an elusive goal. Anyone with the initiative, time, and money can obtain (or brew) alcohol; policy can only add to the cost—in terms of time and money—of obtaining it. (Note that the risks of fines and imprisonment represent contingent time and money losses.) Second, figure 1 shows that the degree to which control of supply affects consumption depends on the demand relationship. That is, the effectiveness of alcohol policy depends ultimately on consumer behavior.

There is a long-standing debate over the degree to which control of alcohol

supply is effective or makes sense as a policy direction for prevention of alcohol and drug abuse; see Peele (1987) and Room (1987) for summaries of the arguments for and against control of supply as a policy for prevention of alcohol abuse. The arguments on both sides of the control-of-supply debate are probably familiar to most alcohol researchers. However, it may be useful to review empirical studies relevant to prevention policy for American Indian populations. The remainder of the chapter begins with a brief review of studies measuring effects of price and availability on alcohol consumption among North American and European populations, followed by a review of studies of alcohol control among American Indians and other cultural groups. Much of this research generally challenges the idea that alcohol control is likely to be an effective prevention strategy for American Indians.

I propose a more complete model of drinking behavior that may reconcile the conflicting findings of the prevention literature and help frame questions of alcohol policy. This model generates a set of testable hypotheses about the effectiveness of alcohol control among American Indians. In the concluding section of this chapter, I discuss the implications for research on alcohol policy for American Indians.

EMPIRICAL RESEARCH ON EFFECTS OF PRICE AND AVAILABILITY

A large and growing body of research, undertaken primarily by economists,

- People do not learn how to drink responsibly; prohibition prevents constructive socialization involving responsible alcohol use (Heath 1987; Peele 1987).
- Prohibition encourages individuals to engage in risky behavior to obtain alcohol (May 1989).
- Abusers will simply shift to another, perhaps more toxic, mind-altering drug (Peele 1987; Oetting and Beauvais 1989; May 1992).
- Prohibition encourages social norms favoring problem drinking (Brody 1971; Peele 1987).
- Social availability, not physical availability, is what influences consumption (Smart 1980).
- It is inappropriate to transfer models from northern European cultures to other cultures (Peele 1987).
- Prohibition takes the focus off what does work—education and positive programs working on alcohol demand (Heath 1992).

In addition to practical, theoretical, and clinical evidence against the effectiveness of the strictest forms of alcohol control, a growing cross-cultural literature has demonstrated that prohibition does not solve social and health problems stemming from alcohol misuse. Heath (1987) reviewed a large number of studies of alcohol use, noting that although drunkenness is common across cultures, problem drinking is rare. He concluded that drinking in most societies is a method of relieving stress and promoting sociability and carries embedded social norms and values. Social rules about who can drink under what

terms are typically strong, and they serve to regulate the effects of drinking on individuals.

The United States' grand experiment with prohibition provides an empirical test for the effect of strict alcohol control on drinking and health outcomes. Prohibition was in effect throughout the Nation for nearly 14 years, from January 1920—1 year after the 18th Amendment to the Constitution was ratified—until December 1933, when it was repealed by the 21st Amendment. All indicators of alcohol consumption fell dramatically during the first years of Prohibition. By the mid-1920s, however, estimated consumption had returned to more than 70 percent of its previous level. Alcoholism death rates actually exceeded those of pre-Prohibition years, due to consumption of poor-quality alcohol (Warburton 1932; Miron and Zwiebel 1991). Miron and Zwiebel concluded that the deterrent effect of Prohibition was weak, even though it raised the price of alcohol at least threefold.

STUDIES OF ALCOHOL CONTROL AMONG AMERICAN INDIAN GROUPS

One of the problems with prohibition is that while it deters drinking as a whole by raising the cost substantially, it also exacerbates social issues concerning drinking and deviance. Although researchers frequently note a constructive role for alcohol in creating culture and establishing behavioral norms in many societies, problem drinking is tied to deviant

behavior.⁵ Unlike Europeans and many other peoples around the world, American Indians and some other indigenous groups had little or no history of a constructive cultural role for alcohol. Also, the nature of colonial conquest and rule provided (and still provides) conditions of frustration and powerlessness that instigate problem drinking as an act of rebellion and escape from both colonial and traditional authority (Lurie 1971; Klausner and Foulks 1982; Brady 1990; Keaulana and Whitney 1990; Bachman 1992). One could argue that this historical environment makes strict alcohol control even less likely to succeed among American Indian groups. A number of case studies bear out this argument.

A survey of Indians both on and off reservations from a variety of tribes showed that residents of dry reservations generally drink larger quantities and drink more frequently than urban Indians with easy access to alcohol (Weibel-Orlando 1990). May (1976) reviewed alcoholism and violent deaths on a number of Indian reservations for the period 1959–74. He found that both alcoholism death rates and violent death rates were lower on reservations that had repealed prohibition after 1953 compared with the ones remaining dry. When Landen (1996) compared deaths on the same reservations for the period 1979–90, he found that unintended injury death rates had declined for both groups, but that suicide rates had increased on wet reservations. On balance, death rates were now slightly higher on the wet

reservations, but the difference was not statistically significant.

Other studies have reported adverse effects of alcohol control with particular Native groups. Levy and Kunitz (1971) found higher liver cirrhosis rates among the Hopi, who condemn drinking, than among the Navajo, who are more tolerant about its use. Berman and Leask (1994) compared violent death rates over the period 1980–90 for Alaska Natives living in urban areas and small communities. Few of the small communities have alcohol outlets, and most are inaccessible by road from alcohol sales outlets. Native residents of towns—where alcohol is legal and easily accessible—had much lower death rates due to accidents, suicide, and homicide than residents of small predominantly Native communities.

A major methodological problem with all the cross-sectional studies mentioned above is that they confound the outcomes of alcohol control policies with intercultural variation in attitudes about alcohol, which influence policies as well as drinking practices. For example, tribes and communities more tolerant of alcohol use are both less likely to suffer from problem drinking as a form of deviant behavior and less likely to try to control alcohol supply. Communities with more serious alcohol problems may be more likely

⁵ Douglas (1987), summarizing cross-cultural literature on alcohol consumption, concluded that problem drinking as a concept differed across cultures. It was not necessarily related to the level of alcohol consumption, but rather to a pattern of drinking outside prevailing social norms.

to try to regulate alcohol.⁶ The research question should not be whether communities with controls appear to do better than those without controls, but rather whether imposing controls in a given community reduces problem drinking and its effects.

The few studies attempting to perform such a comparison have produced mixed results. Smart (1979) studied three Native communities in the Canadian Arctic that implemented controls on alcohol in 1976, finding no effect when compared with neighboring communities not instituting controls. However, O'Neill (1985) reported that prohibition in one of these communities was associated with a number of positive social changes, as well as a decrease in abuse of other drugs. May (1991) described a "natural experiment" in which the fetal alcohol syndrome rate dropped in a "small Indian community" from 14 per 1,000 children to zero for 5 years when royalty checks stopped being distributed to individual families.

Alaska's State local option law, implemented in 1981, provides Alaska Native communities the opportunity to select from a number of alcohol control options by holding a public vote. Landen and colleagues (1997) found that the total violent death rate between 1990 and 1993 was 1.6 times as high for Alaska Natives living in communities with legal alcohol importation as for residents of dry communities. However, communities with attitudes more strongly discouraging alcohol abuse might also have been more likely to select strict control options, exaggerating the apparent

statistical effect of prohibition. Chiu and colleagues (1997) found that alcohol-related outpatient clinic visits declined sharply in an isolated Alaska Native community when alcohol prohibition was in effect, although residents may have gone elsewhere to drink and be injured. Berman and Hull (1996) compared accidents, suicides, and homicides under various local options for the 97 villages that passed restrictions, to death rates in the same communities during periods when there were no controls. The results, summarized in table 1, show that Alaska Native violent death rates were generally lower during periods when alcohol sales, importation, or possession were restricted than during periods with no controls. For the group of 84 communities that banned sale and importation, annual homicide rates declined by 71 per 100,000 and accident death rates dropped by 66 per 100,000 when alcohol controls were in effect.

Findings for the Alaska local option law may not apply to other American Indian communities for two reasons. First, Alaska communities are much more isolated (most are not accessible by road), making prohibition much easier to enforce than in many Indian

⁶ Levy et al. (1987) found that suicide and homicide rates were higher in acculturated (pro-acculturation) Hopi villages than in traditional (anti-acculturation) villages. Cirrhosis, but not alcoholism, was also higher among residents of acculturated villages, and higher still in off-reservation communities. They concluded that chronic risky drinkers were more likely to be expelled to off-reservation communities from traditional villages. Traditional communities were also more likely to adopt strict alcohol control.

reservations in the contiguous States. Second, Alaska communities must circulate a petition and hold a referendum to exercise the local option to control alcohol, whereas reservation communities elsewhere must elect to legalize its use. Holding an election to ban alcohol may be viewed by residents as a step they may take to establish community norms about sobriety,

an issue that will be discussed later in this chapter.

It is important to note that the studies of Indian populations reviewed in this section all evaluate the outcomes of very strict forms of alcohol control. Although the results of research on the effects of prohibition are mixed, the null hypothesis would argue that market regulation and

Table 1. Comparison of Violent Death Rates Under Different Alcohol Control Regimes for Alaska Natives Living in Local Option Communities, 1980-93 (Annual Rates per 100,000 Persons).

| Local Option | Number of Communities | Type of Death | Mean Death Rate Without Control | Mean Death Rate With Control | t Statistic for Difference |
|-------------------------------|-----------------------|---------------|---------------------------------|------------------------------|----------------------------|
| Limited package store license | 3 | Accidents | 217.2 | 46.1 | 2.41 |
| | | Suicides | 36.9 | 25.1 | 0.55 |
| | | Homicides | 38.4 | 26.0 | 0.58 |
| | | Total | 292.5 | 97.1 | 1.76 |
| Ban sale | 7 | Accidents | 299.4 | 212.2 | 0.88 |
| | | Suicides | 168.2 | 57.2 | 1.87 |
| | | Homicides | 73.7 | 34.0 | 0.65 |
| | | Total | 541.4 | 303.5 | 1.55 |
| Ban sale and importation | 84 | Accidents | 222.1 | 156.5 | 1.86* |
| | | Suicides | 94.5 | 86.7 | 0.32 |
| | | Homicides | 98.9 | 27.4 | 2.93*** |
| | | Total | 415.5 | 270.6 | 2.50** |
| Ban possession | 23 | Accidents | 103.3 | 94.7 | 0.29 |
| | | Suicides | 49.1 | 86.5 | -1.36 |
| | | Homicides | 33.5 | 17.9 | 0.94 |
| | | Total | 185.9 | 199.1 | -0.26 |
| Any alcohol control | 97 | Accidents | 226.8 | 152.2 | 2.41** |
| | | Suicides | 95.4 | 85.6 | 0.45 |
| | | Homicides | 91.7 | 26.0 | 3.07*** |
| | | Total | 413.9 | 263.8 | 2.93*** |

*Statistically significant at the 10 percent level.

**Statistically significant at the 5 percent level.

***Statistically significant at the 1 percent level.

Source: Berman and Hull 1996.

more moderate restrictions on physical availability would work as effectively with Indians as they do with other populations. One could suppose that less draconian measures might be less likely to promote a deviant backlash. Unfortunately, no studies evaluating the outcomes of moderate price and availability measures have been performed for American Indian populations.

May (1996) reviewed studies of alcohol use and noted that drinking prevalence varies widely by tribe, although it is generally lower than in the U.S. general population. His analysis cautions us that findings from studies of one group may not apply to other groups with different historical and cultural influences. Empirical research on alcohol policy would benefit from a more complex approach that goes beyond modeling total alcohol consumption and addresses alcohol use as individual behavior in a social context, as spelled out in the next section.

A MORE COMPLETE MODEL OF ALCOHOL CONTROL

Much of the empirical literature on alcohol control treats alcohol consumption as the commodity of interest. Yet the harmful effects of alcohol stem not from alcohol consumption generically but rather from activities involving problem drinking. Problem drinking might include, for example, frequent intoxication leading to alcohol dependency; binge drinking (five or more drinks per occasion); and risky drinking—drinking while preg-

nant or drinking and driving. The quantity of alcohol consumed may not measure problem drinking accurately. Alcohol consumption is an input to problem drinking; a necessary but not sufficient condition. It is not the outcome of concern. Changing the way that alcohol is used matters as much for prevention of its harmful effects as whether it is consumed at all.⁷

One approach that has been developed by economists to address a particular aspect of problem drinking—alcohol dependence—is the rational addiction hypothesis (Becker and Murphy 1988). Under this hypothesis, the “rational addict” maximizes the long-term utility (satisfaction) of consuming an addictive substance, given expected prices and preferences. The main empirical proposition derived from the hypothesis is that consumption over time responds to anticipated future as well as current and past consumption and prices. Initial empirical tests of the hypothesis for cigarette smoking gave promising results (Chaloupka 1991, 1992; Becker et al. 1994).

Waters and Sloan (1995) and Grossman and colleagues (Grossman 1993; Grossman et al. 1998) tested the rational addiction hypothesis for

⁷ *The health and safety outcomes caused by problem drinking are, arguably, the issues of greatest concern. These outcomes depend on behavior while intoxicated, health care delivery systems, and community responses to problem drinking, not just on the level or frequency of problem drinking. The approach suggested here is consistent with a “harm reduction” strategy for drug abuse intervention. Unlike most other drugs, however, alcohol is freely and legally available almost everywhere in North America.*

alcohol consumption. Grossman (1993) found that data on cirrhosis mortality rates were consistent with the hypothesis, but that aggregate alcohol consumption data did not support it. Waters and Sloan found more support for the rational addiction hypothesis using individual consumption data from the 1983 National Health Interview Survey. Grossman and colleagues (1998) found statistical support for addictive behavior in panel data on annual drinks per capita, although their results implied implausible parameters for drinkers’ preferences.⁸

No studies have yet attempted to test the rational addiction hypothesis for American Indian populations. The main challenge in applying it comes with study design: tests of the hypothesis require the researcher to observe the degree to which current consumption patterns might respond in advance to expected future changes in alcohol control policies.⁹ A more serious limitation of the rational addiction hypothesis for addressing alcohol policy, however, is that it addresses only one type of problem drinking: alcohol dependence.¹⁰ In addition, its focus—like nearly all the economic literature—is on individual choice over patterns of alcohol consumption. It places in the background social, cultural, and community forces that contribute to problem drinking behavior. One of the central issues with alcohol policy is how to encourage responsible drinking instead of problem drinking. For these reasons, research on alcohol policy for American Indians could benefit from moving from modeling alcohol consumption to modeling drinking behavior directly.

PROBLEM DRINKING VERSUS RESPONSIBLE DRINKING

This modeling approach treats responsible drinking (often called “social” drinking) and problem drinking as separate activities that are both produced and consumed by the drinker to generate some type of satisfaction. Individuals convert inputs of alcohol, time, and (usually) the companionship of drinking partners into a valued experience (table 2); the model proposed here is an application of the household production model first articulated by Becker (1965). An environmental change that makes problem drinking less attractive is likely to encourage responsible drinking, and vice versa. In the language of economics, the two forms of drinking are substitutes, especially for youth, who are learning drinking styles. Individuals who are alcohol dependent, how-

⁸ *In particular, the coefficients on past and future alcohol consumption in Grossman et al. (1998) imply a large negative discount rate: e.g., that drinkers value future consumption much more than current consumption.*

⁹ *The Waters and Sloan (1995) study illustrates the difficulties with empirical applications of the rational addiction hypothesis. Testing the hypothesis requires future consumption levels, but their survey interview data contained only current and past consumption. Lacking a panel design that would allow respondents to provide the “future” data point, the researchers instead projected future consumption based on an estimated relationship between prior and current drinking.*

¹⁰ *The inability of the rational addiction hypothesis to model other forms of alcohol consumption probably explains why alcohol studies to date have found only weak empirical support.*

ever, may not have a choice about how to drink. Consequently, the model is relevant to policy for primary prevention, but not necessarily for treatment of alcohol-related problems.

Table 2 shows that responsible drinking and problem drinking involve the same inputs but produce different outputs. While the release of stress facilitated by responsible alcohol consumption produces generally constructive socialization effects, intoxication from problem drinking is often associated with antisocial or deviant behavior and involves a high risk to health and safety. The individual chooses the amounts of problem drinking, responsible drinking, and non-alcohol-related activities that provide the greatest satisfaction, constrained by available time and money (and possibly by the availability of drinking partners).

The model suggests that the choice of drinking activities depends on four household economic factors: price of alcohol (the money cost of obtaining alcohol), ease of access to alcohol (affecting the time cost of obtaining alcohol), income (ability to pay for alcohol), and amount of free time for

obtaining alcohol and engaging in drinking activities. How much one chooses to engage in either responsible drinking or problem drinking, as well as the choice of one type over the other, depends on a number of other factors, such as individual psychological (and possibly inherited) factors, environmental stressors, social factors (behavioral norms of family, friends, and community), and cultural and spiritual values.

Responsible drinking appears to have a number of advantages compared with problem drinking. These advantages include lower time cost, lower money cost (less alcohol needed), no lingering physiological effects (hangovers), lower risk of injury to self or others, greater sociability benefits, and (possibly) greater conformity with Native cultural values. Of course, the advantages of responsible drinking for any particular group strongly depend on prevailing social and cultural norms regarding drinking styles and behavior under the influence. Availability of alcohol and a perceived obligation to drink at social gatherings have been shown to have a strong influence on the prevalence of

drinking and the amount consumed, and drinking for social motives—to be sociable or to celebrate with others—increased the frequency of heavy drinking (Abbey et al. 1993). Indian youths with strong attachments to families that value culture and schooling and discourage alcohol abuse are less likely to abuse alcohol, marijuana, or inhalants, regardless of levels of self-esteem, depression, and anxiety (Oetting et al. 1988; Oetting and Beauvais 1989).

HYPOTHESES GENERATED BY THE MODEL

By specifying a more complex, but still enormously simplified view of reality, the model outlined in the preceding section supports the views of May (1992) and others that alcohol abuse is a complex problem without a simple solution. The usefulness of a theoretical model, however, depends on whether it generates testable hypotheses to inform public policy—in this case policy for prevention of alcohol-related health and social problems among American Indians. In this section, I first discuss hypotheses that the model suggests about economic factors—those related to time and money. I then address hypotheses about environmental, social, and cultural factors.

HYPOTHESES ABOUT TIME AND MONEY

There are two hypotheses about economic factors.

H1: Taxation (or higher prices) reduces problem drinking more than it reduces responsible drinking. A tax increase raises the price of alcohol, dis-

couraging both responsible drinking and problem drinking. The model suggests, however, that because problem drinking usually involves consumption of larger amounts of alcohol, it could be more sensitive to alcohol costs than responsible drinking. As noted above, many empirical studies on the general North American population support this hypothesis. Tests for American Indian populations would be useful and timely.

H2: Stiff penalties for alcohol-impaired driving reduce problem drinking. These penalties raise the relative cost of problem drinking. Empirical studies of the U.S. population appear to support this hypothesis. Does it apply to Native populations?

HYPOTHESES ABOUT AVAILABILITY

If restrictions on availability merely increase the time and money cost of obtaining alcohol, then the effects of such restrictions are likely to parallel those of an increase in the price. The model suggests, however, that policies limiting access to alcohol may have more complex effects. One needs to look at the details of the measure, and how it applies to the specific environment. Here are some examples.

H3: Prohibition of alcohol sale but allowing importation is ineffective in controlling problem drinking and may make problems worse. This is the status—legal or de facto—on many reservations in the United States and Canada and in many Alaska Native villages. The model predicts likely problems with this policy. Importation requires either personal travel or freight shipment to bring

Table 2. Inputs and Outputs of Drinking Activities.

| | Responsible Drinking | Problem Drinking |
|---------|---|---|
| Inputs | Alcohol Free time Other drinkers | Alcohol Free time Other drinkers |
| Outputs | "Relaxation" Socialization Few health effects | Intoxication Rebellion, acting out High risk to health and safety |

alcohol and consumers together. The total cost of an alcohol purchase varies with the number of purchases, but little with the quantity purchased at a time, raising the cost of responsible drinking relative to problem drinking. (See Klausner and Foulks [1982] for a description of the problems generated by a ban on sale with legal importation in one Alaska community.)

H4: Prohibition of sale and importation, where it can be enforced, reduces problem drinking in the community. This is the local option most favored by Alaska Native villages. It is easy to import small quantities of alcohol without detection but more difficult to bring in large quantities. Prohibition of importation encourages individuals wishing to engage in problem drinking to go elsewhere—to the bordertown or its equivalent or to urban areas. This may improve the situation in the Native community—by removing a harmful social influence—at the same time as it places the problem drinker in an environment where more health services may be available. It may also, however, encourage individuals to engage in risky behavior to obtain alcohol where it is legal, such as traveling in bad weather or driving back home drunk.

H5: Prohibition of alcohol possession is no more effective, and may be less effective, than an importation ban. Strict tribal control of alcohol possession makes alcohol control easier to enforce. However, if the penalty for possession of one bottle of beer is as severe as that for four cases of vodka, the only drinking that takes place is likely to be problem drinking.

H6: Tribally operated or licensed alcohol sales under policies that promote responsible drinking reduce problem drinking (May 1992). If strict alcohol control raises the risk of social drinking, in the form of either legal or moral sanctions, then it may increase the prevalence of problem drinking.¹¹ The model suggests that tribal control schemes that make alcohol available in small quantities at a time encourage people to shift from problem drinking to responsible drinking.

HYPOTHESES ABOUT ECONOMIC AND SOCIAL POLICY

There are three hypotheses about economic and social policy.

H7: Reducing physical risks to heavy drinkers increases problem drinking. Beauchamp (1980) and May (1992) recommended policies to reduce risk of physical harm to intoxicated persons. While this may be a sound strategy from an overall public health viewpoint, the model suggests that making problem drinking safer removes a deterrent to intoxication that could in fact change people's drinking activities.

H8: Large amounts of unearned income increase problem drinking. Lack of money and time—time free of responsibility—limit all drinking activities but especially constrain problem drinking. The model suggests that situations that provide money without responsibility—such as cash settle-

¹¹ Of course, if problem drinking arises from the inability of drinkers to learn responsible drinking habits, then the negative effect of alcohol control may increase (see Peele 1987).

ments or large transfer payments—may encourage problem drinking.

H9: Jobs reduce problem drinking. Employment takes sobriety, promotes individual responsibility, and uses up free time. Increasing employment should reduce problem drinking, even though the increase in income may lead to greater overall consumption of alcohol. The positive effect of employment in encouraging responsible drinking especially applies to youth.¹²

HYPOTHESES INVOLVING SOCIAL AND CULTURAL FACTORS

Prevailing social and cultural norms and issues of legitimate power and authority complicate the effects of alcohol control efforts. Simple control-of-supply models that work well to explain preventive effects of alcohol control policies on the general North American or European population may not apply to minority populations such as American Indian groups with distinct cultural values. However, the model outlined in the previous section suggests some additional hypotheses about interactions between alcohol control and social and cultural factors affecting drinking behavior.¹³ Here are some ideas taken from the vast literature on alcohol use among American Indians.

H10: Communities with few responsible drinkers will accomplish little by trying to keep alcohol legal but regulate its use. This hypothesis will undoubtedly have its critics. However, May (1994, 1996) noted that a larger fraction of American Indian adults in some tribes do not drink at all compared with the general North American population, and that rates of

problem drinking vary widely among tribes. One could argue that the presence of a large fraction of mature adults choosing not to drink at all suggests that the community lacks social and cultural norms promoting "healthy" drinking patterns.

H11. Alcohol control perceived as imposed without legitimate authority will not work and may increase problem drinking. In this instance, problem drinking may increase its status as an act of defiance. The increased satisfaction gained from drinking to "act out" may more than offset the effect of prohibition to raise the cost of alcohol. Alcohol abuse may increase even as responsible drinking declines.

H12. Any policy adopted with community consensus works better than one adopted with community division. This hypothesis is a corollary to the last one; social pressure for sobriety is stronger when the community agrees on objectives and strategy. Everyone seems to agree that policy imposed on a divided community works less well than one developed by community consensus (see Beauvais 1992; Heath 1992; May 1992). Perhaps it is too obvious a hypothesis to test. However, rigorous empirical studies that

¹² Beauvais (1992) noted the critical nature of the transition from adolescence, where Indians drink more heavily than other U.S. youth, to adulthood, where Indian drinking patterns more closely resemble those of other groups.

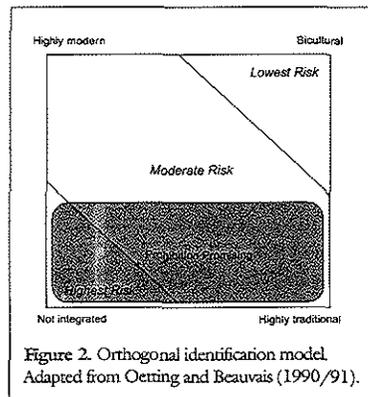
¹³ Another area of policy, which I ignore here, aims to influence drinking styles—social availability (Smart 1980). May (1992) enumerated policies that try to shape drinking practices toward responsible drinking.

compare measures of the degree of community consensus about whatever alcohol policy is adopted to health outcomes under that policy would send a clear signal for design of prevention efforts.

ALCOHOL CONTROL IN COMMUNITY COHESION AND EMPOWERMENT

May and colleagues (May et al. 1993b; May 1995) have argued that the most effective prevention strategies are community mobilization efforts, designed from within the community. If the ability of communities to mobilize against alcohol abuse depends on consensus, then one might ask how alcohol control may contribute to developing community cohesion and empowerment. One often hears the phrase “caught between two worlds” to describe the difficulty American Indians—and especially Indian youth—have in meeting the expectations of elders and “traditionalists” in their own communities, as well as adapting to the dominant non-Indian culture. Navarro et al. (1997) reported that most students in a program to prevent alcohol and other drug abuse among American Indian youth believed that alcohol abuse and depression in Indian communities resulted from “the difficulty of bridging two worlds” rather than from ignorance or moral weakness.

Oetting and Beauvais (1990–91) discussed socialization patterns for Indian adolescents. They argue that the issue is not one of choosing which of two (or more) cultures to join, but rather a problem of integration into



either or both. Figure 2 illustrates their orthogonal identification model. The horizontal scale represents the degree to which the individual identifies with traditional values, and the vertical scale represents the degree of identification with modern values. Oetting and Beauvais suggested that youth who have the highest risk of drug use are those who have difficulty identifying with either traditional or modern value systems. Bicultural individuals—those who identify with both modern and traditional values—have the least risk.

One might characterize the role communities play in the orthogonal identification model as providing integration pathways for individuals. Elements of these pathways include opportunities for youth to succeed in traditional and modern roles, leadership role models and mentors, and opportunities that facilitate or discourage identification. While communities and the individuals that make up the communities may face a variety of environmental insults, those com-

munities that offer a diversity of pathways for youth—bicultural or multicultural communities—are likely to prove more resilient. Individuals in more modern communities are also less likely to respond positively to prohibition, since drinking plays an important role in social integration in mainstream North American culture (Heath 1987).

Although Oetting and Beauvais developed the orthogonal identification model to explain socialization patterns of Indian adolescents, the same principles apply to integration of adults into the community. Several studies have found that a high percentage of adult American Indian drinkers in initial surveys had stopped drinking on their own by the time they were resurveyed about two decades later (Leung et al. 1993; Kunitz and Levy 1994). May (1996) described this phenomenon as “maturing out.” Although most American Indian women do not drink at all, a small minority drink heavily and have a number of children with alcohol-related birth defects (May et al. 1993a).

How does alcohol policy facilitate or inhibit the process of maturing out, if it has any effect at all? A particularly important research question would be to determine factors that promote earlier maturing out for young women who might otherwise bear alcohol-affected children. Exploring this question would require undertaking longitudinal studies that obtain more information about the timing of drinking and abstinence episodes and sort out gender differences in the maturing-out process. Oetting and Beauvais’ work suggests that commu-

nity cohesion and empowerment again could play a strong role. Using their framework as a guide, the model of drinking behavior outlined above suggests the following additional hypotheses about the role of alcohol in developing community cohesion and empowerment.

H13: Prohibition is more effective in more traditional Native communities. Social drinking has not been present historically as a constructive social force; alcohol consumption has usually been present only in its deviant form. The growing indigenous sobriety movement argues that drunkenness debases the individual’s Native values and heritage. Alcohol control by the traditional community has a double effect: it reinforces community values and raises the cost of alcohol.¹⁴

H14: Alcohol prohibition is likely to fail in more modern communities. Success in modern society, such as in college or on a job, requires individual responsibility. Community control of alcohol makes learning to drink responsibly—one area of individual responsibility in modern society—more difficult.

H15: Support of churches for alcohol policies is not a good predictor of their likely success. Klausner and Foulks (1982) noted that church membership was a good predictor of an individual’s stand on alcohol. However, as a typically modern entity, church influence is likely to divide the community

¹⁴ Lee (1993) studied crime rates and patterns of social control for eight dry Yup’ik villages in Alaska. Villages affiliated with the Yup’ik Nation—a traditional sovereignty movement—had lower rates of violent crime and alcohol-related arrests than neighboring villages.

unless, as is the case in some southwestern tribes, it enjoys near universal acceptance as a public authority.

H16: *Alcohol statutes that the community wants enforced but are rarely enforced may be worse than useless.* Mail (1992, p. 107) stated "Prohibition, in those communities that continue struggling to maintain and enforce it, is an artifact of law. It is not a reality within Indian communities." Laws that are not enforced encourage disrespect for authority and probably contribute to deviant behavior. Empirical studies evaluating varying enforcement policies and effects would be a useful contribution.

It bears repeating that in testing these hypotheses, social and cultural variations among tribes, or even across communities in the same tribal area, limit the usefulness of simple cross-sectional studies. Looking across tribes, researchers may be observing cultural differences rather than effects of differing alcohol control policies. Further complicating research design is the likelihood that communities with higher rates of alcohol-related problems will adopt stronger control measures. Studies should be designed carefully to try to sort out these confounding influences, or else researchers should follow individual communities through time.

CONCLUSIONS: DIRECTIONS FOR RESEARCH

Despite social science research focusing on the social role of alcohol, most research on alcohol misuse remains focused on individuals at risk. In this chapter I have outlined a model of

problem drinking and responsible drinking that suggests that alcohol policy—which acts to restrict an input to both types of drinking—provides different incentives for individual drinking behavior in different social and cultural settings. Research on alcohol policy for American Indian populations should move beyond thinking only about individuals or only about communities to thinking about the interaction of the two.

I have also outlined a series of hypotheses suggested by the model that can in principle be tested. Although some of these hypotheses may contradict others, they may still provide direction for empirical research on alcohol policy. Some of the hypotheses may seem trivial. But if they are so self-evident that they do not need verification, why are they not part of a comprehensive alcohol policy advocated by May (1992) and others?

The discussion in this chapter suggests that policy affecting American Indians about non-alcohol issues may tend to counteract the effects of alcohol control policies, or unintended consequences of alcohol policy may affect sociocultural factors that influence drinking patterns and backfire. In the final analysis, alcohol control is only one of many opportunities to empower communities. But alcohol control can contribute to community empowerment. How one controls alcohol is likely to be as important, if not more important, than the type of policy implemented.¹⁵ This leads to the final hypothesis.

¹⁵ *This is an element in the dialog between Pele (1987) and Room (1987).*

H17: *Anything that empowers the community reduces problem drinking and its effects; H17a: Anything that disempowers communities increases problem drinking and its effects.*¹⁶ This is, in fact, a testable hypothesis. If empirical studies support it, then we may not need to worry about alcohol policy. Researchers might focus instead on opportunities to empower communities, leaving matters of alcohol policy to communities themselves.

¹⁶ *May and Moran (1995) suggested that community empowerment should be an important goal for alcohol abuse prevention policies among Native Americans. Community empowerment is used here to mean effective self-government at the local (community) level. Cornell and colleagues (1998) reviewed the literature that has found a positive correlation between the strength of tribal self-government in the United States and indicators of well-being.*

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