

**LIABILITY OF COMMERCIAL AND  
SOCIAL HOSTS FOR ALCOHOL-  
RELATED INJURIES**  
A NATIONAL SURVEY OF ACCOUNTABILITY  
NORMS AND JUDGMENTS

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**Abstract** Legal standards for liability of commercial sellers and social providers of alcoholic beverages are affected by social norms concerning accountability and responsibility. Using a nationwide probability sample telephone survey of 7,021 U.S. residents, we conducted a randomized experiment in which each subject was asked to respond to multiple vignettes. The vignettes told stories of drinking situations, systematically varying dimensions concerning age of drinker, commercial versus social settings, amount of alcohol consumed, history of previous behavior, and seriousness of damage or injury following drinking. Analyses involved linear mixed (i.e., random effects) model regressions, using responses to vignettes as the outcome variable, controlling for a series of sociodemographic, behavioral, and attitudinal measures. Results showed that age of drinker (young), setting (bar), and previous behavior (history of irresponsibility) were most strongly associated with harsher judgments of civil liability. Citizens' multiple standards for assigning legal liability and implications for public policy are discussed.

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## Introduction

Alcohol use and the health and social problems associated with it are a matter of growing national attention in recent decades. Concerned citizens, prevention professionals, and policy makers increasingly adopt an environmental perspective toward alcohol that emphasizes the role of alcohol accessibility, pricing, promotion, and other factors that influence individual attitudes, behaviors, and probabilities of deleterious consequences of drinking (Toomey and Wagenaar 1999). One important dimension of this approach suggests increasing the accountability of commercial sellers of alcohol and private hosts for the risky drinking of their patrons and guests. Changing the behavior of those who provide alcoholic beverages to others is a means to reduce risky drinking and damaging consequences (Holder et al. 1993; Mosher and Colman 1986).

One mechanism for maintaining the accountability of hosts is civil liability. Commercial vendors of alcoholic beverages are expected to balance the legitimate pursuit of sales and profits with the safety of customers and innocent bystanders with whom patrons may come into contact. Private hosts should take an even more positive interest in the well-being of their guests and create conditions to foster low-risk drinking. When these social expectations are transgressed and other parties are injured, civil law may assign compensatory and punitive penalties to redress damages and ultimately deter such future negligent acts. On the other hand, objections to such laws are often raised based on a slippery-slope argument that even limited liability may lead to litigations that will eventually leave no one who serves alcohol safe from prosecution (Lode 1999).

The legal standards for assessing negligence in alcohol-related injuries are complex, vary by jurisdiction, and have evolved over time (Keeton 1984). While some standards are established by statutory law, most such standards emerge from common law—the decisions made by judges and juries in civil cases over time. One element in these adjudications depends on juries' understanding of what a "reasonable" host would do, that is, social expectations about the consideration reasonable hosts have for the future consequences of the behavior of their guests. Thus, such liability standards are not simple specifications of rigid standards but are a reflection of the broader normative environment. Public opinion surveys can be a reasonable gauge of such social preferences.

Numerous public opinion surveys have addressed a variety of alcohol control issues (Crowe and Bailey 1995; Giesbrecht and Greenfield 1999; Harwood, Wagenaar, and Zander 1998; Hilton and Kaskutas 1991; Kaskutas 1993; Mathematica Policy Research, Inc. 1995; Room et al. 1995; Schmid et al. 1990; Wagenaar and Streff 1990; Wagenaar et al. 2000). Such surveys consistently show strong public support for broad-based regulatory approaches that assign shared accountability for alcohol problems to consumers, vendors, and advertisers. While Americans certainly recognize personal responsibility

by favoring individual sanctions and educational interventions, a substantial majority also favor tighter regulation of alcohol-outlet density, hours of service, and advertising practice (Wagenaar and Streff 1990). By inference, these opinions expand the accountability of, and cost sharing by, commercial alcohol vendors that the public expects. When asked directly, substantial majorities of Americans also agree that commercial vendors are too lax in preventing illegal sales and should be subject to mandatory training for “responsible beverage service” (Wagenaar et al. 2000). Americans are especially supportive of tighter regulation of retailer practices and stiffer penalties where underage drinking is involved (Harwood, Wagenaar, and Zander 1998).

Considering Americans’ general distaste for litigation, do these concerns and expectations really imply support for expanding legal liability? Can surveys directly measure support for a specific set of alcohol-liability rules? We assume that meaningful rules would be complex and, therefore, difficult for the average citizen to describe. Under the traditional survey approach of constructing general attitude items that articulate possible rules, we might have low confidence in the validity and reliability of the results.

Survey-based sociological studies of social judgments provide one of the more sophisticated methods for examining how judgments may reflect coherent decision rules. The multivariate vignette design (Rossi and Nock 1982) is a randomized experiment embedded in a survey. Each respondent is presented with a series of vignettes that are randomly assembled to represent a hypothetical situation. Respondents’ judgments about these hypothetical cases are used to infer their preferred decision rules. Vignette approaches are used in a diverse array of substantive applications: defining abuse and aggression in the context of dating (Carlson 1999; Hannon et al. 1996), identifying qualifying factors in business ethics (Morrill, Snyderman, and Dawson 1997; Smith and Rogers 2000), judging the difficulty of business negotiations (Rooks et al. 2000), and assessing the relative importance of prognosis, resource allocation, and other decision factors in treating the terminally ill (Denk et al. 1997).

In our application, the vignette specifies a drinker of one of several possible ages in a setting such as a bar or private party who has an automobile crash after leaving. After each vignette is read, the respondent is asked to make a judgment, using whatever rules he or she thinks are fair and responsible. In our case, we state that the driver is “certainly liable” for damages in the accident, then we ask what damages, on a simple scale, the host should have to pay relative to the driver, including no damages at all.

The advantages of the vignette approach rest on three construction principles. First, questions must describe specific situations that are to be regulated. Otherwise, different respondents may interpret questions by imagining different kinds of harm and levels of irresponsibility.<sup>1</sup> Second, a collection of

1. Sudman and Bradburn (1982) refer to this issue as the “attitude object.” We believe that

different situations must be presented. Otherwise, there is no way to test which plausible alternative normative rules might apply. Third, the normative rules to be tested should be within the competence of the target population. In our case, questions should solicit assessments from the general public that turn on fairness rather than legal proceduralism and technical efficacy.

The following are the variables used to construct the vignettes, with our hypotheses about each. Details of how these variables were specified in vignettes are described below.

*Age of the driver.* We hypothesized that the degree of responsibility socially expected from the host declines with increase in age of the guest/driver. We included a transitional age (24 years old) to test for continuity of the effect.

*Setting and host.* We hypothesized that commercial vendors are held to a higher standard of accountability than private hosts.

*Past history of social responsibility.* We hypothesized that hosts with a history of irresponsible behavior are judged more harshly.

*Alcohol consumption by the drinker.* We hypothesized that hosts are held more accountable when their guests consume more than a few drinks, suggesting lax control. We also hypothesized that this is less of a discriminating factor when the drinker/driver is underage.

*Injury caused by the accident.* We hypothesized that this factor is irrelevant if respondents attended only to the issue of relative liability. Increasing liability ratings depending on injury suggests that respondents were simply boosting compensation to victims.

We also included a number of respondent characteristics in the analysis of vignette ratings, which allowed us to test hypotheses about the homogeneity of ratings across subgroups of respondents. If ratings are homogeneous, this suggests that there is a consensus about how the social responsibility of hosts should be defined and enforced. A lack of homogeneity, by contrast, suggests that either the values that define social responsibility or the way respondents think they relate to judgments differ across segments of the American public.

## Method

### SAMPLE

We tested our hypotheses on the responses of a sample of 7,021 American adults who were interviewed by telephone between April and October of 1997 for a study of public opinions on a variety of alcohol policies. The sample

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orienting the respondent to an event rather than a rule leaves less room for interpretive variation. In the sense that people say they know good art "when they see it," we believe that ratings of vignettes are more firmly held and less subject to volatility than endorsements of abstract rules.

represents the civilian, noninstitutionalized adult population over age 18 in the continental United States. The overall sample design was for a state-level intervention study. Ten specific states and the District of Columbia contributed an average of 486 complete interviews each; 1,678 additional complete interviews came from the remainder of the 48 states. List-assisted random-digit-dialing (RDD) methods were used to generate the sample from households with listed, unlisted, and new telephone numbers.

The final response rate of 54 percent reflects a contact rate of 77 percent and a cooperation rate of 70 percent.<sup>2</sup> These rates, in our opinion, reflect the topical focus on health and children and the endorsement of a government or other nonprofit agency in each intervention state, both mentioned in the survey introduction. A cash incentive of \$10 was offered in refusal conversions; the conversion rate was 28 percent, accounting for 17 percent of all complete interviews.

Survey responses were first weighted to correct for oversampling in the specific states. As compared with the overall population, the weighted sample contained slightly more women, African-American, divorced, and highly educated individuals and slightly fewer respondents who were age 55 and over, married, of low educational attainment, and with very low household income. A second round of poststratification adjusted for deviations between the sample demographics and July 1996 Census population estimates. An iterative raking procedure was used to match population distributions for gender, age, race, Hispanic origin, education, household income, and metropolitan status. The sample distributions are presented in table 1.<sup>3</sup> After trimming, the average design effect for national estimates is 3.34.

#### MEASURES

We examined twelve individual-level sociodemographic, political orientation, attitudinal, and behavioral variables for their association with responses to vignettes included in the alcohol policy survey. The age of respondents ranged from 18 to 97 years. Dichotomized variables are gender (1 = male), race (1 = white, since a relatively small number of respondents identified with other race categories), marital status (1 = married), and parental status (1 = respondent has children, not necessarily living with them). Education is a seven-level ordinal variable. Political orientation is a scale of liberalism/conservatism

2. We use the "RR3" formula from AAPOR's Standard Definitions, published May 1998. Since every residential household was eligible, the only adjustment to the denominator was an imputation of residential status for numbers with no determinative contact. The response rate was not weighted for geographic distribution. The response rate averaged 56 percent in the intervention states and 48 percent in the balance-of-nation sample.

3. A detailed description of weighting and sampling error can be found in Harwood, Wagenaar, and Zander (1998) and Wagenaar et al. (2000).

**Table 1.** Demographic Characteristics of Survey Sample

Variable	Weighted Count	Percent
Age:		
18–29	1,476	21.0
30–39	1,410	20.1
40–49	1,436	20.5
50–59	946	13.5
60–69	844	12.0
70+	795	11.3
Missing	114	1.6
Gender:		
Male	3,738	53.2
Female	3,283	46.8
Race:		
White	5,390	76.9
Black	768	10.9
American Indian	59	.8
Asian	50	.7
Other	688	9.8
Missing	66	.9
Education:		
< High school	1,296	18.5
High school diploma	2,306	32.9
Some post–high school	1,855	26.4
Bachelor’s degree	1,035	14.7
Master’s degree	358	5.1
Law or doctorate degree	128	1.8
Missing	43	.6
Parental status:		
No children	1,832	26.0
Children in family	5,174	73.8
Missing	15	.2
Marital status:		
Not married	2,742	39.1
Married	4,247	60.4
Missing	32	.5

NOTE.—Distributions are weighted by inverse of selection probability.  $N = 7,021$ .

(1–3 = “liberal,” “moderate,” or “conservative”) and leans toward conservatism for this sample (see table 2).

We constructed two latent variables to represent the respondent’s level of awareness about alcohol-related problems in society and level of concern about

**Table 2.** Behavioral and Attitudinal Characteristics of Survey Sample

Variable	Weighted Count	Percent
Political orientation:		
1 Liberal	1,317	18.6
2 Moderate	2,387	34.0
3 Conservative	2,617	37.4
Missing	700	10.0
Aware of alcohol-related social issues (sum over 5 issues, $\alpha = .54$ ):		
0 None	166	2.4
1	369	5.3
2	767	10.9
3	1,545	22.0
4	2,193	31.2
5 All five	1,980	28.2
Concern about youth-alcohol social issues (mean of 2 issues, $r = .41$ ):		
1 Not at all	62	.9
1.5	142	2.0
2 Somewhat	619	8.8
2.5	1,550	22.1
3 Very concerned	4,646	66.2
Number days/month drinks alcohol:		
0 (abstain)	2,428	34.5
< 1	1,585	22.6
1–2.9	966	13.8
3–6.9	809	11.5
7–13.9	673	9.6
14+	491	7.0
Missing	69	1.0
Number days/month drinks 5+ in one sitting (among drinkers):		
< 1	2,937	69.3
1–2.9	1,015	24.0
3–6.9	142	3.4
7–13.9	88	2.1
14+	28	.7
Missing	20	.5

NOTE.—Distributions are weighted by inverse of selection probability. Unweighted  $N = 7,021$ .

these problems (table 2). Awareness is the sum of five dichotomized items that asked respondents whether or not they had “heard anything about” specific social problems related to drinking (Cronbach’s  $\alpha = .54$ ; see table A1 in the appendix for exact wording of questions and items). Concern is the mean of two 3-point items that asked how concerned respondents were about a list of social problems, in this case, teen drinking and drunk driving ( $r = .41$ ). Higher scores on both latent constructs indicate higher levels of awareness and concern. The majority (81 percent) of the study sample were aware of three or more of the five alcohol-related social problems presented, and 88 percent expressed concern over the issues of youth and drinking.

We measured respondent drinking behavior with self-reported responses to items used to create three variables (table 2). The first is a dichotomous variable created to compare abstainers with drinkers at any level (1 = abstain). Non-drinking is reported by 35 percent of the sample, which is consistent with previous U.S. national surveys (Hilton and Clark 1987). The second variable is the average number of days per month respondents reported drinking alcohol in the past 12 months, omitting abstainers (range: 1–31). The third variable is the average number of times per month respondents reported drinking five or more drinks at one sitting, again omitting abstainers (range: 1–31). Table 3 is a weighted, zero-order correlation matrix of these 12 exogenous and endogenous variables.

The outcome variable is respondent assessment of relative liability assigned to parties described in a set of vignettes offered in the opinion survey. Each respondent was presented with five different vignettes randomly drawn from 108 possible combinations and asked to make a judgment about the level of damages he or she thought should be assessed in a lawsuit. The vignettes always involved someone who gets into a traffic crash after drinking alcohol in one of three types of locations. The vignettes follow this format:

A [Fill: AGE] goes to a [Fill: PLACE] and [Fill: DRINKS HOW MUCH]. After leaving, he or she has a car accident that [Fill: DAMAGES]. [Fill: HISTORY OF HOST’S SOCIAL RESPONSIBILITY.] In a lawsuit, both the driver and the [Fill: OTHER PARTY] are being sued. Compared to the driver, who is certainly liable, how much of a penalty do you think the [Fill: OTHER PARTY] should have to pay? Should the [Fill: OTHER PARTY] have to pay an amount in damages that is: (3) more than the driver, (2) the same or equal to the driver, (1) less than the driver, or (0) pay no damages at all?

Figures 1A and 1B detail the possible options used in the vignettes.

#### ANALYSIS METHODS

Proceeding hierarchically, we first used ordinary-least-squares (OLS) regression methods to test the relationship of individual sociodemographic variables with endogenous, and potentially mediating, behavioral and attitudinal vari-

**Table 3.** Zero-Order Correlation Matrix of 12 Exogenous and Endogenous Respondent Characteristic Variables

Variable	A	B	C	D	E	F	G	H	I	J	K	L
A. Abstain	1.0											
B. Drinks/month	-.37*	1.0										
C. Intoxicated/ month	-.15	.31*	1.0									
D. Age	.22*	.02	-.13	1.0								
E. Gender (M)	-.11	.19	.14	-.08	1.0							
F. Race (W)	-.09	.06	.02	.16	-.01	1.0						
G. Married	-.01	.02	-.09	.18	.09	.10	1.0					
H. Children	.12	-.05	-.14	.42*	-.08	.01	.45*	1.0				
I. Education	-.25*	.14	-.01	-.08	.07	.12	.08	-.09	1.0			
J. Political	.10	-.07	-.08	.05	.02	-.00	.09	.10	-.04	1.0		
K. Concern	.15	-.15	-.18	.22*	-.21*	-.01	.10	.22*	-.06	.07	1.0	
L. Awareness	.02	-.03	-.07	.03	-.07	-.12	.03	.05	.04	.01	.22*	1.0

NOTE.—Because of the large sample size ( $N = 7,021$ ; weighted analyses), nearly all calculated correlation estimates are statistically significant.

\* These are pairs where the correlation exceeds .20.

Age	Place	Drinks how much?	Damages
17	<i>If 17...</i> Bar	Has a couple of drinks	Damages another car
<i>or</i>	<i>or</i> Teen party	<i>or</i>	<i>or</i>
24	<i>If 24 or 40...</i> Bar	Gets drunk	Seriously injures someone
<i>or</i>	<i>or</i> Private party		<i>or</i>
40			Kills someone

History of social responsibility for "place"	Other party being sued
<i>If Bar and 17-year-old...</i> This bar has frequently been cited for serving to minors.	<i>If Bar...</i> Owner
<i>If Bar and 24- or 40-year-old...</i> This bar has frequently been cited for disturbances caused by patrons.	<i>or</i> Server
<i>If Bar and any age (used randomly)...</i> This bar rarely has any legal problems.	<i>If Teen party...</i> Parents
<i>If Teen party...</i> The driver's parents knew about the party.	<i>If Private party...</i> Hosts
<i>or</i> The driver's parents did not know about the party.	
<i>If Private party...</i> The hosts of this party frequently throw rowdy parties in their home.	
<i>or</i> There was nothing unusual about this party.	

**Figure 1A.** Experimentally manipulated conditions used to fill vignette text

ables.<sup>4</sup> Second, we examined marginal relationships between vignette responses and individual demographic, behavioral, and attitudinal variables using cross-tabulation procedures. Finally, we used the linear-mixed-model (MIXED) regression procedure in SAS (Littell et al. 1996) to analyze variations in individual responses to vignettes adjusting for the sociodemographic,

4. In the case of the dichotomous outcome variable "abstain," we used logistic regression instead of ordinary-least-squares regression.

Driver age	and	Other party	after	Incident preceding accident
17-year-old		Bar owner		Bar drinking
17-year-old		Server		Bar drinking
17-year-old		Parents		Teen party drinking
24-year-old		Bar owner		Bar drinking
24-year-old		Server		Bar drinking
24-year-old		Host		Private party drinking
40-year-old		Bar owner		Bar drinking
40-year-old		Server		Bar drinking
40-year-old		Host		Private party drinking

**Figure 1B.** Possible combinations of experimentally manipulated conditions. Within each Driver age/Other party/Incident grouping are 12 combinations for a vignette, given the other characteristics (Place, How much drunk, Damages, History) creating  $9 \times 12 = 108$  possible vignette combinations.

behavioral, and attitudinal variables used in the first step. The outcome has four (ordered) levels. For such an outcome, various models for ordered logistic regression would first come to mind. However, ordered logistic models require assumptions about the odds ratio for either cumulative logits (cumulative ratio model) or generalized logits (proportional odds model); this is in a complex partial multifactorial design. We opted for the simpler analysis of covariance model with correlated responses within subject. Not only is the complex design implemented in a simpler environment but the expected values are directly interpretable on the liability scale. We checked that, indeed, the residuals from the linear regression are approximately Gaussian distributed. The general (linear) model for outcome variable  $y_{ij}$  from the  $i$ th respondent to the  $j$ th vignette ( $j = 1 \dots 5$ ) is

$$y_{ij} = \mu + V_m + \sum_{c=1 \dots k} \beta_c X_c + \tau_i + \text{error}_{ij}, \quad (1)$$

where  $i = 1 \dots 6,838$  for respondents,  $j = 1 \dots 5$  for the respondent-specific vignettes,  $V_m$  ( $m = 1 \dots 108$ ) are the vignette multifactorial effects, and  $X_c$  is

one of  $k$  covariates having corresponding regression coefficient  $\beta_c$ . The random effects in the mixed model are  $\tau_i$  (random intercept for respondent) and error  $\epsilon_{ij}$ . This specification of random effects models the repeated measures per respondent as having compound symmetric (exchangeable) correlation. The model includes only those 108 vignette combinations needed to describe the experimental design. The effect  $V_m$  measures the average assessment of relative liability in vignette  $m$  after adjusting for the covariates  $X_1 \dots X_k$ . Coefficient  $\beta_1$ , for example, represents the predicted change in the outcome variable (relative liability) for unit change in the covariate  $X_1$ , keeping the vignette the same and the other covariates the same. We initially included 12 exogenous and endogenous respondent characteristics in the model; seven (two of which are categorical) were statistically significant, and they are the only variables included in the final model presented in table 6. For each of the various factors present in the vignettes, we extracted estimates of average factor effect. For example, the adjusted estimates for the relative liability of the other party (parents) when parents knew of the teen party are 0.96, 0.99, 1.04, 0.93, 1.08, and 1.10 for the six combinations of amount consumed by the driver (drunk vs. having one or two drinks), and damage (property only, personal nonfatal, or personal fatal); these average to 1.01. On the other hand, the estimates of relative liability of parents when they did not know about the teen party are 0.23, 0.31, 0.21, 0.16, 0.30, and 0.29 in the same six scenarios; these average to 0.25. The relative liability of parents who knew as compared with parents who did not know is assessed as 0.76 ( $1.01 - 0.25$ ), almost one step higher on the 4-point scale of relative liability.

## Results

### REGRESSION MODELS: DEMOGRAPHICS WITH BEHAVIORAL AND ATTITUDINAL VARIABLES

Respondent demographic characteristics are related to, but explain little of, the variability in the behavioral and attitudinal variables. As shown in table 4, the Hosmer and Lemeshow (1989, pp. 140–45) goodness-of-fit test for the logistic model for abstinence from alcohol is poor ( $GF$  statistic = 14.22, 8  $df$ ,  $p = 0.08$ ), and the coefficients of determination ( $R^2$ ) for the linear regressions are low ( $< 0.10$ ). Nevertheless, in each of the five regression models, two or more demographic variables are statistically significant for the outcome, a result of a combination of magnitude of association and the large sample size. For the models related to drinking behavior, abstainers tend to be older, female, nonwhite, and less educated, but among drinkers the number of days the subject drinks alcohol is higher among older respondents, males, those not having children, and the more highly educated. Heavy drinking is

**Table 4.** Relationships of Behavioral and Attitudinal Variables with Demographic Variables

Variable	Model <i>F</i>	<i>R</i> <sup>2</sup>	Age <sup>a</sup>	Sex (Male)	Race (White)	Married	Has Children	Education <sup>b</sup>
Abstains from alcohol <sup>c</sup> No. days/month	854	14.2 <sup>d</sup>	.30***	-.44***	-.55***	.01	.006	-.42***
drinks alcohol No. days/month	58.8	7.3	.98***	3.13***	.09	-.37	-1.42***	.41***
drinks 5+ at a sitting	10.7	4.1	.06	1.11***	.12	-1.01***	-.41	-.23
Political orientation	15.6	1.5	.00	.04	-.01	.09***	.12***	-.02
Awareness	36.8	3.2	.02	-.23***	-.43***	.08	.03	.08***
Concern	111.6	9.2	.03***	-.14***	-.03	.04***	.09***	-.01

NOTE.—Coefficients in weighted logistic regression for abstain; weighted linear regressions for all others ( $N = 7,021$ ).

<sup>a</sup> Age coefficient is per 10 years.

<sup>b</sup> Education coefficient is approximately per 2–3 years.

<sup>c</sup> The coefficients for abstain estimate the log (odds ratio); all other coefficients estimate differences on the linear (natural) scale.

<sup>d</sup> Hosmer and Lemeshow chi-square goodness-of-fit test statistic for logistic regression models.

\*\*\* Significant at  $p < .001$ . All of the model predictor coefficients are significant at  $p < .01$ .

more likely reported by males and the unmarried (single, separated, widowed, or divorced).

With regard to the two attitudinal models in table 4, those married and with children are more likely to report themselves as both more conservative and concerned about the social problems related to drinking. In addition, higher levels of concern are associated with age (older) and gender (female). Awareness of youth alcohol issues is higher for females, nonwhites, and respondents who are better educated.

#### CROSS-TABULATIONS: RESPONDENT CHARACTERISTICS WITH VIGNETTE OUTCOMES

The focal outcome of this study is the respondent's rating of the relative liability assessed against the host who might also be sued as compared with the driver who had the traffic crash: the driver is responsible and the host not at all (none = 0), some liability but less liable than the driver (less = 1), equally liable as the driver (equal = 2), and greater liability than the driver (greater = 3). The weighted marginal distribution of this liability assessment variable shows 30 percent assessing no liability on the host, 18 percent assessing less liability on the host than on the driver, 34 percent assessing equal liability, and 18 percent assessing greater liability on the host (see the first data line of table 5). Also shown is the breakout of the marginal distribution according to characteristics of the respondent having the largest effect on the outcome. These are age, gender, education level, abstinence from alcohol use, number of days per month that respondent drinks alcohol, level of awareness of social issues, and level of concern for social issues as described in the methods. Interpretation of these cross-tabulations relies on the assumption that vignettes are randomly distributed across the characteristic involved. Consider gender, for example. The percentages of respondents assessing greater or lesser liability on the host are essentially equal among female and male respondents (female = 19 percent and 19 percent vs. male = 17 percent and 17 percent). But only 25 percent of female respondents would assess no liability on the host as compared with 35 percent of the males. Correspondingly, 37 percent of the females versus 31 percent of the males would assess equal liability on the host and on the driver (table 5). Assuming random distribution of vignettes, other cross-tabulations in table 5 show tendencies for older respondents to place greater liability on the host. Similarly, those less educated, abstainers and light drinkers, those more aware of social issues, and those more concerned about social issues all place greater liability on the host.

#### MIXED LINEAR MODELS: VIGNETTES

As described in the Method section, we used weighted-repeated-measures analysis of covariance models to estimate the effects (if any) of the different



**Table 5.** (Continued)

Characteristic/ Category	Liability of Host Involved (Bar Owner, Server, Parent, Party Host) as Compared with Liability of the Guest/Driver Is Assessed to Be:							
	Weighted Frequencies				Row Percentages			
	None	Less	Equal	Greater	None	Less	Equal	Greater
Not at all concerned	119	27	76	87	38	9	25	28
A little concerned	397	107	142	50	57	15	20	7
Somewhat concerned	1,292	646	791	317	42	21	26	10
Concerned	2,563	1,583	2,234	1,250	34	21	29	16
Very concerned	5,841	3,981	8,548	4,368	26	18	38	19

NOTE.—The study design called for each participant to respond to five vignettes; therefore, frequencies are multiples of cases, with minor missing data. Frequency counts are also weighted inversely to the probability of selection. Five of the original 12 respondent characteristic variables were dropped because of insignificant relationships with the dependent variables: race, marital status, parental status, political orientation, and frequency of intoxication.

aspects of the vignettes on the assessment of liability. The adjusting variables retained in the model were the demographic characteristics (age, gender, education, and drinking behavior), an indicator for abstaining and one for average days per month alcohol is consumed, and both attitudinal scales (awareness and concern for alcohol-related social issues). The top panel of table 6 presents estimates and significance statistics for the effects of these respondent characteristics on the placement of liability. We see that males, those more educated, abstainers, and those that drink more frequently tend to place more liability on the driver (negative sign), while older persons and those most aware of or concerned for alcohol-related social issues tend to assess increased liability on the other person involved. However, the predicted effects are small and not statistically significant for some. These averaged effects represent contrasts that control for demographic variables but are averaged across other vignette factors. Since vignette factors are assigned randomly (with some logical constraints), their effects are at least approximately balanced. Contrasts thus average the differences between stated classes of vignettes across potential interaction effects (Hinkelmann and Kempthorne 1994).

We now turn to the manipulations in the vignettes presented in the bottom portion of table 6. Vignettes describing 17-year-old guests received a rating 0.87 scale points higher than vignettes with 24-year-old guests, with virtually no additional difference between 24- and 40-year-olds (contrasts 1–3). Qualitatively, this raises the penalty judged by just under a step, for example, from

**Table 6.** Effects on Assessment of Relative Liability of Host as Compared with Guest/Driver of Factors Presented in Vignettes

Adjusting Variables	Coefficient	SE
Age (18–97)	.002	.000
Gender (male)	–.105	.016
Education (1–7)	–.069	.006
Abstains from drinking (1 = yes)	–.093	.018
Days per month drinking (1–31)	–.003 <sup>n.s.</sup>	.001
Aware of social problems = 0	–.088 <sup>n.s.</sup>	.055
Aware of social problems = 1	–.272	.037
Aware of social problems = 2	–.157	.027
Aware of social problems = 3	–.067	.022
Aware of social problems = 4	–.053	.020
Aware of social problems = 5	.000	...
Concern for youth drinking = 1	.039 <sup>n.s.</sup>	.092
Concern for youth drinking = 1.5	–.357	.057
Concern for youth drinking = 2	–.242	.030
Concern for youth drinking = 2.5	.000	...
Concern for youth drinking = 3	.115	.020
	Vignette Factorial Effects	
	Effect	SE
Contrasts:		
Age of driver:		
1) Age 17 vs. age 40	.906	.010
2) Age 24 vs. age 40	.035	.011
3) Age 17 vs. age 24	.870	.010
4) Teen vs. adult (party only)	.599	.015
5) Teen vs. adult (bar only)	1.032	.011
Place of drinking:		
6) Bar vs. private party: teen or adult	.497	.011
7) Bar (teen) vs. teen party	.586	.015
8) Bar (adult) vs. private party	.153	.122
9) Other being sued (nondriver): Owner (bar) vs. server (bar)	.072	.011
Past history of social responsibility:		
10) Irresponsible vs. responsible	.425	.009
11) Bar (irresponsible vs. responsible): adult	.393	.014
12) Bar (irresponsible vs. responsible): teen	.322	.017
13) Parents knew vs. did not know	.764	.024
14) Private party: wild vs. normal	.422	.020
Type of damage caused:		
15) Fatal vs. property	.083	.011
16) Fatal vs. nonfatal	.010 <sup>n.s.</sup>	.011
17) Nonfatal vs. property	.074	.011

**Table 6.** (Continued)

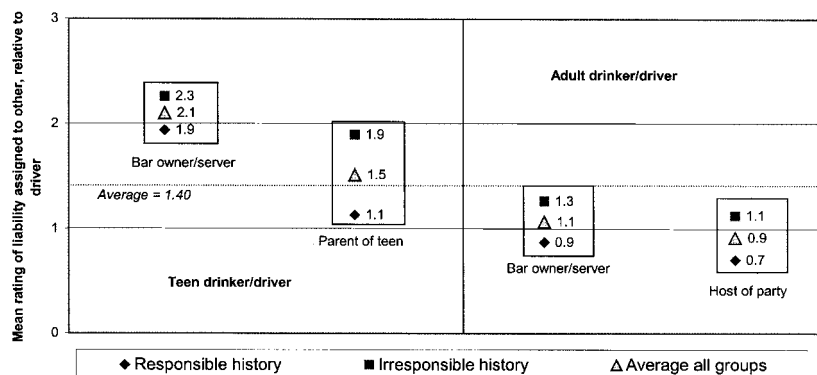
Adjusting Variables	Vignette Factorial Effects	
	Effect	SE
Level of alcohol consumed:		
18) Drunk vs. 1–2 drinks	.115	.009
19) Drunk vs. 1–2 drinks: teen	.025 <sup>n.s.</sup>	.014
20) Drunk vs. 1–2 drinks: adult	.161	.012

NOTE.—These have been weighted and adjusted for major covariates. Positive coefficients or effects indicate predicted shifts toward more liability on the other person and away from the driver. n.s. = not significant. Effects are stratified within subgroups noted.

none to some, but less than the driver's penalty, or from a lesser penalty to an equal one. The hypothesized age effect is not continuous—hosts who serve underage drinkers are held to a much higher level of liability than those who serve adults of any age, regardless of the host/setting or other factors.

The manipulations we made in vignettes regarding place and host reflect only one degree of freedom for commercial versus private setting and an additional degree of freedom between owner and server within commercial settings. The increased liability assigned to bars as compared with private parties (adult and teen) averaged 0.50 scale points higher across all vignettes (contrast 6), but this effect was significantly different for teen guests than for adult guests. These can be seen from stratified contrasts computed only within age groups. Bars serving teens received ratings 0.59 points higher than parents responsible for teen parties (contrast 7), while bars serving adults had average liability ratings only 0.15 point higher than private hosts (contrast 8). Conversely, age effects were stronger when stratified within bars as compared with private parties. Parents of teen guests received liability ratings 0.60 points higher than hosts of adult parties (contrast 4), while bars that served teens received liability ratings 1.03 points higher than bars that served adults (contrast 5). The distinction between owners and employee servers meant little to respondents—owners were assigned only 0.07 scale points more liability than servers (contrast 9).

Past history of social responsibility demonstrated by hosts was manipulated independently of setting/host, and the effects of this manipulation also depended somewhat on the age of the guest. Vignettes describing bars with a history of irresponsible acts involving either adult or underage drinkers received ratings 0.39 and 0.32 scale points higher, respectively, than those with no such prior behavior (contrasts 11 and 12). When parents are described as knowing about (implicitly condoning) a teen party, their liability was assessed, on average, 0.76 scale points higher than if they did not know (contrast



**Figure 2.** Survey respondent assessment of liability to bar owners/hosts/parents by age of drinker (teen/adult) and setting (bar/party). Also shown is effect of bar/host/parent past social irresponsibility.

13)—about twice the effect for bars (compare to contrasts 11 and 12). Hosts of frequently “rowdy” adult parties rate an average 0.42 higher level of liability than private hosts without such a history (contrast 14). Figure 2 summarizes these most important effects that we will reconsider in the discussion below.

Two other vignette manipulations had marginal effects on ratings. The type of injury caused did not produce any difference greater than 0.1 scale points, although differences between personal injury and property damages were statistically significant (contrasts 15 and 17). The effect of the amount of alcohol consumed by the guest/driver increased liability ratings by an average of only 0.11 scale points (contrast 18). This effect was not significant within vignettes describing teens, while allowing adult guests to get drunk did produce an increase of 0.16 in liability ratings across all hosts (contrasts 19 and 20).

## Discussion

The manner in which respondents assigned responsibility to commercial and social hosts in our liability vignettes met most of our expectations. The mean rating of liability assigned to the host was 1.4, somewhere between judgments of lesser and equal liability as compared to the guest/driver. The overall standard deviation of ratings was 1.1. This variability largely arises from respondents’ reactions to the factors we used to describe vignettes. The extent of that discrimination in judgments is illustrated by the extremes. For vignettes in which a bar owner with a history of legal problems is sued when a 17-year-old driver gets drunk and causes injury to another person, the mean rating

was 2.3, with 93 percent favoring liability for the host equal to the guest/driver or greater (scale scores of 2 or 3). For vignettes in which a private host with no history of problems is sued when a 40-year-old driver has a few drinks and causes injury to another person, the mean rating was 0.7, with 17 percent assessing liability of the host greater than or equal to that of the guest/driver.

As we expected, the vignette variables to which respondents reacted most strongly were the age of the guest/driver, the host/setting, and the past social responsibility shown by the host (see fig. 2). But the role of age of guest in conditioning the effects of other variables indicates the existence of two qualitatively different standards for assigning legal liability and, hence, social accountability. First, consider vignettes involving teens. In such cases, bars are assigned more than half a scale point greater liability on average than parents. Bars are also judged one full scale point greater liability for incidents involving teens than for those involving adult customers. The effect for bars of prior social responsibility is much smaller than these effects and also much smaller than the same effect for parents. In fact, socially irresponsible parents who condone underage drinking and bars with relatively blameless histories are held to about equal levels of liability. All this adds up to the public expectation that bars be held substantially more accountable for individual, isolated cases of underage service than applies to any other situation portrayed in our vignettes.

Parents do not totally escape their own accountability, as they are assigned more than a half scale point greater liability on average than hosts of private adult parties, even though they are not hosts in the usual sense and have no knowledge of a party. But that knowledge does have a significant influence on the level of liability they are assigned, and it is the largest such effect among all hosts. The most germane contrast between parents and bars is probably motivation. Commercial hosts have an inherent conflict between profit motive and public safety. Coupled with a perception of lax enforcement, judgments in our survey may tend to discount prior record and assume a general lack of conscientiousness in commercial settings. Our inference is that bars are expected to exercise a greater degree of control within their domain than that expected of conscientious—or at least not overtly negligent—parents over the general range of their children's behavior.

There are several qualitative differences in the allocation of accountability in vignettes involving adult guests. On average, ratings are one full scale point lower, with 60 percent awarding any damages in our vignettes. Although ratings have the same variance as those for teen vignettes, they are less responsive to vignette manipulations. Overall, bars are held only marginally more liable than private hosts for the actions of adult guests. The effects of prior social responsibility are about 2.5 times larger than the bar/private difference, and they are almost equal for bars and private hosts. So, in one sense, we conclude that prior social responsibility matters more than setting for adult

drinkers. On the other hand, the effect of prior social responsibility is less than half a scale point. Thus, the effect of social responsibility on vignette ratings is not much more than for bars serving teens, and it is much less than for parents of teens.

These findings on setting and guest/driver age are generally consistent with our hypotheses. Public sentiment clearly supports assigning considerable liability to commercial and private hosts with prior histories of irresponsible behavior. Other findings reinforce this conclusion by process of elimination. For example, the extent of damages caused by the driver's crash, while it may increase sympathy for the victim, does not affect the relative assessment of the host's liability. This evidence of objectivity in ratings is an important check on the validity of our vignette approach. It should also be somewhat reassuring to those who fear out-of-control awards as an outcome of this aspect of liability reform. Our finding that individual characteristics do not greatly influence personal judgments implies that respondents are willing and able to attend to vignette variables and ignore personal prejudices or interests. This is a sign of an important value consensus in the U.S. population as a whole.

One other finding does surprise us, however. The amount of alcohol consumed by the driver had little influence on ratings, although its effect was positive and statistically significant for adult guests. We might have expected that more culpability would be assigned to a host when adult guests become drunk. Many respondents may have discounted a host's ability to monitor the sobriety of individual guests, or they may have felt that personal responsibility of guests is most important in these situations. A more sophisticated interpretation is that high-risk consumption raises the culpability of both guest and host in equal proportion and thus should not change the relative liability rating. The important observation is that substantial accountability is allocated to the host for both high- and low-risk drinking. We feel that this finding reinforces our earlier inference about the low exculpatory value of a host's prior record for responsible behavior (excluding parents of teen drinkers). In other words, while host behavior does matter, a host bears some accountability as host regardless of negligence.

It is this point that may give considerable pause to those who seek to capture only excessively irresponsible commercial hosts in the net of liability reform. Our vignettes clearly demonstrate an intent broader than that among a large proportion of respondents. Of 108 distinct vignettes, 30 received (unadjusted) mean ratings under 1.0—the minimum level of penalty. But even in those vignettes, which mostly involved adult guests and hosts not described as irresponsible, between 40 percent and 60 percent of respondents assigned some liability to the host. Clearly a very substantial proportion of Americans feel there is something fundamentally wrong with drinking and hosting norms in contemporary society, and they are willing to use civil litigation to create new incentives for responsible hosting.

In closing, we should comment on the limitations of the multivariate factorial vignette approach as it relates to judgments in actual civil liability proceedings. It is not our claim that the responses to vignettes are a valid predictor of the distribution of outcomes in real civil actions. Nor do we claim that the survey and legal judgment processes are fundamentally the same. Yet the vignette approach allows us to explore the dimensions of the factual content of a case that resonate with the average person's sense of "justice." This tells us something about the social values that are part of a conception of justice that may be vague for both researchers and the people interviewed. Similar methodology has been applied by economists who seek the "value" of a class of goods and by sociologists who attempt to establish what makes a given wage rate or child custody ruling "fair" (Rossi and Nock 1982).

We ask the general public how they would like to see justice applied in these types of situations rather than what they expect from the current justice system. This distinction is an important positive element in comparing the vignette approach with actual civil proceedings. The implementation of liability reform will undoubtedly be complex, and it will need to address a set of procedural issues that are far removed from the value preferences we explore in this article. Nevertheless, information acquired from these analyses can set a useful target for public policy to be achieved by such reform.

## Appendix

**Table A1.** Wording and Scales of Policy Opinion Survey Items

Demographic Variables	Question Wording
Age	In what year were you born? (Responses subtracted from 1997 for approximate age)
Race	Do you consider yourself to be of Hispanic origin, such as Mexican, Puerto Rican, Cuban, or other Spanish background? AND What race do you consider yourself to be? (Responses combined and dichotomized to indicate racial background: 1 = white/non-Hispanic, 0 = all others)
Marital status	Are you now married, not married but living with a partner, widowed, divorced, separated, or have you never been married? (Responses recoded to 1 = married, 0 = all others)

**Table A1.** (Continued)

Demographic Variables	Question Wording
Parental status	Do you have any children? This includes any natural, adopted, or step-children whether they are living with you or not, or any wards. (1 = yes, 0 = no)
Education	What is the highest level of school you ever completed or the highest degree you received? (1 = less than high school, 2 = high school or GED, 3 = some college or AS degree, 4 = bachelor's degree, 5 = master's degree, 6 = law degree, 7 = MD/doctorate)
Political orientation	When it comes to most political issues, do you think of yourself as a liberal, a moderate, or a conservative? (1 = liberal, 2 = moderate, 3 = conservative)
Awareness scale: five items ( $\alpha = .54$ )	Stem: We're interested in how people get information about various social issues. I'm going to mention some issues. For each one please tell me whether you have heard anything about it in the past year on the radio or TV, read about it in newspapers or magazines, or talked about it with friends, school officials, or someone like that. Have you heard anything in the past year about ... (item 1) alcohol and violence? (item 2) proposals to increase taxes on alcoholic beverages? (item 3) traffic deaths involving young drivers? (item 4) how easy it is for teenagers to buy alcohol? (item 5) alcohol and teenage sex? (1 = yes, 0 = no; scale is the sum of the five items [0-5 range])

**Table A1.** (Continued)

Demographic Variables	Question Wording
Concern scale: two items( $r = .41$ )	Stem: Let's start off [the survey] with some questions about problems that affect teenagers. I'd like to ask your attitudes about some current public problems, and I'd like to know whether you have felt concerned about any of them recently. How concerned would you say you are about the problem of ... (item 1) drunk driving? (item 2) teenage drinking? (1 = not at all concerned, 2 = somewhat concerned, 3 = very concerned; scale is the mean of the two items [1–3 range])
Drinking scales: Abstain	I'd like to ask you a little about your own drinking habits. Over the past 12 months, how often have you had any alcoholic beverage to drink, such as beer, wine, wine coolers, mixed drinks, or other liquor? (1 = not at all or never, 0 = all others)
Drinks per month	Converts responses greater than "none/never" (to above question) to average number of drink days per month (1–31 days, excluding abstainers)
Intoxicated per month	And also over the past 12 months, how often have you had five or more drinks in a day? Please include any alcoholic beverage, such as beer, wine, wine coolers, mixed drinks, or other liquor. (Responses converted to average number of intoxicated days per month [1–31 days, excluding abstainers])

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