

The Impact of Alcohol Intoxication on Medical Judgments by Professionals and the Public: Evidence from a Cross-National Experiment

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Abstract

Existing studies do not provide consistent results regarding the role of alcohol intoxication on sentencing, and little is known about the specificity of sentencing by judges when compared to the general population. In this study, we experimentally investigated the influence of the level of alcohol intoxication on the sentence given to a defendant who had committed an act of physical aggression towards another person. A large sample of judges (N = 1207) and a representative sample from the general population (N = 1972) from both Germany and France were randomly assigned to a written depiction of an assault case in which the protagonist had either previously drunk no alcohol, or 0.50 liters, or 1.5 liters of beer. The respondents were then asked to assign a sentence to the defendant from a range of predefined options. Based on previous studies on sentencing among judges, we hypothesized that they would deliver harsher sentences than the participants from the general population, contrary to the “myth of judicial leniency”. Moreover, following attribution theory, we hypothesized that alcohol consumption would decrease the severity of the sentence chosen by the participants from the general population. It was expected that the judges would not be influenced by alcohol information because in both France and Germany, alcohol is not considered to be an aggravating factor in crime according to national laws. The results showed that irrespective of the level of alcohol intoxication, the judges recommended harsher sentences than the participants from the general population, and tended to rely on fewer sentence options. However, contrary to our expectations, in both countries, the protagonist’s level of intoxication did not influence sentencing severity.

The Role of Alcohol Intoxication on Sentencing by Judges and Laypersons: Findings from a Binational Experiment in Germany and France

Introduction

The association between drinking alcohol and aggression has been recognized for centuries (Hanson, 1995). Today, alcohol is known as a psychotropic substance which is frequently related to aggressive and violent behavior (Bègue & Subra, 2006; Boles & Miotto, 2003; Cherpitel et al., 2012; Fagan, 1990; Gmel & Rehm, 2003; Parker & Auerhahn, 1998; Van Amsterdam et al., 2019). For example, in a classic study aggregating more than 9300 criminal cases from 11 countries, Murdoch, Pihl, and Ross (1990) showed that 62 percent of violent offenders had been drinking at the time of committing the crime, or shortly before. Similarly, in an American nationwide survey, Coleman and Strauss (1983) showed that rates of marital violence were 15 times greater for husbands who were often drunk compared to those who were never drunk during the previous year. Furthermore, experimental studies carried out in laboratories using human samples have provided consistent results showing a causal effect of intoxication on aggression (Abbey et al., 2014; Bushman & Cooper, 1990; Ito et al., 1996; Parrott & Eckhardt, 2017).

The « intoxication defense »

While it is acknowledged that alcohol has a causal effect on aggressive behavior, the extent to which information regarding intoxication has an influence on the evaluation of transgressions needs to be clarified (Padfield, 2011). As the « intoxication defense » is a permissible legal defense in criminal trials in many places (e.g., Coates & Wade, 2004; Grad, Goldberg, & Shapiro, 1971; Lang, 1993; Lang & Sibrel, 1989; Room, 1996; Tao, 1969; Wilson, 1997), accused individuals may use self-serving explanations involving intoxication reducing their personal responsibility to decrease the negative reactions of others (see Gabor, 1994; Scott & Lyman, 1968; Snyder, Higgins, & Stucky, 1983; Sykes & Matza, 1957). Discourse analysis studies have suggested that the authors of violence commonly use intoxication rhetoric as excuses (Abrahamson, 2006; Dobash & Dobash, 1979; Gelles, 1972; Gelles & Strauss, 1979; Scully & Marolla, 1984; Tryggvesson, 2004). In a study of 197 incarcerated male offenders, Loza and Clements (1991) showed that alcohol abusers assigned significantly more blame to alcohol in comparison to other people. These results suggest that some offenders use alcohol as an excuse or justification for their actions.

Alcohol and sentencing in third party observers

While the self-serving function of alcohol attributions seems obvious among offenders, the role of alcohol in relation to third party observers and judicial experts is also an important issue. From a legal point of view, intoxication could be considered as an aggravating factor, an irrelevant factor, or a mitigating factor (Dingwall & Koffman, 2008). Studies of informal or legal sanctions following intoxicated transgressions in preliterate society have highlighted that drunken transgressions involving sex or aggression are not severely punished (Horton, 1943; McAndrew & Edgerton, 1969; Washburne, 1961, quoted by Critchlow, 1983, p. 452). Neither is this mitigating effect of alcohol limited to preliterate societies, as a penal study examining 238 cases of sentencing for first degree murder in California from 1958 to 1966 showed that half of all offenders who had consumed little or no alcohol received the death penalty, whereas only 30% of offenders who had consumed a moderate or excessive amount of alcohol were sentenced to death (Baldus, 1980; Note, 1969). Another, larger study based on reports on 628 offenders observed that offenders convicted for minor offences received more lenient sentences if they had consumed alcohol in conjunction with their crimes than if they had not done so. The opposite was observed for offenders committing serious crimes (Harrell, 1981).

However, in the general population, surveys do not tend to strongly sustain the excuse function of alcohol. A survey by Sobell and Sobell (1975) indicated that 60% of respondents thought that an intoxicated person was behaviorally responsible and accountable for their actions. In a random digit dialing study regarding alcohol expectations among six countries, Room and Bullock (2002) noted that only 11% (France) to 48% (Italy) agreed with the sentence: 'people who are drunk should not be considered as responsible for their actions as when they are sober'. In another study in Ontario, Paglia and Room (1998) showed that 92% of respondents felt that people remained accountable for any action when drunk.

Sentencing studies based on experimental methodology

By and large, these survey studies do not provide strong support for the idea that alcohol consumption would be perceived as an excuse for criminal acts by laypersons. However, it has been suggested that accepting alcohol consumption as an excuse when responding to survey questions might result in desirability bias, at least in cultures emphasizing self-control

(Tryggvesson & Bullock, 2006). It may be the case that less direct questioning could enable other trends to emerge. Therefore, a between-subjects analysis using vignette methods appeared to be an appropriate way of avoiding a response bias. Tryggvesson and Bullock (2006) showed that respondents attributed less blame to the perpetrator as a result of his drinking under specific circumstances. Several other experimental vignette studies have also confirmed that drunken offenders were frequently assigned less responsibility and blame than offenders who were not drunk (Critchlow, 1985; Carducci & McNeely, 1981; Katz, Arias, & Beach, 1995; McKay & Collins, 1987; Richardson & Campbell, 1980, 1982). However, in another group of vignette studies, the intoxication of an aggressor was shown to have null effect or mixed effects on responsibility and/or attribution depending on other variables. In a study by Wild, Graham, and Rehm (1998), intoxication reduced the attribution of blame, but only among targets without any prior criminal history. Another study showed that the perpetrator of an acquaintance rape was considered to be less responsible and blameworthy after alcohol consumption, but only when he and the victim had roughly equivalent levels of intoxication. When the victim was more intoxicated, perceptions of the perpetrator's responsibility increased (Stormo, Lang, & Stritzke, 1997; see also Corenblum, 1983; Dent & Arias, 1990; Fischer, 1995; Gustafson, 1991; Kelly & Campbell, 1997; Testa & Leonard, 2001). Finally, in other studies, intoxication increased the level of responsibility and/or blame attributed to an aggressor (Aramburu & Leigh, 1991; Lane & Knowles, 2000; Leigh & Aramburu, 1994; Stewart & Maddren, 1997).

Considering the available literature on the possible mitigating effect of alcohol on sentencing among laypersons, we expected that the severity of intoxication of a depicted offender would decrease the seriousness of their sentence. We also expected that judges would be less influenced by the presence of alcohol than participants from the general population. In legal corpora in France and in Germany, alcohol intoxication does not represent a mitigating factor, and indeed is even considered as being an aggravating factor when the author of a road accident is intoxicated, as is the case in other countries (regarding Australia, see Warner et al., 2018). When presented with a sentencing vignette, the judges' expertise in law represents a form of prior knowledge that constitutes a specific input that should influence information processing (Bless & Greifeneder, 2018). Relying on this stable knowledge structure, judges were expected to be less influenced by the contextual factors surrounding the case. This hypothesis is consistent with a previous study which analyzed how judges in the County Court of Victoria responded to various factors in 122 sentencing cases, and compared the views of the judges with those of the 426 jurors who had tried the cases. It was observed that jurors were more likely than judges to find addiction and intoxication both aggravating and mitigating (Warner et al., 2018; see also Quilter, McNamara, Seear, & Room, 2018).

In conclusion regarding the excuse function of alcohol, our review suggests that whereas individuals frequently associate alcohol consumption and violence, the attribution of responsibility and blame following hypothetical or real-life intoxicated violence is not necessarily diminished among observers, which suggests that important contextual features frequently interact when judging alcohol-related violence. The inconsistencies observed in the available literature may also be due to historical evolutions and cultural shifts in societal attitudes about substances (Fagan, 1990).

While vignette studies provide a systematic analysis of the factors involved in sentencing, they are usually subject to several important limitations that may account for the inconsistencies mentioned above. First, most of the vignette studies rely on small and non-representative samples

composed of university students (who tend to be predominantly white, young, and female; Heinrich, Heine, & Norenzayan, 2010), which may produce specific results in relation to some variables (see Bornstein et al., 2017). As has been highlighted by Lightowlers and Pina-Sanchez (2017), nationally representative quantitative work examining how intoxication is used in sentencing practice is lacking. Moreover, the available studies have rarely, if ever, investigated how criminal justice professionals elaborate their sentences compared to laypersons. The present study aims to fill this important gap using a very large sample of judges and a large and representative sample of participants drawn from the general population.

The study was carried out in two countries, Germany and France, in order to explore the generalizability of the phenomenon. These neighboring European countries have both inherited Napoleonic criminal law systems and are considered by political science to be “conservative corporatist systems” (Esping-Andersen, 1990; Cavadigno & Dignan, 2005). Sociologically, they have an equivalent index of normative « tightness » (Gelfand et al., 2011), which means that the strength of the general behavioral norms and the tolerance toward deviant behavior are very similar in both countries. Moreover, the per capita levels of alcohol consumption in both countries are in the same category (>12.2 liters/year: World Health Organization, 2018). The between-countries comparison was exploratory, and no hypotheses were formulated regarding the possible differences in sentencing between France and Germany.

The issue of judicial leniency

In a recent study carried out in France on a large representative sample including 90,000 participants, 64% of the participants expressed dissatisfaction towards penal justice, and many of the respondents believed that sentences were generally too short or too soft (Larchet, 2019). This disapproval has also often been observed in other countries. North American, European, and Australian surveys have indicated that public opinion strongly distrusts penal justice, which is considered as too lenient towards delinquents (Gelb, 2008; Hough et al., 1987; Mayhew & Van Kesterem, 2002; Robert, 1978; Roberts, 2002; Roberts et al., 2007). As Roberts indicated 25 years ago, in international surveys, the issue of judicial leniency “has never failed to generate the result that the majority of the public... expressed their desire for harsher penalties. In fact, this question concerning sentencing severity generates a higher consensus than any other issue in criminal justice” (Roberts, 1992, p. 147). Vignette studies analyzing how judges or law professionals elaborate their sentence compared to laypersons have provided less consensus (Warner, Davis, Walter & Spiranovic, 2014). Despite some notable exceptions (Doob & Roberts, 1984; Tremblay, Cordeau & Ouimet, 1994; Doob & Roberts, 1984) which have shown that when laypersons have more available information, their hypothetical sentences get closer to the judges’ evaluations, most of the vignette research has shown more lenient sentences by the public than by judges (see, however, Ouimet, 1990). For example, Hough and Roberts (1998) asked a representative sample of British participants to evaluate a burglary case and showed that they sentenced the offender in almost the same way - or even more leniently - than the judges, even though around 80% of these respondents thought that the sentences delivered by the judges were too lenient.

Beyens (2000) used an International Crime Victimization Survey question asking which sentence the respondents would prefer in the case of a young repeat burglar who had stolen a television. Among the interviewed judges, 63% delivered a prison sentence, whereas only one out of five respondents from the public chose the same sentence. In a Scandinavian sample, while citizens were convinced that justice was generally too indulgent, the sentences allotted to

criminal scenarios were similar, or those of judges were stiffer (Balvig et al., 2015; see also De Keijsjer et al., 2007; Diamond & Stalans, 1989; Kuhn & Vuille, 2011). Finally, an Australian study involving 987 jurors from 124 criminal trials found that 62% of jurors suggested a more lenient sentence than the judge, and that only 36% were more severe (Warner, Davis, Spiranovic, Cockburn, & Freiberg, 2017).

In summary, most of the studies discussed here showed that, in contrast to the “myth of judicial leniency in sentencing” (Diamond & Stalans, 1989), judges do not deliver less severe sentences than members of the public would, and that in fact, their sentences are often stiffer.

Methods

Participants

The sample included a total of 3179 participants aged 18-83 ($M = 48,71$, $SD = 16,64$, 48,1% females) from France ($N = 1381$) and Germany ($N = 1798$). In France and Germany, the general population sample was representative with respect to age group, gender, incomes, and regions, and included 1,972 participants (62% of the total sample). Judges were contacted to participate in the online study via various institutional and professional networks, including the national Ministry of Justice in France, and the respective Ministries of Justice of the different German federal states. A total of 1,207 judges completed the study.

Measures

Participants were asked to read a description of an offense, and to give a sentence to the perpetrator. They were randomly exposed to scenarios where the perpetrator had either drunk 0 liters, 0.5 liters, or 1.5 liters of beer. Each participant was therefore randomly given one version of the scenario, reading as follows: « After leaving a nightclub, Mr. A. started insulting a man he met, by chance, in the parking lot of the establishment and punched him twice. The victim suffered a fracture of the jaw, for which he underwent medical intervention and was unable to work for 15 days. The defendant, Mr. A., denied the facts: he said he left the club later. He was however identified by witnesses who indicated that, in addition, he had not drunk alcohol (condition 1), had drunk 0.5 l of beer (condition 2), or had drunk 1.5 l of beer (condition 3). The defendant is 23 years old, and is single, without children. He is a truck driver; his gross monthly income is 1200 euros. He has a bank debt of 6500 euros for the purchase of a car. He has no previous criminal record, and no history with alcohol ».

The proposed sentences were as follows: 1 = Dispensing prosecution; 2 = Obligation to undergo medical treatment, not recorded in the judicial file; 3 = Fine, not recorded in the judicial file; 4 = Community work; 5 = Fine (less than one month's net income); 6 = fine (more than one month's net income); 7 = Prison sentence with probation (suspended sentence); 8 = Prison, for less than one year; 9 = Prison, for more than one year. In order to ensure a consensual severity gradient, these nine sentences were combined into four levels of increasing severity: 1 = Dispensing prosecution; 2 = Obligation to undergo medical treatment, not recorded in the judicial file; Fine, not recorded in the judicial file; Community work; 3 = Fine (less than one month's net salary; more than one month's net salary); 4 = Prison sentence (suspended, less than one year; more than one year).

We conducted a multilevel mixed-effects linear regression to estimate the effects of alcohol intoxication on sentencing severity, while controlling for random error from countries and occupations by adding random intercepts for Country and Occupation. The between-subject variable "Alcohol Intoxication" (3 levels), Age, Sex, Country, and Occupation were each entered as fixed effects. The severity level was entered as a dependent variable. All continuous variables

were centered. The analysis was conducted with R 3.5.2 (R Core Team, 2018), with the *lme4* and *LmerTest* packages.

Results

Intoxication Level (1 = weak, 2 = mild, 3 = strong), Age (standardised), Sex, Country (-1 = Germany, 1 = France), and Occupation (-1 = Judge, 1 = General Population) were each entered as fixed predictors in a linear model with Severity scores entered as dependent variables (see Table 1 for the descriptive statistics, and Table 2 for the fixed and random effects estimates). The fixed effects analysis revealed no main effect of Intoxication level, $b = .001$, 95% CI [-0.03, 0.03], $t(3100) = 0.09$, $p = 0.92$, $\eta^2_p < 0.001$. We found a main effect of occupation on severity, $b = .28$, 95% CI [0.22, 0.33], $p < 0.001$, $\eta^2_p = 0.028$, as the judges ($M = 3.42$, $SD = 0.62$) selected more severe sentences than the participants drawn from the general population ($M = 3.14$, $SD = 0.87$). Additionally, we found a main effect of age, $b = .003$, 95% CI [0.001, 0.005], $p = .001$, $\eta^2_p = 0.003$, and sex, $b = .09$, 95% CI [-0.14, -0.03], $p = 0.003$ on severity, indicating that older participants and males assigned stiffer sentences to the defendant.

Insert Table 1 and Table 2

A multinomial logistic regression was conducted on sentences, entered as a categorical dependent variable with four outcomes. As with the linear model, Intoxication Level (1 = weak, 2 = mild, 3 = strong), Age (standardized), Sex, Country (-1 = Germany, 1 = France) and Occupation (-1 = Judge, 1 = General Population) were entered as fixed predictors. The judges tended to be more likely to choose harsher sentences than the general population. For example, the judges were significantly more likely to choose a prison sentence than dispensing prosecution, $OR = 16.91$, $z = 2.77$, $p = .006$, to choose a fine than dispensing prosecution, $OR = 25.8$, $z = 3.18$, $p = .001$, and had a marginally significantly higher probability of choosing medical treatment over dispensing prosecution, $OR = 1.98$, $z = 1.73$, $p = .08$, compared to the general population. Overall, judges had a higher probability of choosing the two harsher sentences than the general population (see Figure 1 and Table 3 for the raw probabilities).

Insert Figure 1 and Table 3

Discussion

Large-scale empirical research studies on sentencing practice in relation to assault offences involving intoxication are scarce and inconsistent, and research in the area has mainly been based on small and convenience samples. In this study, we examined the possible mitigating effect of intoxication on sentencing. We carried out a binational study involving 1,207 judges in Germany and France, and representative population samples in both countries including 1,972 participants, and investigated the influence of the severity of alcohol intoxication on the sentence attributed to a defendant who had committed an act of physical aggression. We relied on a between-subject vignette method in order to limit response bias, and we evaluated the precise contribution of three intoxication levels on sentencing by judges and laypersons.

One important feature of our study was the inclusion of judges. To the best of our knowledge, no prior study has used such a large sample of this category of participants. We

observed that judges expressed harsher sentences than participants from the general population, irrespective of their age or gender. Such results contradict the “myth of judicial leniency in sentencing” (Diamond & Stalans, 1989), and undermine the common idea of “penal populism” (Roberts et al., 2003; Pratt, 2007; Hogg, 2012).

Further analyses showed that the main difference between the two samples was characterized by the more restrictive set of sentencing options chosen by judges, while in contrast, people from the general population tended to rely on a wider range of sentences. Some of them selected very punitive sentences (e.g., prison), while others were very lenient and therefore reluctant to impose any kind of punishment. Therefore, beyond the simple matter of leniency or harshness, the difference between judges and the public lay in the respective uses they made of the options available to them. And, in this matter, participants from the general population seemed less predictable than professional judges.

Contrary to our expectations, we observed that intoxication level did not influence sentencing severity. This results is at odds with many prior vignette studies which reported that third parties assigned less responsibility and blame to drunk perpetrators than to sober ones (Critchlow, 1985; Carducci & McNeely, 1981; Katz, Arias, & Beach, 1995; McKay & Collins, 1987; Richardson & Campbell, 1980, 1982) or, on the contrary, that intoxication increased responsibility and/or blame attributed to an aggressor (Aramburu & Leigh, 1991; Lane & Knowles, 2000; Leigh & Aramburu, 1994; Stewart & Maddren, 1997). Three possible explanations can be suggested in seeking to understand the inconsistencies between the previous research and our current results based on a large sample. First, the classical file drawer phenomenon (according to which the results of a study are more likely to be published when the results are significant) remains a credible explanation. For example, a study of 221 survey-based experiments funded by the National Science Foundation found that almost two-thirds of studies yielding null findings were not submitted for publication (Mervis, 2014). Second, the mismatch between our results and those that found an extenuating effects of alcohol on sentencing may also be the result of a specificity of sampling, in that most were based on small and convenience student samples, while our sample was large and representative. Finally, the publication date may be considered as an important source of variation since, as Fagan (1990) underlined, the acceptance of excuses is mutable and vulnerable to historical and cultural shifts in societal attitudes about substances such as marijuana (Silver, 1979), cocaine (Reinerman, 1979), opiates (Musto, 1981), and alcohol (Heath, 1976, 1995; Marshall, 1979; Reinerman, 1988).

Several limitations should be mentioned regarding this study. First, an inherent restriction in vignette studies relates to the hypothetical feature of the case presented to participants and the limited amount of information that is provided in the sentencing task. Moreover, our vignette dealt with a specific offense, and the observed results cannot be generalized to other kind of offenses (see Potas & Spears, 1994), or those involving other contexts. For example, when an offender is presented as seeking treatment for alcohol abuse, the sentence may be mitigated (Mc Donald, Erickson, & Allen, 1999). Finally, many individual variables that may have critically influenced the sentencing process were not measured. For example, personality and ideological factors are commonly considered to be important predictors of sentencing (Carroll, 1987).

In conclusion, this binational study based on two large samples including judges and individuals from the general population showed that irrespective of the level of alcohol

intoxication of the defendants, judges recommended harsher sentences than participants from the general population, contrary to the widespread belief that judges are lax on law, and they also tended to rely on fewer sentence options. However, both in France and in Germany, the protagonist's intoxication level did not influence sentencing severity, a finding which runs contrary to the alcohol disavowal perspective.

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Ethical statement

The procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Authors contributions

Laurent Bègue and Fabien Jobard were involved in study conceptualization, design, writing and revision. Oulmann Zerhouni analyzed the data and revised the manuscript.

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Table 1. *Participants’ characteristics according to their country and type of population*

	<i>Judges</i> Mean (SD) or n and %	<i>General Population</i> Mean (SD) or n and %
N	1207	1972
Age	48.75 (16.55)	48.36 (16.62)
Gender		
Women	506 (41.92%)	1023 (51.87%)
Men	1023 (51.78%)	949 (48.12%)
Country		
France	419 (34.7%)	962 (48.78%)
Germany	788 (65.28%)	1010 (51.21%)
Severity evaluation	3.42 (0.620)	3.15 (0.875)

Table 2. *Summary of fixed and random effect estimates.*

Type of variable	Name	Estimate	Standard error	t	p
Fixed	Intoxication level	0.0015	0.017	0.09	0.92
	Age	0.003	0.001	2.91	0.003
	Sex	0.09	0.028	-3.24	0.001
	Country	0.014	0.028	0.51	0.61
	Occupation	0.28	0.029	0.45	<.0001
	Name	Variance	Standard	ICC	

Random	Country (intercept)	7.962e-16	0.000	<0.001
	Residual	0.03920	0.614	

Figure 1. Estimated probability to choose each sentence for judges compared to the general population



Table 3. Estimated probability to choose each sentence for judges compared to the general population

Type of variable	Sentence	Probability	Standard error
General population	Dispensing prosecution	0.01109	0.002
	Medical treatment	0.27978	0.009
	Fine	0.25179	0.009
	Prison sentence	0.45734	0.011
Judges	Dispensing prosecution	0.0007	0.0007
	Medical treatment	0.06503	0.007
	Fine	0.40580	0.013
	Prison sentence	0.52841	0.014