

Alcohol, Distraction, and Aggression

Studies have shown that for men, being provoked by someone while intoxicated often leads to aggression, and for some men, violence. So what is it about being intoxicated that leads to such reactions? One explanation is called disinhibition; which occurs when alcohol shuts down the part of your brain that keeps your impulses in check. In a sober state you may think about attacking the person who just insulted you, but your forebrain is able to inhibit or check the impulse to help you stay calm. When you're drunk however, the forebrain doesn't work so well and you are more likely to give in to aggressive impulses.

A less well known explanation has to do with alcohol's effect on our attention spans. Previous research has shown that alcohol limits our attention span so that we focus on just one thing when intoxicated. If someone makes you mad, that's what you focus on, disregarding what else is going on around you. But suppose someone gets you to focus on something else at the moment when you are being provoked? Because you're drunk and can't focus on more than one thing, would you become less aggressive? Psychologists at Georgia State University recently devised a rather complicated experiment to answer this question.

The Experiment. One hundred seventy men between the ages of 21 and 35 who identified themselves as social drinkers were recruited through the internet and newspaper ads to participate in a study about the effects of alcohol. Heavy drinkers were screened out. Once in the laboratory half of the men drank a glass of orange juice spiked with enough alcohol to make them intoxicated (Blood alcohol levels averaged about 0.11); the other half just drank a glass of orange juice. Everybody then was tested for pain threshold by rating the intensity of electrical shocks to their fingers on a scale of 1 to 10. They were then placed in front of a computer for a practice session of a Reaction Time game against an opponent whom they got to know by looking at a brief video of him reading some personality information about himself. (In fact the "opponent" was an actor and did not participate in the game, and the game was rigged so that the experimenters could control the number of wins and losses for each participant.) The game consisted of seeing how fast each participant could respond to a visual cue on the computer screen by pressing a key and releasing it upon seeing a second cue. After each trial, the computer announced either "You Won. You get to give a shock" or "You lost. You get a shock." If the participant won, he could choose how strong a shock to deliver (on a scale of 1 – 10). If he lost, he would get a shock from his opponent. The experimenters rigged the practice trials so that participants lost four out of six. At the end of the practice session each participant could type in a comment about his opponent. The "opponent's" comments about the participant were shown on the screen and were always hostile (e.g., "This guy is really slow – he must be an idiot.") The "opponent" also always gave very strong shocks.

Once the practice session was over, all participants were given an Attention Test, which consisted of presenting two words (one over the other) on a computer screen for a brief period of time. One of the words was designated a target. Next an arrow appeared on the

screen replacing one of the words. If the arrow corresponded to the target word the person had to push the arrow key on the computer as quickly as possible. Sometimes the target word denoted aggression (e.g., abuse, assault) sometimes just a neutral word (e.g., alike, bush). How quickly the participant reacted to the word probe provided a measure of how much attention that word had captured when the person saw it the first time, and attention to aggressive words versus neutral words could be measured.

Once the Attention Test was finished, all the participants played the Reaction Time game which they had previously practiced against their “opponents” for 20 trials, which were rigged so that they won ten and lost ten. The experimenters recorded the intensity of shocks delivered to their “opponents.” During the course of this game half the men were distracted by a second task on a laptop computer at their side. They were prompted on their desktop computer to look at the laptop and memorize a sequence of lighted squares in a 3 by 3 grid and type the sequence into the laptop. They were told if they performed in the top 20% of participants on this task they would earn an extra \$30. Thus the incentive for paying attention to what was happening on the laptop was high. (In fact all the participants “earned” the extra \$30.)

Results. As complicated as this study is, there are essentially two simple results. First, the men who were intoxicated were much more aggressive in delivering electrical shocks to their “opponents” than were men who drank no alcohol *unless they were distracted by the laptop task*. When they were distracted the intoxicated men were actually less aggressive toward their “opponents” than were the sober participants! Second, the intoxicated men who were distracted by the laptop task paid less attention to aggressive words on the attention task than did intoxicated men who were not distracted. For this reason the authors conclude that the distracting task was successful in shifting these men’s attention away from aggressive impulses so that they were actually less aggressive than the sober men.

The implications of this research are interesting, but how might they apply to real world situations? Suppose you’re at a party where there is a lot of drinking going on. Two of your buddies get into an argument and start to square off. What sort of distraction would shift their focus away from the provocation? Telling one of them his shoe is untied? Yelling “Fire!”? Offering him \$30? The authors suggest non – provocative distracters such as painting jail bars across the mirrors in a pub to “shift myopia toward inhibitory cues and away from instigatory cues such as provocation.” Can you think of other distracters that might stop alcohol-fueled aggression?

Gallagher, K.E. & Parrott, D.J. Does distraction reduce the alcohol-aggression relation? A cognitive and behavioral test of the attention allocation model. (2011) *Journal of Consulting and Clinical Psychology*, Vol. 79, Pages 319-329.