

Stephen J. Kunitz

Department of Community and Preventive Medicine
University of Rochester School of Medicine

Life-Course Observations of Alcohol Use among Navajo Indians:

Natural History or Careers?

In this article, I describe changes in patterns of alcohol use and abuse among Navajo Indians from the mid-1960s to the late 1990s. The prevalence of alcohol dependence continues to be higher than in the general U.S. population, but remission is also common, as it was in the 1960s and previously. Men have substantially higher rates of alcohol dependence than women. The former engage in heavy drinking largely in response to the heavy drinking of those around them. The latter drink excessively largely as a response to psychiatric disorders, depression, and abuse by a partner or husband. As increasing numbers of people have moved to reservation and border towns, a youth culture has developed in which alcohol use is initiated by teenagers with their peers rather than, as in the past, with older kinsmen. Alcohol use has thus been freed from the constraints imposed by both isolation and family obligations.

Keywords: [Navajo Indians, alcoholism, conduct disorder, prevalence, remission]

The conventional wisdom with regard to alcohol use among Native Americans is that it is so widespread and so devastating to so many that it must be a condition with a life of its own; one that, having begun, leads inevitably to disease, disaster, and death. It unfolds from within and progresses inexorably. It has, in other words, a natural history. The statistics, well known to anyone with even a nodding acquaintance with the problem, certainly support the conventional wisdom that alcohol has blighted the lives of Indian individuals, their families, and their communities (Kunitz 2004).

There is, however, great diversity among and within Indian populations and communities that should encourage a more nuanced, as well as a more optimistic, view. In this article, I do not consider intertribal differences, significant although they are (Kunitz 1994, 2004; Levy and Kunitz 1971). I focus instead on intratribal diversity and temporal trends, drawing primarily on work Jerrold Levy and I did together and with other colleagues on the Navajo Reservation beginning in 1966 and ending shortly before his death in 2002.

Three major studies are summarized. The first was based on fieldwork done in the mid-1960s (Levy and Kunitz 1974); the second was based on a 25-year follow-up

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in 1990 of people interviewed in the first study (Kunitz and Levy 1994); and the third was a much larger study of an entirely different sample of respondents (Kunitz and Levy 2000). The opportunity to observe the same population for 35 years, and the same individuals for 25 years, led us to think that it was useful to conceive of the lifetime trajectory of alcohol use as a career that might differ greatly among individuals and might change substantially from one generation to the next.

Griffith Edwards (1984) was the first to distinguish between the natural history of alcoholism and the career of the drinker. The former implies a process that, if left unchecked by intervention, follows an inevitable progression that is essentially the same for all individuals with the condition. That is to say, the focus is on the disease as an entity with characteristics that are everywhere the same. The conception of career is far more sociological and is concerned with the individual(s) who manifests the condition in question, and how his or her interaction with institutions and individuals shapes its origin and trajectory. Clearly, under similar circumstances individuals may pursue similar careers. The distinction between natural history and career is akin to the familiar distinction between the disease as an entity and the patient as a person.

Each perspective is more or less useful depending on the situation. Considering a disease as an entity with a natural history is helpful for epidemiological studies that require the calculation of incidence, prevalence, and attributable risk. It is also useful at the individual level, for diagnosis can be a great comfort to patients, as the example of the New Zealand novelist Janet Frame indicates. She had been diagnosed as schizophrenic, but when she won a literary award, her psychiatrists withdrew the diagnosis. She resented the decision because the diagnosis “had been the answer to all my misgivings about myself.” Without it, Frame had nothing but the “homelessness of self” (Angier 2004:12). Adults newly diagnosed with Asperger’s syndrome are reported to have also welcomed the naming of their condition for much the same reason (Angier 2004). Naming helps demystify otherwise unknown conditions; it makes possible a community of suffering; and it implies a prognosis and guides treatment. But it can also lead to inappropriate treatment and labeling and to neglect of the unique attributes of the individual who is ill. It is thus a double-edged sword.

The concept of career implies that conditions that appear similar at the beginning may unfold in many different ways, depending on the characteristics of the individual sufferer and of the individuals and institutions with whom he or she comes in contact. It implies that the label itself may have an impact on the course of the condition, for instance by directing people into one or another kind of institutional setting. But it, too, is a double-edged sword, for in its extreme form it may lead to sterile nominalism, asserting that the condition itself has no reality apart from that invoked by the societal reaction to particular forms of seemingly odd or deviant behavior. Both the career and natural history perspectives are useful when describing the variety of alcohol-related behaviors.

The Prevalence and Trajectory of Alcohol Use

Our first study, in the mid-1960s, was of three community samples and one clinical sample of people admitted to hospital to be started on disulfiram, also known as Antabuse (Levy and Kunitz 1974). One of the community populations included all

the adult kin from a large and formerly wealthy livestock-owning family in a rural area ($n = 46$); the second was a random sample of adults in an agency town ($n = 40$), that is, a town on the reservation in which various tribal, state, and federal offices and services were located; and the third was the adult residents of a border town, all of whom had lived there for at least ten years ($n = 48$). The treatment sample included the first 35 patients admitted to the Indian Health Service hospital in Tuba City, Arizona (on the western end of the Navajo Reservation) to be started on disulfiram, which causes nausea and other unpleasant symptoms when alcohol is consumed.

Because at that time alcohol was said to be “The Navajos’ number one health problem,” it was not surprising to find a high prevalence of alcohol abuse. It was a surprise, however, to discover that nondrinkers were more prevalent among Navajos than among non-Indians. Among women, the proportion of abstainers was over 75 percent in the border town and over 90 percent in the reservation communities. Among men, the proportion was over 30 percent in the agency town, 50 percent in the border town, and 65 percent in the rural population. Most of the women who were not drinking had been lifelong abstainers, whereas most of the men had been drinkers but had ceased some time before our interviews (Levy and Kunitz 1974:134–136). In the general U.S. population at that time, over 70 percent of the adult population used alcohol, with great variations among regions, social classes, and age and sex groups. The lower the social class, the more likely were individuals to have stopped drinking (Levy and Kunitz 1974:135).

Other observers found similar results 15 to 20 years later in a sample of Navajos drawn from clinic records (May and Smith 1988), and the same was true in our much larger third study 30 years later. As in the first study, a large proportion of women in the mid-1990s were lifelong abstainers, and a high proportion of men had given up drinking. The proportion of women who were using alcohol in the mid-1990s was between 13 and 38 percent, and of men 38 to 55 percent, depending on place of residence (see Table 1). Age was the most statistically significant predictor of current drinking status among men: Older men were more likely than younger men to have ceased drinking, and older men were more frequently found in rural reservation communities. Older women were more likely to have been lifelong abstainers than younger women, but community of residence was also important. Even taking age into account, women living in border towns were more likely to be current users of alcohol than women living on reservation, whether in rural areas or agency towns (Henderson 2000:46–48).

At least as surprising were the histories of alcohol use collected in the mid-1960s from older rural men (age 50 and above) we had known as sober and law-abiding individuals. They reported having engaged in binges of impressive proportions, resulting in delirium tremens and other sequelae of heavy consumption, as well as encounters with the police, but by the 1960s they had long since given up alcohol, usually in their thirties and early forties. Alcohol had been expensive and difficult to obtain before the 1930s when most of them were drinking heavily, and it was regarded as a high-prestige consumption item. When they were off reservation and could obtain it more readily, they often drank to excess, but even at home they would occasionally drink heavily, particularly in peer groups, and often at ceremonies. Drinking parties within the family, which were also common, were relatively more

Table 1 The Prevalence of Alcohol Use in the mid-1960s and mid-1990s, by Type of Community of Residence and Sex (%)

| | Rural Reservation | | Agency Town | | Border Town | |
|---------------------|-------------------|-------|-------------|-------|-------------|-------|
| | Men | Women | Men | Women | Men | Women |
| A. Mid-1960s | | | | | | |
| Life-long abstainer | 5.0 | 37.5 | 0 | 64.3 | 11.1 | 66.7 |
| Current abstainer | 60.0 | 58.3 | 31.6 | 28.6 | 38.9 | 10.0 |
| Current drinker | 35.0 | 4.2 | 68.4 | 7.1 | 50.0 | 23.3 |
| Number | 20 | 24 | 19 | 14 | 18 | 30 |
| B. Mid-1990s | | | | | | |
| Life-long abstainer | 7.6 | 36.4 | 3.7 | 33.0 | 10.0 | 6.9 |
| Current abstainer | 54.3 | 50.6 | 41.4 | 48.4 | 46.3 | 55.2 |
| Current drinker | 38.1 | 13.0 | 54.9 | 18.6 | 43.7 | 37.9 |
| Number | 289 | 77 | 162 | 97 | 80 | 29 |

Source: Kunitz and Levy (2000:46–47).

restrained (Levy and Kunitz 1974:76–78). Interviews 30 years later provided similar accounts from people recalling stories told to them by their parents and grandparents (Henderson 2000).

Drinking in the agency town was more frequent, and fewer people had stopped by the time of the first study. This was largely age related: The agency town respondents were, on average, younger than those from the rural population. More of them than of the rural group did not have livestock, and most had been attracted to the town by opportunities for wage work and access to needed services. Their drinking, like that reported by the rural sample, involved bingeing, usually with fortified wine. Alcohol was more readily available in the agency town, however, and drinking episodes occurred more frequently. Indeed, death rates from alcoholic cirrhosis were highest in areas where access to alcohol was greatest (Kunitz et al. 1969).

The people in the border town had been selected because of their residential stability and the chance that they had been steadily employed for most of their adult years. They had come from families with less livestock in the previous generation than the rural respondents had at the time of interview. They had attended school, usually boarding school, long enough to develop language and work skills that made it possible for them to obtain and hold jobs off reservation. Their drinking patterns were very much like those of non-Indians of the same working or lower middle class: one or more beers at home in front of the television after work. They had fewer alcohol-related problems on the job, at home, and with the police than did the reservation respondents (Levy and Kunitz 1974:174), which was all the more impressive because their opportunities for trouble with the police and on the job were so much greater than those of people living in more remote areas without regular employment.

The men in the treatment group gave very similar histories of heavy alcohol use as the rural men, although because they were much younger, they had not stopped drinking at the time of interview as most of the rural men had. The few women in

this group ($n = 5$) seemed to us to be very different from the men, having many more severe psychological and other problems.

As a result of this first study, several conclusions seemed warranted. First, and most contentious, the histories of very heavy drinking reported by men from the wealthy, traditional family from a period before they had been deprived of their livestock and at a time when they still lived isolated from day-to-day contact with Anglos, suggested to us that there was a style of abusive alcohol use that was consistent with traditional Navajo life and culture that could not be explained by assaults by the larger society. Because the dominant explanation, then as now, of alcohol abuse by Native Americans invoked alienation, economic deprivation, and the disruption of traditional native cultures, we were accused of blaming the victim rather than the real perpetrator, the colonial society that had engulfed and destroyed them (Levy and Kunitz 1974:188). This is an issue to which I return in the discussion.

Second, although this pattern of alcohol use could result in serious problems, such as threats to health, family disruption, trouble with the police, and economic losses, it was not necessarily lifelong but generally diminished or ceased entirely as men reached their late thirties and forties.

Third, there was a segment of the population, made up of people who had lived in the border town at least ten years, that had clearly learned a very different, and much more moderate, style of drinking than the one that was most visible and regarded as most typical. Because such people were not publicly visible, their presence and moderate drinking style generally went unobserved. We wrote that we were "impressed by the persistence of older traditions and forms of social organization and life styles alongside . . . continuing change. Indeed, it [was] our position that there have been changing attitudes toward drinking behavior but that these have not proceeded uniformly within the Navajo population" (Levy and Kunitz 1974:189).

The trajectory of alcohol use observed in the 1960s became even more obvious, but also more complicated, when the two reservation community groups and the treatment group (or their survivors) were reinterviewed for our second study 25 years later (Kunitz and Levy 1994). (The border town sample was not reinterviewed.) Comparing men and women separately, it was clear that the two community samples and the treatment group differed substantially. The community samples had favorable survival for the first half of the period and then began to die at increasing rates with advancing age. The treatment group had dramatically reduced survival during the first ten or 12 years after the first interview, but if they survived those early years, their chances of living the full 25 years were extremely good.

Among the men in the treatment group ($n = 30$), those who died had been substantially younger when they entered treatment than those who survived, and, with one exception, they died of alcohol-related causes. They were also more likely than those who survived to have attended school, to have lived in smaller households or camps, and to have had earlier and more frequent trouble with the police. In the two community groups, the people who had died were older than those who survived.

In the 1960s, the diagnostic criteria for alcohol dependence had not been formalized as they had been by the time of the follow-up. It was possible, however, to use the criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (3rd edition, rev.) of the American Psychiatric Association (1987), known as DSM-III-R, retrospectively with data from the first wave of interviews to make a diagnosis. All

but one person in the treatment group met the criteria of alcohol dependence. Thus, a diagnosis of alcohol dependence in that group was not predictive of death. The criteria were also applied to the first interviews with people who were using alcohol when they were first interviewed in 1966. "Of the sixteen people for whom the data were adequate, eleven were diagnosed as having been alcohol dependent and five were not. Four of the eleven diagnosed as alcohol-dependent died in the follow-up period, all of alcohol-related causes. Three of the five nondependent drinkers died, none of alcohol-related causes" (Kunitz and Levy 1994:97).

The net result was that the survivors in all three groups had been indistinguishable in the mid-1960s with regard to their alcohol use (Kunitz and Levy 1994:96). That is, the deaths of the oldest people and those who were alcohol dependent in the two community groups and of the youngest people with the most troubled histories in the treatment group had left behind a group of people who had been very similar in age and drinking behavior when first interviewed in the mid-1960s and who continued to be very similar with respect to drinking behavior when reinterviewed in 1990, regardless of the sample they had been in originally. In 1990, there were no significant differences among the survivors in the proportion who were drinking; what, how much, and how frequently they drank; and whether they were experiencing difficulties with alcohol. Of the entire group of survivors ($n = 79$), only 20 percent were still using alcohol, including only 25 percent of the surviving members of the treatment group.

Navajos regarded solitary drinking as deviant, and indeed when the survivors and those who had died were combined and analyzed as one group, people who had been social drinkers in 1966 were found to have been more likely than solitary drinkers to have given up drinking at the time of reinterview or at the time of death (Kunitz and Levy 1994:103). In addition, the people who had died of alcohol-related causes were more likely than those who survived to have been solitary drinkers, no matter which sample they had been in, although social drinkers were found more frequently in the rural group.

There was also evidence that the men in the treatment group who died were deviant in other ways as well, for, as noted above, their drinking had gotten them into more trouble with the police than had the drinking of those who survived. Thus, the story that emerged was that heavy drinking was very common, that it was most commonly outgrown, but that there seemed to be a segment of the population that was at very high risk of premature death. When that segment of the population was excluded, the rest of the male population appeared to have been very similar, regardless of the sample they had been in originally.

The fact that there seemed to have been a group of young men who were at especially high risk of premature death prompted our third and final study (Kunitz and Levy 2000). We wondered if there were a segment of the population who met the criteria of conduct disorder before age 15 and who then went on to more serious alcohol-related problems than other people. To answer that question, we did a case-control study in which we used scales from the Diagnostic Interview Schedule (DIS) that had been used in the Epidemiological Catchment Area Study (Robins and Regier 1991) to diagnose alcohol dependence and conduct disorder. We identified and interviewed male ($n = 204$) and female ($n = 148$) alcoholics in treatment programs (the cases) and matched them by age, sex, and community of residence to

controls. We were looking for nonalcohol-dependent controls, but it soon became apparent that it was difficult to find people who did not have a lifetime history of alcohol dependence. The result was that we accumulated two different groups of male and female controls: those with and those without a history of alcohol dependence. Among male controls, 372 had a history of alcohol dependence and 157 did not have such a history. Among women, the numbers were 60 and 148, respectively.

Although the distribution by age, sex, and place of residence of the controls was not representative of the population distribution of people 21–65, reflecting, rather, the distribution of our cases, with suitable adjustment they did represent a reasonable sample of the total adult population. The discussion that follows relies primarily on data from the 737 controls.

The study showed that indeed men and women who met the criteria of conduct disorder before age 15 were more likely to have become alcohol dependent than those who did not; they were more severely alcohol dependent; and they were more likely to have engaged in a variety of antisocial behaviors, even adjusting for the severity of alcohol dependence (Kunitz and Levy 2000:70).

However, conduct disorder accounted for very little alcohol dependence in the population, because it was rather rare (a prevalence of about 5 percent), whereas alcohol dependence was very common, as Figure 1 indicates. The more affirmative answers to the Conduct Disorder Questions (from 0 to 8, with 3 or higher being the score beyond which conduct disorder was diagnosed), the greater the probability that the individual will have a lifetime history of alcohol dependence. However, very few of the people with a history of alcohol dependence had met the criteria of conduct disorder.

The attributable risk percent, that is, the percent of alcohol dependence attributable to conduct disorder, was less than 10. Therefore, although it is a risk factor for severe alcohol dependence, it does not account for much alcohol dependence in the population. If it were prevented, it would help those afflicted but would have no impact on prevalence in general. Among this high-risk but very small segment of the population, comprised almost entirely of men, it might be useful to think of alcoholism as having a natural history that has a high probability of ending badly. Among the remainder of the population, the career perspective appears to be more useful, for some individuals drink moderately over a lifetime and others drink heavily and then moderate or cease their drinking.

Alcohol dependence in this study was measured as in the Epidemiological Catchment Area Study (Robins and Regier 1991), as lifetime prevalence. This is a measure of the degree to which people, over a lifetime, have met the DSM–III–R criteria of alcohol dependence (for a list of the items used, see Kunitz and Levy 2000:56). It is not a measure of point prevalence, that is, of the proportion of the population who at the time of the study were alcohol dependent. It is a useful measure for some purposes, for it represents the proportion of people in a population who have at various times in their lives had problems with alcohol, but it may also be misleading because it obscures the fact that many of the people with a history of alcohol dependence are no longer using alcohol or are using it in a controlled fashion.

An extraordinarily high proportion of the controls had a lifetime history of alcohol dependence: 70.4 percent of men and 29.6 percent of women. The rate for men may be biased slightly upward by the underrepresentation of younger age groups, a

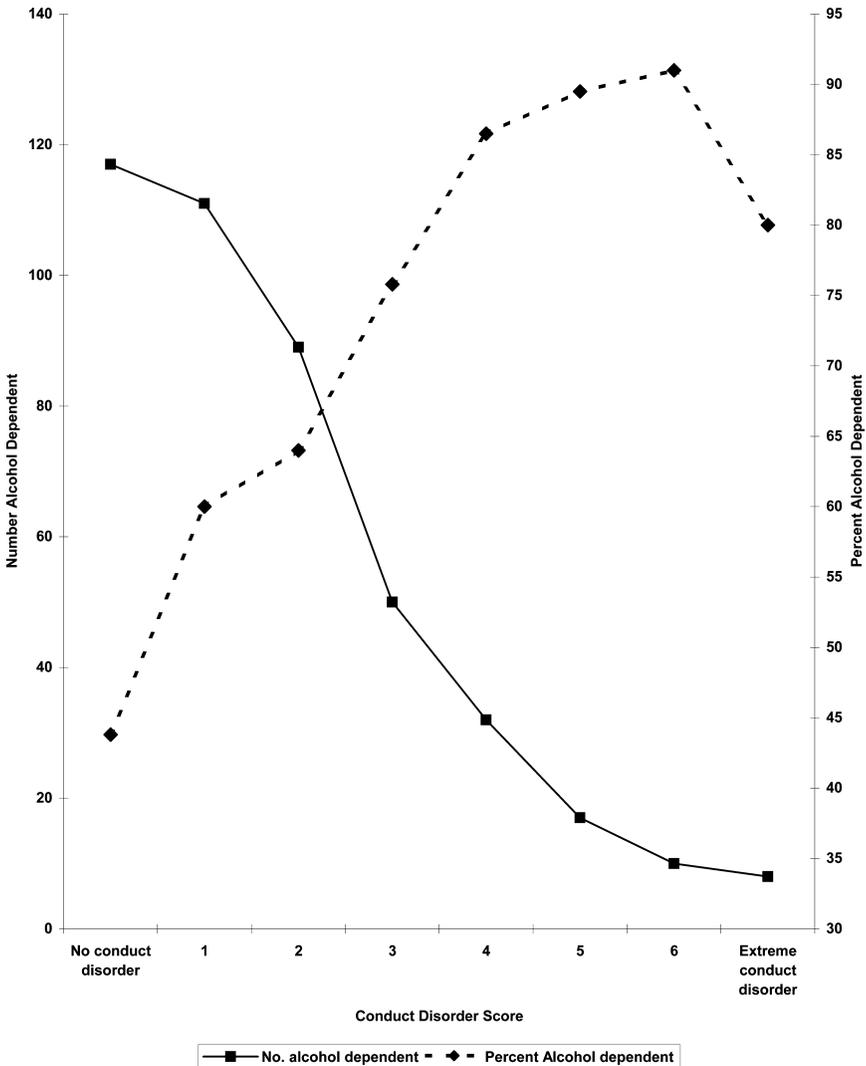


Figure 1 Conduct Disorder and Alcohol Dependence.

function of the sampling design. Nonetheless, the total rate for men 21–65 is probably no lower than 65 percent, based on the unrealistic assumption that there should have been three times as many men in the youngest age group (see Table 2). These rates are very much higher than the comparable figures reported in the Epidemiological Catchment Area Study for the population of the United States.

As noted previously, however, a great many people had stopped drinking. Thus, when only the men and women who were currently drinking were considered, the point prevalence for the entire sample was 28.2 percent for men and 9.8 percent for women, perhaps two to three times the rate in the general U.S. population. The

Table 2 Lifetime Prevalence and Point Prevalence of Alcohol Dependence among Navajo Women and Men, by Age, mid-1990s (%)

| Ages | Men | | | Women | | |
|-------|----------|-------------|-----|----------|-------------|-----|
| | Lifetime | Point Prev. | No. | Lifetime | Point Prev. | No. |
| 20-29 | 57.7 | 37.1 | 97 | 40.0 | 18.2 | 55 |
| 30-39 | 78.8 | 34.9 | 212 | 25.6 | 8.9 | 90 |
| 40-49 | 73.3 | 21.5 | 135 | 24.3 | 0 | 37 |
| > 50 | 59.8 | 12.6 | 87 | 28.6 | 9.5 | 21 |
| Total | 70.4 | 28.2 | 531 | 29.6 | 9.8 | 203 |

data in Table 2 indicate that the point prevalence of alcohol dependence tends to be lower in the older than the younger age groups, whereas lifetime prevalence does not change as much, suggesting both attrition as a result of the death of heavy drinkers and an increasing rate of remission with increasing age among those who survive.

Differences between Men and Women

That there are differences in alcohol use by men and women in virtually all populations is widely known but has not been adequately explained. The same is true among Navajos. In the first study, the samples were too small for us to have detected enough female problem drinkers to say a great deal about them, but the overwhelming impression from the relatively few who were interviewed was that they had serious problems, including abusive parents and husbands, schizophrenia, severe depression, and grand mal epilepsy (Kunitz and Levy 1994:122). Nothing similar was encountered among the much larger number of male alcoholics.

In our most recent study, the number of respondents was larger and it was possible to explore the differences between men and women in more depth. There were several striking findings. The first had to do with the diagnosis of alcohol dependence itself. The same instrument (the DIS) was used as in the Epidemiologic Catchment Area Study to make diagnoses consistent with DSM-III-R criteria. The criteria were used in two ways: (1) to make a diagnosis of alcohol dependence or not, a simple yes-no dichotomous variable; and (2) to treat the condition as continuous, simply adding up the positive responses to the series of questions in the DIS (the highest possible score was 26). Like most conditions, we thought alcohol misuse was probably best understood as a continuous variable, but it was also useful to consider it as a simple categorical variable (e.g., for estimating incidence, prevalence, and attributable risk percent).

In the event, alcohol dependence among women was best described as a dichotomous variable. Almost 50 percent of the women did not answer any of the questions affirmatively, another 25-30 percent had scores between 1 and 4, and a few had scores in the higher range. This is characteristic of a bimodal distribution. Among men, however, alcohol misuse is best described as a continuous distribution: only 12 percent had zero scores, with lesser and lesser percentages having scores from 1 to over 20 (Gabriel 2000:193-198; Kunitz and Levy 2000:56-57). These different

patterns suggested again that alcohol dependence was a very different phenomenon among men and women, an observation that was supported by the differences and similarities in significant risk factors for each of the sexes.

People who are alcohol dependent generally come from families in which abusive drinking has been common. That was also true in our sample, with the exception that paternal drinking patterns were not associated with alcohol dependence among female respondents, but maternal drinking was. For men, both maternal and paternal drinking patterns were significant risk factors, but so were the drinking patterns of siblings, friends, and visitors to the home. That is, men seemed responsive to the pervasiveness of drinking within their environment, whereas women seemed much more responsive to psychosocial problems within the family (Kunitz and Levy 2000:67–68). Other risk factors were important for both men and women—for example, a history of abuse in childhood, conduct disorder, dropping out of high school, and absence of parents from the home during childhood and adolescence. Like conduct disorder, however, these other risk factors do not account for a great deal of alcohol dependence. Yet neither parental social status nor having attended boarding school was associated with alcohol dependence among either men or women.

The history of a family decimated by alcohol misuse revealed in great detail the transformation that had occurred in the agency town in which much of our research was done and something of the differing origins of alcohol abuse by women and men (Andrews 1994). The grandparents, born some time in the mid-19th century, were not known to have used alcohol at all. The father, born in the 1890s into a family of moderate means, became a minor ceremonialist, livestock owner, and bootlegger. He drank in a controlled fashion that never jeopardized his ability to perform ceremonies or to support his family, and he was never abusive when he drank. His wife only began to drink to excess when, as a widow in her sixties, she was overwhelmed by the devastation alcohol had caused 11 of her 12 children. Their father had admonished all the children not to drink except in moderation. Despite this, all but one of the children drank abusively, and three of her sons were in the treatment group included in our first study.

The daughters began drinking in the context of marriages to men who drank heavily. The eldest daughter, who had been raised by her elderly grandparents, and who had been married to a man who did not abuse either alcohol or her, was the one exception, for she had rarely misused alcohol and was adamantly opposed to its use. Unlike the daughters, the sons all began to drink abusively in the context of male peer groups after they had “left home in their late teens or early 20s for boarding school, job training, or seasonal farm labor” (Andrews 1994:152). Problem drinking continues among many of the 60 grandchildren and even among the great-grandchildren of this family, and at least one of the great-grandchildren has been diagnosed with fetal alcohol syndrome.

That the alcohol-dependent sisters in this family began their drinking in the context of relationships with men who drank excessively and were also physically abusive is consistent with what has been observed in other studies as well as in our own subsequent research (Kunitz et al. 1998; McCloskey 2000). The high prevalence of alcohol dependence among men has already been noted.

The proportion of women who said they had been physically abused by a partner was also at the high end of the range reported from other populations: 52.7 percent

among women under 50 and 28.6 percent among women 50 and older. Alcohol was involved in a high proportion of these episodes (Kunitz and Levy 2000:114). The association between alcohol dependence and being the recipient of violence is reciprocal, for women who are abused have an increased risk of becoming alcohol dependent, and alcohol-dependent women are particularly vulnerable and more likely than others to be abused. In our most recent study, the more severe a woman's history of alcohol dependence, the more likely she was to have been physically abused. In addition, the presence of husbands or boyfriends who were both physically abusive and misused alcohol was a significant risk factor for alcohol dependence in women.

Domestic violence is not a new phenomenon, for historically the most common form of Navajo homicide has been the result of sexual jealousy, with a husband or boyfriend killing his wife or girlfriend, and often then committing suicide (Levy et al. 1969). There is suggestive evidence, however, that it has increased in recent decades. In our most recent (third) study, women 50 years of age and above reported much lower lifetime rates of having been physically abused than younger women, and men 50 and above reported lower rates of having struck their partners than younger men (Kunitz and Levy 2000:114). The age differences in reported violence could be the result of bias caused by either problems of recall among the older informants or differential mortality among those who were most involved in violence. Almost certainly, both sources of bias are operating, but we cannot be certain how important they are, which is why the evidence is only suggestive.

Nonetheless, the data support the possibility of a real increase in the lifetime prevalence of domestic violence over the past several generations, some of which has been fueled by easier access to alcohol. Indeed, the greater the average daily amount of alcohol consumed, the higher the probability that violence has been perpetrated by both men and women (Kunitz and Levy 2000:116). However, even male abstainers and very moderate drinkers report having struck their partners (abstainers, 11 percent; those consuming an average of less than an ounce of alcohol a day, 33.2 percent), so alcohol alone is neither a necessary nor a sufficient cause of domestic violence although it increases the risk significantly.

Peer Groups

The fact that for men pervasiveness of alcohol use in the social environment is an important risk factor for alcohol dependence suggests just how important the peer group is. It had always been significant, but in the context of agency and border town life, it has become overwhelmingly so. According to one autobiography recorded in the 1930s and referring to the 1870s, peer pressure was exerted by groups of young men when one of their number did not want to drink (Dyk 1947). Informants reported similar experiences in the 1960s (Kunitz and Levy 1994:121). In general, however, in the past drinking was initiated in the family context, usually with older kinsmen and women. About 50 percent of informants who began using alcohol in the 1950s did it first in the company of older relatives. About 30 percent began with schoolmates and friends. Thirty years later, the figures were almost reversed. Of those who began drinking in the 1980s, about 25 percent first drank with older kinsmen and women and 60 percent with schoolmates and friends.

This reflects an enormous change in Navajo life. In the early postwar years, the Navajo population was still largely rural, living in camps of related households at varying distance from agency towns on reservation and border towns off reservation. With the continuing collapse of the livestock economy and increasing dependence on welfare and wage work, as well as the necessity to be close to schools and other services, many families moved away from rural areas. The places to which they moved were home to many other unrelated families, enrollment in school was universal, and the result was that the cross-generational fabric was torn and a youth culture comprised of peer groups and, at the extreme, gangs emerged (Henderson et al. 1999). For example, the agency town we first studied in the mid-1960s had at that time a population of 800–1,000, half of whom were non-Indians working for various government agencies. Thirty-five years, later the same community had 8,000–10,000 people, over 90 percent of whom were Navajos. In new settings such as these, young people learned to drink in entirely new ways, unrestrained by older relatives (Kunitz and Levy 1994:138).

Conduct disorder does not account for a large proportion of alcohol dependence in the population, but this is not to discount its importance, for there is suggestive evidence that (1) the incidence of conduct disorder has increased in recent years (Kunitz and Levy 2000:103), and (2) people who meet the criteria of conduct disorder before age 15 are the ones who form the core around which gangs and other more informal but still antisocial groups form (Henderson et al. 1999). Such groups may engage in a variety of practices, including abuse of alcohol and other substances and violence.

Until the 1960s, the ratio of male-to-female homicide victims was 1:1 (Levy et al. 1969). Since the 1970s, however, the homicide rate and the male-female ratio have both increased. The ratio is now 4:1, similar to what has been observed among Anglos and African Americans, the result, apparently, of gang-related and peer-group violence. Most people ultimately reduce and finally end their participation in such groups. A few do not, and we think they may be disproportionately the core members, many of whom go on to more seriously antisocial careers or die prematurely of alcohol-related conditions and violence, like the young men in the treatment group included in our first study.

Reasons for Remission

That many Navajo men and women give up heavy drinking at some point in their lives is similar to what has been observed in the non-Indian population (Kunitz and Levy 1994:126). It is an especially important finding among Navajos, however, because the lifetime prevalence of alcohol dependence is so much higher than in the non-Indian populations that have been observed, and because the assumption has often been that it is a rare phenomenon.

In our long-term follow-up study, we asked why people had ceased drinking. Men from the rural sample said they stopped for religious reasons. These had to do with the fact that many of them had joined the Native American (peyote) Church, which has been widely credited with helping people stop alcohol use and abuse. Men from the agency town and from the treatment group were significantly more likely to say that health-related concerns caused them to stop. In addition, men from all three

groups invoked other reasons as well (e.g., drinking was less pleasurable as they got older, they had acquired family and job responsibilities, and they had no worldly possessions of which they could be proud; Kunitz and Levy 1994:110–112). Women in the rural sample who stopped drinking gave reasons similar to the men. Among both men and women, social drinkers were more likely to have become abstainers than were solitary drinkers.

That the Native American Church has been an important way for people to cease drinking is also evidenced by the results of our most recent study. Respondents were asked about their parents' drinking when they themselves were growing up. The vast majority of mothers were reported to have been abstainers. Among fathers, however, the proportion of abstainers was less (18.7 percent), and those who were abstainers were disproportionately likely to have been members of the Native American Church. Indeed, it was the only variable that was significantly associated with being an abstainer. Education, occupation, community of residence, and livestock holdings were not significant (Kunitz and Levy 2000:67).

Among respondents in that study, those who had been alcohol dependent and were in remission at the time of interview had had less severe drinking problems than those who were not in remission; they were more likely to have been involved in stable relationships; to have been active in religion, although which religion did not appear to be significant; and were less likely to have been in a treatment program. Christianity was not associated with remission in the earlier study because, until the 1990s, there were not large numbers of Christian congregations with Navajo pastors in the region where we worked, a situation that has now changed significantly (Kunitz and Levy 1994:113). Thus, some people in the most recent study in the mid-1990s credited their remission to conversion to Christianity. Very few respondents in any of our studies credited traditional Navajo ceremonies with having caused their remission (Kunitz and Levy 1994:115–116). We thought this was because traditional ceremonies are generally one-time affairs that do not reconstitute a social network of nondrinkers as the Native American Church and Christian churches do (Kunitz and Levy 1994:235–236).

The fact that traditional ceremonies were invoked only rarely does not mean that traditional values have been unimportant in recovery from alcohol misuse, however. For as Gilbert Quintero (2000a) has shown, giving up alcohol misuse is often explained in terms consistent with core Navajo values. The men he interviewed explained their cessation of excessive alcohol use in terms of “the traditional Navajo ideals of a good life associated with home, family, the accumulation of valued possessions, and beauty and harmony, . . . all predicated upon good thinking. Alcohol and the problems associated with it are antithetical to achieving these cultural goals” (Quintero 2000a:1041).

Formal treatment programs get mixed reports. In our long-term follow-up study, more men credited treatment programs than any other single cause for helping them stop problem drinking (13 out of 34). Health concerns were the reason most men gave for cessation of all drinking (Kunitz and Levy 1994:112). But, in our most recent study, remission was not associated with having been in treatment, even taking into account the fact that the people who had been in treatment were more severely alcoholic than those who had not and had more disrupted personal lives. And only 39 percent of people who had been in treatment credited it with helping them, indicating

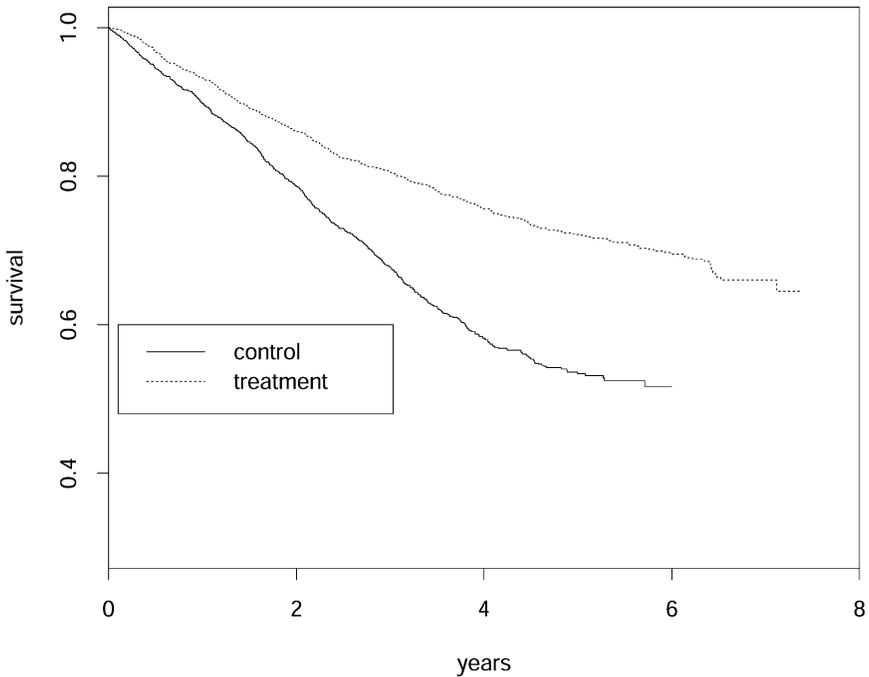


Figure 2 The Probability of Not Being Rearrested.

that treatment programs have not been very effective in this population (Quintero 2000b:133). This is consistent with what others have found (e.g., May 1986).

However, in a recent study of a comprehensive detention–treatment program located in a border town and serving people convicted of driving under the influence of alcohol, 70 percent of whom were Navajos, there was a significant decline in the probability of rearrest compared to the rates for people convicted and receiving some other sentence. The program effect was observed among Native Americans, Hispanics, and Anglos (Kunitz et al. 2002; Woodall et al. 2004). Figure 2 displays survival curves reflecting the probability of *not* being rearrested for DWI for only the Native Americans, virtually all of whom were Navajos, convicted of DWI in San Juan County, New Mexico, from August 1994 through 2000. The curve labeled “treatment” represents the people sentenced to the incarceration–treatment program. The curve labeled “control” represents people receiving some other penalty. (When covariates such as age, sex, blood alcohol level, and prior arrests are included in multivariate analyses, significant program effects remain.) Because these data are for rearrests for DWI, not alcohol use more generally, it is not yet possible to determine whether this treatment program affects remission of alcohol dependence. Whatever the result turns out to be, in general treatment programs have not been remarkably effective.

Despite the evident ineffectiveness of the treatment programs available to Navajos, remission rates are similar to, but slightly lower than, those found in the general

U.S. population. In the Epidemiological Catchment Area study, 50 percent of men and 53 percent of women with a lifetime history of alcohol dependence had been in remission for a year at the time of interview. Among Navajo respondents who met the same criteria, 43 percent of both men and women were in remission. Thus, all the evidence suggests that stopping alcohol use entirely, or drinking without associated problems, occurs at almost the same rate in the Navajo population as in the general U.S. population. One year constitutes a very limited period of remission, however. Over a period of many years, cessation of drinking occurs at far higher rates. Unhappily, remission starts from a much higher base line of alcohol dependence among Navajos than it does among non-Indians.

Discussion

As the Navajo population has continued to grow and diversify, so have drinking styles proliferated. Experience in the military, in various kinds of educational institutions and occupational settings, and in different cities across the United States all contribute to increasing diversity of opportunities to learn about alcohol use (Henderson 2000). Our research only partly captured that diversity, for we worked in just a few places on and adjacent to the Navajo Reservation. That is perhaps why we have been especially impressed with the growth of a youth culture in agency towns. Rural reservation communities are increasingly places where the elderly predominate, just as in the rest of rural America. Young families generally move away for educational and occupational opportunities, and the places to which they move provide an entirely new and unfamiliar context for many of them.

In these new settings, the opportunities to interact meaningfully and frequently with older relatives are diminished, and the frequency and intensity of contact with peers is increased. "Because alcoholic beverages are readily available in agency and border towns, conditions are created that encourage heavy and frequent drinking unimpeded by the restraining influence of older kinsmen and women" (Kunitz and Levy 2000:160). Heavy utilization is also encouraged by, or rationalized as, the result of boredom. There is simply nothing else to do, many respondents assert (Kunitz and Levy 1994:232).

More than that, however, this change represents a shift from narrow to broad socialization (Kunitz and Levy 2000:161). The former refers to settings in which young people are socialized into a narrow range of occupations, usually by working in close association with older kinsmen and women. The latter refers both to the expanding range of choices of adult roles made possible by industrialization and universal and prolonged education and to the encouragement these choices give to the expression of individuality.

This development is a double-edged sword, however. For those with financial resources, family guidance and support, and luck the result may be enhanced opportunities for satisfying careers. For the poor, especially those without adequate support and guidance from family, friends, or teachers the result may be dead-end jobs, a criminal career, and/or unemployment. This seems to have been the difference between the children and grandchildren of the formerly wealthy rural informants

in our first study and the children of poor families. Eric Henderson (1985) showed that the wealthy livestock owners very early saw the value of education, and their children and grandchildren have benefited accordingly. "Conversely, poorer families saw education as an intrusion and did everything they could to keep their children from being sent away to school" (Kunitz and Levy 1994:135). Something similar appears to be characteristic of agency towns, where many families may be unable to provide the support necessary for young people to take advantage of whatever limited opportunities there are. In such a context, where alcohol use is already pervasive, widespread abuse of alcohol, as well as other substances, remains especially common.

This brings me back to the contentious issue raised at the outset. As a result of our first study, we had suggested that there was a style of abusive alcohol use that was consistent with traditional Navajo life and culture and that could not be explained by assaults by the larger society, although we also argued that much had been learned about how to consume alcohol, and its effects, from observing and mimicking the excesses engaged in by Anglo frontiersmen, soldiers, and cowboys. As a result, we were accused of blaming the victim rather than the real perpetrator.

In the almost four decades since that study, there have been profound changes in Navajo life. The pattern that we first described as occasional peer group drinking rooted in rural life and observed as far back as the 1870s has become institutionalized in a new context, one in which the restraints imposed by isolation and obligations to kin are far less common than they once were, and where the pervasiveness of drinking has itself become a risk factor for alcohol misuse. This is disquieting, for to the extent that heavy drinking contributes to school failure, increased morbidity, accidents, and premature death, it is clearly dysfunctional for the affected individuals and for the community more generally.

However, it was also remarked at the outset that conceiving of alcohol users as having a career, rather than thinking about alcohol dependence as a unitary phenomenon with a natural history, provides some grounds for optimism. Forty and more years ago when the population was less diverse than it is now, it was possible to think of alcoholism among Navajos as being a unitary phenomenon with a natural history leading to catastrophic outcomes, for the most visible drinking was done by groups of young men in public places. Even then, there were other patterns of use, including house parties and moderate drinking at home and remission and complete cessation of heavy drinking. Since then, patterns have only proliferated and diversified, and moderation, remission, and abstemiousness are not uncommon. Thus, Navajo drinkers follow different career trajectories, and it is reasonable to assert that there is good evidence that destructive patterns of alcohol use are not inevitable.

This is not to deny that alcohol abuse and dependence are important and cause major health and social problems. The career of problem drinker is still pursued all too frequently, and among a small segment of antisocial men, alcoholism may be usefully described as having a natural history that has a high probability of ending in death unless intervention is successful. It is to say, rather, that for the vast majority there is every reason to believe that the present high rates of alcohol dependence with dire consequences are not inevitable. Reducing those rates, however, will require substantial social and economic changes as well as more effective interventions by

the public health community and the educational system. Unfortunately, it is by no means clear that the necessary resources will be available anytime soon.

Notes

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Due to a computational error in Kunitz and Levy 2000:72, the percent of alcohol dependence attributable to conduct disorder (the attributable risk %) was reported incorrectly. The correct figures are as follows: for women 14.5% and for men 1.0–11.3%, depending on the age group and place of residence. The interpretation of the results, however, remains unchanged.

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