The Imbibing Idiot Bias:

Merely Holding an Alcoholic Beverage Can be Hazardous to Your (Perceived) Intelligence

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Abstract

Although alcohol consumption often impairs cognition, we identify an implicit association between alcohol and cognitive impairment that causes people to over-generalize this link. When individuals observe a target consuming or merely holding a beverage, they rate the target as less intelligent when the beverage is alcoholic than when the beverage is non-alcoholic. In fact, simply priming individuals with the concept of alcohol causes individuals to evaluate targets (holding no beverage at all) as less intelligent. Across five experiments, we demonstrate this *imbibing idiot bias* for both beer and wine, for both male and female targets, and we find that this bias persists when observers are also consuming alcohol and when observers know that the target did not choose the beverage for themselves. We demonstrate that this bias has important practical implications. Job candidates who ordered an alcoholic beverage in simulated interviews were perceived as less intelligent and less hireable than those who did not, even when the boss had ordered an alcoholic beverage first. In a sixth experiment, we demonstrate that job candidates fail to anticipate that ordering an alcoholic beverage will reduce their perceived intelligence.

Keywords: alcohol, intelligence, person perception, impression formation, job interviews

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Alcohol consumption plays a prominent role in many professional interactions, including job interviews, negotiations, and informal meetings (e.g., Capell, 2008; Galinsky & Schweitzer, 2007). By introducing alcohol, managers can create a relaxed atmosphere that facilitates information exchange and relationship development. At the same time, however, alcohol consumption can influence behavior in undesirable ways, such as promoting aggression (e.g., Bushman & Cooper, 1990; Krishnamurti, Morewedge, & Ariely, 2009; Zeichner & Pihl, 1979), increasing risk-taking (e.g., MacDonald, Fong, Zanna, & Martineau, 2000; MacDonald, Zanna, & Fong, 1995; Sayette, Kircher, Moreland, Levine, & Travis, 2004), and impairing attention, short-term memory, and cognitive functioning (e.g., Peterson, Rothfleisch, Zelazo, & Pihl, 1990; Steele & Josephs, 1990).

In this paper, we examine the link between alcohol and cognitive impairment from a different perspective. Rather than examining how consuming alcohol influences cognitive performance, we consider how consuming, or merely holding, an alcoholic beverage influences the *perceived* intelligence of the person holding the beverage. Because alcohol consumption and cognitive impairment frequently co-occur, we hypothesize that viewing someone with alcohol implicitly primes observers to expect cognitive impairment, and that this expectation acts as a lens through which people of ambiguous intellect are subsequently viewed. As a result, merely holding an alcoholic beverage may reduce the perceived intelligence of the person holding it, in the absence of any actual reduction in cognitive performance, a mistake we term the *imbibing idiot bias*.

Alcohol Consumption and Cognitive Performance

The relationship between alcohol consumption and cognitive performance is well documented. This work suggests that even moderate amounts of alcohol can harm cognitive performance. Compared to placebo or non-placebo control beverages, alcohol consumption promotes mind-wandering (Sayette, Reichle, & Schooler, 2009), impairs short-term memory (e.g., Birnbaum, Hartley, Johnson, & Taylor, 1980), damages performance on cognitive tests (e.g., Hannon, Day, Butler, Larson, & Casey, 1983; Hull & Bond, 1986; Peterson et al., 1990), and even strengthens preferences for blunt, slapstick humor over subtle humor that relies on plays on words (Weaver, Masland, Kharazmi, & Zillmann, 1985). Some researchers have likened the cognitive effects of intoxication to the effects of damage to the prefrontal cortex (Peterson et al., 1990), and several studies support the theory of alcohol myopia (Steele & Josephs, 1990): Alcohol narrows attention and impairs the ability to understand information.

This large body of research demonstrates that moderate-to-heavy alcohol consumption routinely impairs cognitive functioning. To many, this relationship is familiar and well-known. The link between alcohol and cognitive impairment has been illustrated in literary and religious texts for millennia. The Bible, for example, notes that "they drink old wine and fresh wine. When they do those things, it destroys their ability to understand" (Hosea 4:11, New International Reader's Version). In Shakespeare's *Othello*, Cassio laments the impairing effects of alcohol, exclaiming "O God, that men should put an enemy in their mouths to steal away their brains!" More recently, television and cinema have further illustrated this link (e.g., Homer Simpson, *Animal House*, *The Hangover*). In addition, terms commonly used to describe the state of intoxication (e.g., *loopy*, *gone*; Levitt, Sher, & Bartholow, 2009) further suggest that the link between alcohol and cognitive impairment is well-known. We postulate that this relationship is

so familiar that there is likely to be an implicit association in memory between alcohol and cognitive impairment.

Events that frequently co-occur are stored close together in memory. John Stuart Mill (1843/1963) suggested this, and more recent work formalized this notion in semantic network models of memory (e.g., Collins & Loftus, 1975; McNamara, 1992). According to these models, when one concept is activated, closely related concepts tend to become more cognitively accessible via a spreading activation process. Critically, concepts or categories that are particularly accessible tend to act as lenses through which ambiguous stimuli are subsequently perceived (Higgins, Rholes, & Jones, 1977; Srull & Wyer, 1979, 1980).

These lenses matter because perception is not a passive, bottom-up process that creates an exact mental replica of reality. Instead, judgments of ambiguous stimuli can be influenced by expectations, stereotypes, and schemas (e.g., Abelson, 1981; Cantor & Mischel, 1979; Devine, 1989). For example, because people expect high quality products to be expensive (McConnell, 1968), people perceive expensive products to be better, more pleasurable, and more effective than inexpensive products, in the absence of any actual quality differences (e.g., Chinander & Schweitzer, 2003; Plassmann, O'Doherty, Shiv, & Rangel, 2008; Shiv, Carmon, & Ariely, 2005; Waber, Shiv, Carmon, & Ariely, 2008). Through a similar process, stereotypes linking race and hostility prompt people to perceive ambiguous facial expressions and behaviors as more hostile when performed by a Black actor than when performed by a White actor (e.g., Duncan, 1976; Hugenberg & Bodenhausen, 2003; Sagar & Schofield, 1980). In addition, in a videogame-like simulation, people are quicker to shoot ambiguously hostile Black targets than similarly ambiguous White targets (Correll, Park, Judd, & Wittenbrink, 2002), though this bias disappears with extensive training (Correll et al., 2007). Because alcohol consumption and cognitive

impairment are commonly linked, we predict that consuming, or merely holding, an alcoholic beverage can reduce the perceived intelligence of a target, in the absence of any actual reduction in cognitive performance.

Managing and Forming Impressions of Intelligence

What we consume conveys information about who we are. Consumers often acquire (or discard) products to strategically manage impressions (cf. Ariely & Norton, 2009; Belk, 1988; Berger & Heath, 2007, 2008). For example, priming males with mating motives increases their willingness to spend money on conspicuous luxuries, presumably as an attempt to signal their wealth to potential mates (Griskevicius et al., 2007). Conversely, observers often draw inferences from the consumption choices others make (e.g., Belk, Bahn, & Mayer, 1982; Holman, 1981; Gosling, Ko, Mannarelli, & Morris, 2002; Gosling, 2008). For example, Calder and Burnkrant (1977) found that observers readily inferred aspects of a woman's personality (e.g., status, maturity) based on the brand of mascara or deodorant she purchased. These consumption-based inferences often correlate significantly with self-reported or objectively evaluated traits (e.g., Vazire, Naumann, Rentfrow, & Gosling, 2008).

Although alcohol can only directly influence behavior and cognitive performance when consumed, the influence of alcohol on perceptions of intelligence may be far broader. We hypothesize that an alcoholic drink, a minimal consumption cue, can bias perceptions of intelligence. This prediction is consistent with work demonstrating that irrelevant cues, such as warmth (Cuddy, 2009; Fiske, Cuddy, Glick, & Xu, 2002), shyness (e.g., Paulhus & Morgan, 1997), and attractiveness (e.g., Clifford & Walster, 1973; Feingold, 1992), can bias perceptions of intelligence and competence. This is true even though intelligence and competence can often be approximated based on exposure to "thin slices" of behavior (e.g., Ambady & Rosenthal,

1993; Borkenau & Liebler, 1993; Carney, Colvin, & Hall, 2007; Murphy, 2007; Murphy, Hall, & Colvin, 2003).

In professional settings, the link between alcohol and biased perceptions of intelligence may be very costly. When business is conducted outside the office (e.g., job interviews that involve dinner), alcohol consumption is common (e.g., Capell, 2008; Galinsky & Schweitzer, 2007; Schweitzer & Gomberg, 2001; Schweitzer & Kerr, 2000). Prior work has found that a host of factors that are not particularly predictive of actual job performance (e.g., handshake quality; Stewart, Dustin, Barrick, & Darnold, 2008) can influence evaluations of job candidates in unstructured interviews (see Campion, Palmer, & Campion, 1997, for a review). Consuming alcohol may be a non-diagnostic factor that biases perceptions of candidates.

If candidates anticipate the imbibing idiot bias, they may avoid ordering an alcoholic drink. If, however, candidates only consider the pharmacological effects of alcohol, they may order alcoholic beverages and consume them in moderation. This may be a mistake on two levels. First, because individuals assume that alcohol is more likely to negatively influence others' cognitive performance than their own (Leigh, 1987), they may become more impaired than they expect. Second, and more relevant to the current paper, merely choosing to consume alcohol may produce negative impressions of their intelligence.

Candidates may also base their drink choice on the drink choices of others. People often mimic those in higher-power positions to manage impressions (e.g., Jones, 1965). For example, a job candidate may choose to order an alcoholic beverage because the prospective boss ordered one first. Although conformity is an ingratiation tactic that is commonly effective, the imbibing idiot bias suggests that following the boss's lead may backfire when alcohol is involved.

Overview of the Present Research

To empirically detect an imbibing idiot bias, our experiments either manipulated whether or not targets appeared to be holding an alcoholic beverage or whether or not observers were implicitly primed with the concept of alcohol. In each experiment, the actual cognitive performance of the target was held constant across conditions.

Experiments 1A-1C examined whether the presence of alcohol reduces perceived intelligence. Observers judged the intelligence of targets photographed consuming or merely holding an alcoholic beverage, a non-alcoholic beverage, or nothing.

Experiment 2 extended our investigation in two ways. First, Experiment 2 examined whether the bias persists when evidence diagnostic of intelligence is available. Participants watched a video clip of a speaker making a persuasive argument, while holding and consuming either an alcoholic or a non-alcoholic beverage. Second, Experiment 2 examined whether the bias is driven by a (potentially rational) belief that less intelligent people are most likely to choose to consume alcohol, or by an implicit association between alcohol and cognitive impairment. We distinguished between these two explanations by manipulating whether the target actually selected his own beverage or whether someone else selected his beverage for him.

Experiment 3 more explicitly investigated the implicit association in memory between alcohol and cognitive impairment. In this experiment, we manipulated whether or not observers were implicitly primed with the concept of alcohol (via exposure to either alcohol-related or neutral advertisements; cf. Bartholow & Heinz, 2006). Participants then judged the intelligence of a target photographed without a beverage.

In Experiment 4, we considered potential professional implications of the bias. In this experiment, a panel of 610 practicing managers viewed a hypothetical job interview held over

dinner, in which only the drink orders of the candidate and the boss were manipulated. The managers then evaluated the perceived intelligence and hireability of the candidate.

In Experiment 5, we extended our investigation to consider observers who themselves were consuming alcohol. In this experiment, mildly intoxicated MBA students, playing the role of bosses, conducted mock interviews with candidates (actors) who gave memorized responses while either drinking soda or what appeared to be an alcoholic beverage (a non-alcoholic beer). The bosses then evaluated the candidates.

In Experiment 6, we investigated the mental model of people choosing to order a beverage. Specifically, MBA students about to go on the job market viewed a hypothetical job interview that manipulated the boss's drink choice. Participants were then asked what they would order if they were in the job candidate's position.

Experiment 1A

Method

Fifty-three adults (53% female, mean age = 34) participated in a "Person Perception Study" via a survey website in exchange for a small payment. Participants were initially told that they would view pictures of "students who are about to graduate from college" and that we wanted to get their "gut reaction" to each picture.

Participants evaluated five photographs. Each photograph featured a different actor. The first and last photographs of the set are the focus of our analyses. One photograph featured an actor holding a beer, and the other photograph featured a different actor holding no beverage (see Appendix A). We counterbalanced across participants whether the first actor was holding a beer or no beverage, as well as which of the two actors appeared first. We included three filler

photographs (of other students, either drinking non-alcoholic beverages or working on their laptop) to obfuscate the true purpose of the experiment.

Participants viewed each photograph for five seconds, and then rated the extent to which the student was "intelligent" and "likeable" on 1-7 scales, where 1 = *not at all* and 7 = *very much*. We elicited likeability ratings to examine whether alcohol selectively diminishes perceived intelligence or results in more globally negative evaluations. The photo remained visible while participants made their ratings.

Results and Discussion

We found no significant differences in ratings across actors (all *p*s > .10), and we report results pooled across actors. We first report within-subject analyses. Participants viewed actors who were holding an alcoholic beverage as significantly less intelligent than actors who had no beverage (4.34 vs. 5.04; $t(52) = 3.32$, $p < .005$, paired *t*-test; $d = .63$). The effect holds in a repeated-measures analysis controlling for whether the first actor was holding a beer or no beverage, as well as which of the two actors appeared first ($F(1,50) = 9.91$, $p < .005$). Holding an alcoholic beverage did not influence perceived likeability (4.58 vs. 4.58; $t(52) < 1$, paired *t*-test).

We next report between-subjects analyses, focusing on ratings of the first picture in the set. Between-subjects, participants viewed actors who were holding an alcoholic beverage as significantly less intelligent than actors without a beverage (4.65 vs. 5.19; $t(51) = 2.30$, $p = .025$; $d = .63$). Holding an alcoholic beverage did not influence likeability (4.81 vs. 4.78; $t(51) < 1$).

Experiment 1A provides initial evidence that merely holding an alcoholic beverage selectively reduces perceived intelligence.

Experiment 1B

Experiment 1A compared ratings of actors holding a beer to ratings of actors holding no beverage. Experiment 1B extends our investigation by adding a condition in which an actor consumes a non-alcoholic beverage, to rule out the possibility that consuming any beverage reduces perceived intelligence. In addition, to examine whether the bias is specific to beer, we use wine as the alcoholic beverage.

Method

A total of 243 adults (61% female, mean age = 37) participated in a "Person Perception Study" via a survey website in exchange for a small payment. The instructions were identical to those in Experiment 1A, except that participants were told in Experiment 1B that they would be viewing a picture of a "junior-level manager."

Participants then evaluated a single photograph of an adult male in a suit and tie, drinking a glass of wine, a glass of Coke, or nothing (see Appendix A). Participants viewed the photograph for five seconds, and then rated the target's perceived intelligence and likeability on 1-7 scales, where 1 = *not at all* and 7 = *very much*.

Results and Discussion

Consistent with an imbibing idiot bias, participants perceived the target to be significantly less intelligent when drinking wine ($M = 5.43$) than when drinking Coke ($M = 5.72$; $t(160) = 2.03$, $p < .05$; $d = .32$) or when drinking nothing ($M = 5.75$; $t(160) = 2.24$, $p = .03$; $d = .35$). Intelligence ratings did not differ significantly between the Coke and no-drink conditions ($t(160) < 1$).

Likeability ratings did not differ significantly between the wine ($M = 4.07$) and Coke conditions ($M = 4.27$; $t(160) = 1.06$, $p = .29$). Both means were significantly lower than the likeability mean in the no-drink condition ($M = 4.83$; both ps $< .01$), perhaps because the target

had a slight smile and a more open body position in the no-drink condition (cf. Mehrabian, 1972; see Appendix A). (Note, however, that body position differences cannot explain why perceived intelligence was significantly lower in the wine condition than in the soda and no-drink conditions, since body position was virtually identical in the wine and soda conditions.)

Consistent with Experiment 1A, these results indicate that the presence of an alcoholic beverage (in this case, wine) selectively reduces perceived intelligence.

Experiment 1C

In Experiments 1A and 1B, the photographed targets were male. In Experiment 1C, we extend our investigation to female targets.

Method

A total of 109 adults (53% female, mean age = 35) participated in a "Person Perception Study" via a survey website in exchange for a small payment. The instructions were identical to those in Experiment 1A, except that participants were told in Experiment 1C that they would be viewing pictures of "graduate students."

Participants evaluated four photographs. Each photograph featured a different actress. The first and last photographs of the set are the focus of our analyses. One photograph featured an actress holding a beer, and the other photograph featured a different actress holding a glass of water (see Appendix A). We counterbalanced across participants whether the first actress was holding a beer or a glass of water, as well as which of the two actresses appeared first. We included two filler photographs of other females to obfuscate the true purpose of the experiment.

Participants viewed each photograph for five seconds, and then rated the target's perceived intelligence and likeability on 1-7 scales, where 1 = *not at all* and 7 = *very much*.

Results and Discussion

We pooled data across actresses. We first report within-subject analyses. Participants viewed actresses who were holding an alcoholic beverage as significantly less intelligent than actresses who were holding water (4.47 vs. 5.11; $t(108) = 4.14$, $p < .0001$, paired t-test; $d = .52$). The effect holds in a repeated-measures analysis controlling for whether the first actress was holding a beer or a glass of water, as well as which of the two actresses appeared first ($F(1,106) = 7.21$, $p < .01$). Holding an alcoholic beverage did not influence perceived likeability (4.36 vs. 4.42; $t(108) < 1$, paired t-test).

We next report between-subjects analyses, focusing on ratings of the first picture in the set. Between-subjects, participants viewed actresses who were holding an alcoholic beverage as significantly less intelligent than actresses who were holding water (4.50 vs. 5.15; $t(107) = 2.88$, $p < .01$; $d = .55$). Holding an alcoholic beverage did not influence likeability (4.54 vs. 4.71; $t(107) < 1$).

The results from Experiment 1C suggest that the imbibing idiot bias generalizes across genders.

Experiment 2

In Experiment 2, we addressed two limitations of Experiment 1. Observers in Experiment 1 made judgments in a "zero acquaintance" setting (Albright, Kenny, & Malloy, 1988), in the absence of information diagnostic of the target's intelligence. By contrast, in Experiment 2 observers watched a video of an actor making a persuasive argument. The actor consumed either an alcoholic or a non-alcoholic beverage while making his argument.

Second, in Experiment 2 we disentangle competing explanations for the bias. The imbibing idiot bias may be caused by a belief that diminished intelligence causes people to choose to consume alcohol or by an implicit association between alcohol and impaired cognition.

In Experiment 2, we manipulate whether the target actually selected his own beverage or whether someone else selected his beverage for him.

Method

We recruited 427 undergraduates (57% female) at a private northeastern university to participate in a series of experiments in exchange for $10/hour. We introduced the experiment as a study designed to assess opinions toward comprehensive exams.

We informed participants that we recently approached several graduating seniors at a restaurant near campus and asked them to consider whether the university should require comprehensive exams prior to graduation. The seniors were presumably given a fact sheet about comprehensive exams and then asked to state their own opinion while being videotaped. We told participants that we would randomly select one of the videos and ask them to evaluate the speaker.

We told participants that, to thank each speaker for participating, we paid them $5 and bought them a drink. We varied who selected the drink (the speaker selected his own drink or the experimenter bought the same kind of drink for every speaker), as well as the type of drink (Coke or a beer). (We filmed in a nondescript location – see Appendix B – so that it would be unclear what most patrons would naturally have to drink.) In the forced choice conditions, we told participants:

> We bought each person a [Coke / beer]. We approached this student before he had ordered a beverage and ordered the [Coke / beer] for him, which we paid for.

In the free choice conditions, we told participants:

> We bought each person a drink of their choice. We approached this student after he had ordered a [Coke / beer], which we paid for.

The experiment thus employed a 2 (Speaker Agency: Free Choice or Forced Choice) × 2 (Drink Type: Coke or beer) between-subjects design.

Participants then viewed a one-minute video of a male student making two arguments in favor of comprehensive exams (see Appendix B). We adapted these arguments from those used by Norton, Dunn, Carney, and Ariely (2007; see also White & Harkins, 1994). One argument was relatively strong (undergraduates from institutions that implement comprehensive exams are more likely to get into law school), and one argument was relatively weak (some peer schools have implemented comprehensive exams).

While making the arguments, the speaker held either a can of Coke or a bottle of beer (see Appendix B). Over the course of the video, the speaker took two sips of the drink.

Following the video, we asked participants to indicate the extent to which they found the speaker persuasive, convincing, thoughtful, intelligent, scholarly, and intellectual, as well as the extent to which they were "moved" by the speaker's arguments and the extent to which they were able to take the speaker seriously. Responses to each item were made on 1-7 scales, with higher responses indicating greater quality. We averaged the eight responses to form an index of speaker intelligence ($\alpha = .92$).

Stimuli pre-test. Although our speaker was blind to our hypotheses, we pre-tested our stimuli to examine whether our speaker unconsciously behaved less intelligently when drinking beer. In the pre-test, 156 undergraduates from the same university listened to the audio from either the Coke video or the beer video. These participants had no information about drinks. The procedure was otherwise identical to Experiment 2, without the attention check discussed below. We found no significant differences across conditions. In fact, participants rated the speaker to be slightly more intelligent in the beer condition than in the Coke condition (2.68 vs. 2.54; $p = .40$). This pre-test helps to rule out the possibility that the speaker spoke less intelligently or less convincingly when drinking beer.

Attention check. After participants evaluated the speaker, we asked participants to recall what the speaker was drinking. Participants could select one of five options: Coke, Beer, Water, Other, or Don't Recall. We also asked participants to indicate who had selected the speaker's drink: the Speaker, the Scientist conducting the study, or Don't Recall.

Nearly all participants (99.5%) correctly recalled what the speaker was drinking ($p <$ .0001, sign test). A significant majority (75%) also correctly recalled who selected the drink ($p <$ .0001, sign test).

Results and Discussion

We conducted a factorial ANOVA treating the intelligence index as the dependent variable, and Speaker Agency and Drink Type as independent variables. We found a significant main effect of Drink Type ($F(1,423) = 4.56$, $p < .05$). Specifically, the speaker was perceived as significantly less intelligent when drinking beer than when drinking Coke (3.05 vs. 3.29; $t(425) = 2.17$, $p = .03$; $d = .21$). There was no main effect of Speaker Agency ($F(1,423) = .15$, $p = .70$) and no interaction ($F(1,423) = .83$, $p = .36$).

The results do not substantively change when we limit the analyses to the 319 participants who correctly recalled who selected the drink. We again observed a significant main effect of Drink Type ($F(1,315) = 6.69$, $p = .01$), but no main effect of Speaker Agency ($p = .43$) and no interaction ($p = .45$). Interestingly, intelligence index means were virtually identical when the speaker chose to consume beer and when the experimenter selected beer for the speaker (2.98 vs. 2.98; $p = .98$).

The results suggest that the imbibing idiot bias is driven by an implicit association between alcohol and cognitive impairment, and not by a belief that low intelligence leads to the selection of alcohol.

Experiment 3

In Experiment 3, we test our hypothesis that there is an implicit association in memory between alcohol and cognitive impairment in a different way. In this experiment, we examined whether implicitly priming the concept of alcohol leads observers to subsequently view targets (holding no beverage) as less intelligent.

Method

We recruited 176 adults (63% female, mean age = 34) to participate in a "Perception Study" via a survey website in exchange for a small payment. We described the experiment to participants as consisting of two separate studies.

To manipulate whether participants are implicitly primed with the concept of alcohol, we adapted a method validated by Bartholow and Heinz (2006). Specifically, we informed participants that "Study 1" would involve evaluating vintage advertisements. Participants were either randomly assigned to view six alcohol-related print ads (e.g., Coors beer, Stolichnaya vodka) or six neutral print ads (e.g., Morton salt, Ritz crackers). To build credibility in our cover story, we asked participants to evaluate the extent to which each ad was "visually appealing" and likely to be "effective among its target audience." The ads we selected featured only the product itself. None of the ads included photographs of people (see Appendix C).

Next, we asked participants to complete "Study 2." We described Study 2 as a pre-test of a photograph we planned to use in a future experiment. We informed participants that they would view a photograph of a student and that we wanted to get their "gut reaction" to the picture. Participants then viewed a picture of a male actor sitting at a table. Unlike Experiments 1 and 2, the target in this experiment always held no beverage (see Appendix C). Participants rated the

extent to which the student was "intelligent" and "likeable" on 1-7 scales, where 1 = *not at all* and 7 = *very much*.

Stimuli pre-test. In a pre-test with 51 adults (55% female, mean age = 38), we randomly assigned participants to rate the extent to which either the alcohol or the neutral ads were "visually appealing," "thought-provoking," and featured "prestigious" brands. We found no significant differences (all *p*s > .45).

Results and Discussion

Supporting our thesis, participants rated the photographed person as less intelligent following the alcohol prime than they did following the neutral prime (4.44 vs. 4.77; $t(174) = 1.98$, $p < .05$; $d = .30$). Consistent with Experiments 1 and 2, we found no differences in likeability ratings across the alcohol and neutral prime conditions (4.54 vs. 4.57; $t(174) < 1$).

Experiment 3 demonstrates that observers implicitly primed with the concept of alcohol evaluate targets as less intelligent. Priming alcohol did not influence likeability ratings. In these results, we find strong support for an implicit association in memory between alcohol and cognitive impairment.

Experiment 4

Experiment 4 investigated professional consequences of the imbibing idiot bias. In this experiment, adults employed as full-time managers viewed a hypothetical job interview held over dinner and evaluated the hireability and intelligence of a job candidate. We manipulated the drinks ordered by the candidate (alcohol or soda) and the boss (alcohol or soda).

Consistent with our findings in Experiments 1-3, we expected managers to rate candidates who order alcohol as less intelligent and less hireable than candidates who order soda. We manipulated the manager's drink choice to explore whether consuming alcohol is less

damaging (in terms of hireability and intelligence perceptions) when the manager establishes a "descriptive" norm (Cialdini, Reno, & Kallgren, 1990) of alcohol consumption.

Participants

Participants were members of a panel maintained by a survey company. Our sample consisted of 610 "mid-level managers" (60% female; mean age = 48), whose occupational role was either Director, Manager, or Assistant Manager. Participants had an average of 26.8 years of work experience (at any level) and 13.4 years of managerial experience. At the conclusion of the experiment, 46% of participants reported that they have been in "a setting like this one (that is, an interview over dinner)" at least once. Respondents participated in exchange for a payment.

Procedure

Participants learned that they would see a portion of an interview between a manager and a job candidate. Participants were told that the position requires management abilities and that the candidate meets the technical requirements for the job. The background information concluded by noting that "in this final stage of evaluating the candidate, the manager wants to get to know this person and see if they would be a good fit for the company."

Participants then read the dialogue of a hypothetical interview held over dinner, which was accompanied by pictures from the interview (see Appendix D). Both the manager and the candidate were male. The interview began with a brief discussion about the candidate's earlier tour of the office, and a waitress then came by to take drink orders. The manager ordered first. Drinks were then delivered, and the interview concluded with a discussion of the candidate's strengths and prior experience.

We varied the manager's drink choice (Coke or a glass of the house Merlot) and the candidate's drink choice (Coke or a glass of the house Merlot). The experiment thus had a 2 × 2

between-subjects design. Aside from the drink orders, the interview dialogue was held constant across conditions.

Dependent variables. Immediately following the interview, we assessed the candidate's hireability by asking participants "Do you think the candidate should be hired?" and "If the manager asked your opinion right now, how likely is it that you would recommend the candidate for the job?" Both responses were made on 1-7 scales, with higher responses indicating greater hireability. Responses to the two items correlated highly with one another ($r(608) = .92$), and we averaged the two items to form a hireability index.

To assess the candidate's intelligence, we then asked participants to indicate the extent to which the candidate was intelligent, scholarly, and intellectual on 1-7 scales, where 1 = *not at all* and 7 = *very much*. Responses to the three items correlated highly with one another ($\alpha = .93$), and we averaged the three items to form an intelligence index.

Because intelligence and hireability are conceptually related, we conducted a confirmatory factor analysis of the intelligence and hireability items to examine whether they measured distinct constructs. Specifically, we tested whether a model in which the two factors were allowed to covary fit the data better than a unidimensional model that assumes perfect correlation between the two factors. Allowing the intelligence and hireability factors to covary results in a significant improvement in model fit ($\Delta\chi^2(1) = 584.95$, $p < .0001$), indicating that the two sets of items measure distinct constructs.

Perspective-Taking measure. After evaluating the candidate, we asked participants whose perspective it was easier to take during the interview. Specifically, we asked participants to indicate whether "it was easier for me to relate to" the candidate or the manager. Responses were made on a 1-7 scale, where 1 = *the candidate* and 7 = *the manager*.

The average response ($M = 5.22$) was significantly greater than the scale midpoint ($t(609) = 18.00$, $p < .0001$). As expected, participants were far more likely to relate to the manager (responses of 5 or higher) than they were to relate to the candidate (responses of 3 or lower) (72% vs. 15%; $\chi^2(1) = 395.1$, $p < .0001$). Female participants were as likely as male participants to relate to the manager (71% vs. 72%; $\chi^2(1) = .1$, $p = .75$). These results suggest that participants were significantly more likely to adopt the manager's perspective than the candidate's perspective.

Attention check. After completing the perspective-taking measure, we asked participants what the candidate was drinking and what the manager was drinking. The options were Coke, Wine, Water, Other, and Don't Recall for each item. Nearly all participants correctly recalled what the candidate was drinking (97%, $p < .0001$, sign test) and what the manager was drinking (94%, $p < .0001$, sign test).

Results and Discussion

We began by conducting a factorial ANOVA treating the hireability index as the dependent variable, and Candidate Beverage and Manager Beverage as independent variables. As predicted, there was a significant main effect of Candidate Beverage ($F(1,609) = 62.13$, $p < .0001$). When the manager ordered Coke, candidates were perceived to be less hireable when they ordered wine than when they ordered Coke (3.00 vs. 4.00; $t(309) = 6.42$, $p < .0001$; $d = .73$). Similarly, when the manager ordered wine, candidates were perceived to be less hireable when they ordered wine than when they ordered Coke (3.72 vs. 4.43; $t(297) = 4.72$, $p < .0001$; $d = .55$). In this case, a descriptive norm of alcohol consumption (established by the manager) did not protect candidates from the harmful effects of the imbibing idiot bias.

The ANOVA did reveal a main effect of Manager Beverage ($F(1,609) = 27.86$, $p < .0001$): Candidates were perceived to be significantly more hireable when the manager ordered wine than when the manager ordered soda (4.03 vs. 3.51; $t(608) = 4.59$, $p < .0001$). This finding appears to be driven by the Candidate–Wine/Manager–Soda condition, in which ordering alcohol is especially punished ($M = 3.00$). However, the ANOVA revealed no significant interaction ($F(1,609) = 1.58$, $p = .21$), suggesting that candidates who order alcohol are perceived to be less hireable even when the boss also orders alcohol.

Next, we conducted a factorial ANOVA treating the intelligence index as the dependent variable, and Candidate Beverage and Manager Beverage as independent variables. We found a significant main effect of Candidate Beverage ($F(1,609) = 23.65$, $p < .0001$). When the manager ordered Coke, candidates were perceived to be significantly less intelligent when they ordered wine than when they ordered Coke (3.56 vs. 4.15; $t(309) = 4.39$, $p < .0001$; $d = .50$). In addition, when the manager ordered wine, candidates were perceived to be significantly less intelligent when they ordered wine than when they ordered Coke (4.09 vs. 4.44; $t(297) = 2.52$, $p < .02$; $d = .29$). The ANOVA also revealed a significant main effect of Manager Alcohol ($F(1,609) = 18.32$, $p < .0001$), but no interaction ($F(1,609) = 1.52$, $p = .22$).

Finally, we examined whether intelligence perceptions mediated the influence of Candidate Beverage on hireability perceptions. We performed the standard four-step mediation analysis (Baron & Kenny, 1986). We pooled across the Manager Beverage conditions in this analysis. Step 1 revealed that Candidate Beverage (1=alcohol, 0=soda) significantly predicted perceived hireability (standardized $\beta = -.29$; $t(608) = -7.39$, $p < .0001$). Step 2 revealed that Candidate Beverage significantly predicted perceived intelligence (standardized $\beta = -.18$; $t(608) = -4.54$, $p < .0001$). In Step 3, we regressed perceived hireability on both Candidate Beverage

and perceived intelligence. Perceived intelligence was strongly related to perceived hireability (standardized $\beta = .72$; $t(607) = 27.07$, $p < .0001$), but the coefficient on Candidate Beverage was only about half as large as in Step 1 (standardized $\beta = -.16$; $t(607) = -5.89$, $p < .0001$). In Step 4, we performed the modified Sobel (1982) test ($z = -4.48$; $p < .0001$). The findings revealed that perceived intelligence partially mediated the influence of Candidate Beverage on perceived hireability.

Experiment 4 revealed important professional consequences of the imbibing idiot bias. Practicing managers viewed job candidates who consumed alcohol as less intelligent and less hireable than those who did not. The bias was observed regardless of whether the manager was also consuming alcohol.

Experiment 5

One potential limitation of the first four experiments is that the observers were sober. It is possible that managers and other observers may perceive people who consume alcohol differently when they themselves are also consuming alcohol (either because of the pharmacological effects of alcohol, the social bonding facilitated by sharing a drink, or some combination of factors). This would not be a limitation if sober people could accurately anticipate how they would see the world while drinking alcohol. But when people are in a "cold" state (e.g., comfortably full following a meal), they generally find it difficult to accurately predict how their perspective will change when in a "hot" state (e.g., hungry), a failure of perspective-taking known as the "cold-to-hot empathy gap" (Loewenstein, 1996).

To overcome this potential empathy gap, Experiment 5 was conducted in the "field," with participants who were currently consuming alcohol. These mildly intoxicated participants played the role of bosses in mock job interviews. We gave the bosses a set of questions to ask the

candidates, who gave memorized responses. Candidates either drank soda or what appeared to be an alcoholic beverage (a non-alcoholic beer) during the interview. Once the interview concluded, the bosses evaluated the candidate.

Participants and Procedure

We conducted the experiment during "MBA Pub Night," a weekly gathering of MBA students at a pub located on the campus of a private northeastern university. Five MBA students served as recruiters during the event, periodically escorting small groups of students to the experiment, which we held in a room adjacent to the pub. As an incentive to participate, we randomly selected five participants to win $100 each.

Seventy-one MBA students (26% female; mean age = 29) participated as bosses in one-on-one interviews. Participants entered the experiment after they had already consumed, on average, two beers. Most entered the experiment holding a plastic cup of beer. The experimenter told them that they would "play the role of a Senior Manager" in a mock interview with an undergraduate who was about to graduate and in need of interview practice.

We informed participants that the position the candidate was interviewing for requires management abilities and that the candidate meets the technical requirements for the job. We gave each participant a list of three questions to ask the candidate (e.g., "Have you ever had a serious conflict with a supervisor?"), and we instructed participants not to ask follow-up questions. Post-experiment debriefing of the candidates confirmed that follow-up questions were extremely rare. Candidates gave memorized responses to each question (see Appendix E).

Interviews were held in private booths (two chairs and a table, surrounded by 6' folding screens). Nine male undergraduates served as candidates, who were already seated in the booths, with a beverage, when managers arrived (see Appendix E).

We utilized a two-condition, between-subjects design, manipulating only the candidate's drink. During the interview, each candidate held either a can of Coke or a clear plastic cup of what appeared to be regular beer (in fact, O'Douls, a non-alcoholic beer). Candidates took a sip of their drink each time the manager asked a question.

At the conclusion of the interview, candidates thanked the manager for his or her time and left the interview booth with their drink.

Dependent variables. Participants (the bosses) then answered two questions about the hireability of the candidate: "Do you think the candidate should be hired?" (1-7 scale, where 1 = *absolutely not* and 7 = *absolutely*) and "How likely is it that you would hire the candidate for the job?" (1-7 scale, where 1 = *not at all likely* and 7 = *very likely*). Responses to the two items correlated highly with one another ($r(69) = .88$), and we averaged the two items to form a hireability index.

We also asked participants to assess candidates on four dimensions (likeable, honest, intelligent, and genuine) on 1-7 scales, where 1 = *not at all* and 7 = *very much*.

Attention check. After evaluating the candidate, participants were asked "What was the candidate drinking?" The question was open-ended. A significant majority (77%) correctly recalled what the candidate was drinking ($p < .0001$, sign test). Of the 16 respondents who got the attention check incorrect, 14 wrote "yes," suggesting they misread the question as asking *whether* the candidate was drinking something.

Results and Discussion

We brought in groups of four to nine participants at a time, and after each group finished we told candidates to switch drinks. We randomly, but unevenly, assigned participants to candidates. As a result, some candidates completed more interviews while drinking soda than

while appearing to drink alcohol, and others completed more interviews while appearing to drink alcohol than while drinking soda. After the experiment, we asked candidates to report their prior experience (i.e., number of completed real-world interviews) and their relative comfort with alcohol and soda (i.e., average weekly consumption of alcoholic beverages and sodas), to examine whether variables that might have influenced interviewer perceptions were confounded with our manipulation. One candidate reported values more than two standard deviations above the mean on both dimensions. This candidate, at age 20, reported drinking more than 20 alcoholic beverages per week and having completed 30 interviews. As a result, we excluded interviews with this candidate from the analyses. On average, the other candidates were 21.3 years old and reported consuming eight alcoholic beverages per week and having completed nine interviews.

Consistent with Experiment 4, mildly intoxicated participants perceived candidates as less hireable when the candidates consumed alcohol than when the candidates consumed soda (2.72 vs. 3.28; $t(59) = 1.71$, $p = .09$; $d = .46$). Additionally, consistent with Experiments 1-4, candidates were perceived as less intelligent when consuming alcohol than when consuming soda (3.89 vs. 4.52; $t(59) = 1.93$, $p < .06$; $d = .53$). The candidate's beverage did not influence likeable, honest, or genuine ratings (all ps $> .70$). Thus, the mildly intoxicated bosses were not globally evaluating candidates who drink alcohol negatively. Instead, alcohol consumption by candidates selectively influenced their perceived intelligence and hireability.

We performed the standard four-step mediation analysis to examine whether perceived intelligence mediated the relationship between the candidate's drink and perceived hireability. As noted above, the candidate's drink choice predicts perceived hireability (step 1) and perceived intelligence (step 2). Consistent with Experiment 4, when we regressed perceived hireability on

the candidate's drink choice and perceived intelligence, we found that perceived intelligence significantly predicted hireability (standardized $\beta = .50$; $t(58) = 4.34$, $p < .001$). The candidate's drink choice was no longer a significant predictor of perceived hireability (standardized $\beta = -.10$; $t(58) = -0.84$, $p = .40$). The Sobel test revealed a marginally significant mediated effect ($z = -1.76$, $p < .08$).

Experiment 5 demonstrates that the imbibing idiot bias persists when the observer consumes alcohol. Thus, the bias does not appear to be an artifact of a cold-to-hot empathy gap.

Experiment 6

In Experiments 1-5, we document a consistent result: Alcohol, whether held by targets or primed among observers, causes targets to be perceived as less intelligent (see Table 1 for a review of findings). In Experiment 6, we examine whether people anticipate the imbibing idiot bias. Specifically, we ask MBA students about to go on the job market what drink they would order in an interview setting very much like those in our earlier experiments.

If prospective candidates accurately anticipate what observers will infer from their drink choice, few candidates should choose to consume alcohol in professional settings. However, if candidates fail to take the evaluator's perspective and instead base their drink choice on factors such as the potential pharmacological effects of alcohol, they may be too likely to order alcohol. This is likely to be the case because individuals generally believe that alcohol will impair others more than it will impair themselves (Leigh, 1987).

In addition, candidates may order alcohol in an attempt to conform with others. Candidates often mimic higher-power others when trying to make a good impression (e.g., Jones, 1965). Thus, alcohol consumption may be particularly likely when the boss orders alcohol first.

Participants and Procedure

We conducted the experiment in Negotiation classes at a private northeastern university. Seventy-two MBA students (35% female; mean age = 29) participated.

Participants received a packet displaying pictures and text from a hypothetical job interview held over dinner. To facilitate perspective-taking, male participants received pictures of a male boss interviewing a male candidate, and female participants received pictures of the same male boss interviewing a female candidate (see Appendix F). The background information and interview dialogue were nearly identical to what we used in Experiment 4. The dialogue concluded either immediately before or after the manager ordered a drink. When the manager ordered a drink, we varied whether he ordered wine (merlot) or soda (Coke). The experiment thus employed a three-condition between-subjects design (manager orders wine, manager orders soda, or manager's drink choice is unknown).

We then asked participants, "If you were the job candidate in this situation, what drink would you order?" They were asked to select one of eight drinks: Four were alcoholic (merlot, chardonnay, some other kind of wine, or beer), and four were non-alcoholic (Coke, some other kind of soda, water, or coffee/tea). Alternatively, participants could write in a drink that was not listed.

Results

In our previous experiments, observers rated targets who drank beer and wine similarly (see Table 1). In this experiment, we classify beverage choices as either alcoholic (wine or beer) or non-alcoholic (soda, water, coffee, or tea).

When the boss's drink choice was unknown, 26% of candidates ordered alcohol (significantly greater than 0%; $\chi^2(1) = 6.78$, $p < .01$). Candidates were significantly less likely to order alcohol when the manager ordered soda (0% vs. 26%; $\chi^2(1) = 7.18$, $p < .01$) and

significantly more likely to order alcohol when the manager ordered alcohol (72% vs. 26%; $\chi^2(1) = 27.31$, $p < .0001$).

Overall, men were more likely than women to order alcohol (39% vs. 24%), though this difference was not significant ($\chi^2(1) = 1.50$, $p = .22$). Both genders were more likely to order alcohol when the manager ordered alcohol than when the manager's choice was unknown (women: 56% vs. 13%; men: 81% vs. 33%).

Discussion

We identify a failed mental model with respect to alcohol in interview settings. Approximately one-quarter of participants ordered an alcoholic beverage when the manager's drink choice was unknown, and this figure nearly tripled when the manger ordered an alcoholic beverage first.

With respect to alcohol consumption, prospective candidates follow the boss's lead. Although conformity is a common ingratiation tactic, our findings identify alcohol conformity in interviews as a behavior that has important (unanticipated) negative consequences.

Interestingly, the MBA student participants in Experiment 6 were drawn from the same university as the MBA students who viewed candidates drinking alcohol as less intelligent and less hireable in Experiment 5. (The samples were non-overlapping: No student participated in both Experiment 5 and Experiment 6.) This pair of findings suggests that encouraging candidates to take the perspective of the prospective boss might curtail their preference for alcoholic beverages during interviews.

General Discussion

The relationship between alcohol consumption and diminished cognitive performance is well-known (Southwick, Steele, Marlatt, & Lindell, 1981). Drawing on spreading activation

models of memory, we predicted that drawing attention toward alcohol would implicitly prime observers to expect cognitive impairment and rate targets as less intelligent.

Consistent with our reasoning, we document a robust imbibing idiot bias: Consuming, or merely holding, an alcoholic beverage reduced perceived intelligence, in the absence of any actual reduction in cognitive performance. We observed this bias even when the person consuming alcohol had his beverage selected for him, suggesting that the bias does not reflect a belief that less intelligent people are most likely to choose to consume alcohol, but rather an implicit association between alcohol and cognitive impairment. We even found that implicitly priming the concept of alcohol caused observers to view targets, holding no beverage at all, as less intelligent. These findings are consistent with an implicit association in memory between alcohol and cognitive impairment.

We also found that alcohol selectively reduced perceived intelligence: Targets were consistently rated as less intelligent, but no less likeable, honest, or genuine, when consuming alcohol.

In interview settings, candidates who consumed alcohol were judged to be less intelligent and less hireable. We document the imbibing idiot bias in informal interview settings with both experienced managers and mildly intoxicated MBA students who assumed the role of a boss in a mock interview.

Prospective job candidates largely fail to anticipate the imbibing idiot bias. Candidates in informal interview settings follow the boss's lead, even when the boss chooses to consume alcohol. Our demonstration of a robust imbibing idiot bias suggests that this form of mimicry is a mistake.

Theoretically, our work builds upon prior research (e.g., Bartholow & Heinz, 2006; Palfai & Ostafin, 2003) that has attempted to illuminate the semantic network surrounding the concept of alcohol. Our evidence is consistent with a strong implicit association between alcohol and cognitive impairment. Our work suggests that this link may influence the outcome of professional interactions, in ways that job candidates largely fail to anticipate.

Our findings may also further develop our understanding of prior work that has documented an association between alcohol and aggression (e.g., Friedman, McCarthy, Bartholow, & Hicks, 2007). Bartholow and Heinz (2006) found that people who were implicitly primed with the concept of alcohol were more likely than people who were primed with neutral concepts to interpret ambiguous behaviors as hostile. Although these results suggest a direct link between alcohol and aggression, intelligence and hostility are themselves closely linked. Low intelligence heightens aggressive tendencies (Huesmann, Eron, & Yarmel, 1987), and alcohol may indirectly influence aggression by directly impairing cognitive functioning (e.g., Hoaken, Giancola, & Pihl, 1998; Pihl, Peterson, & Lau, 1993). We conjecture that the imbibing idiot bias may partly mediate the link between alcohol and perceived aggression.

Prescriptively, our results suggest that people attempting to manage impressions of intelligence should exercise caution when deciding whether or not to consume alcohol. Experiment 6 suggests that the amount of caution people naturally exercise may be insufficient. Though we focused on job candidates, our results suggest that many individuals seeking to manage impressions (e.g., sales representatives, potential business partners, aspiring politicians) may make mistakes when choosing whether or not to consume alcohol.

Limitations and Future Directions

The boundary conditions of the imbibing idiot bias warrant additional research. For example, the levels of target familiarity and ambiguity are likely to moderate the imbibing idiot bias. When observers judge unambiguous targets, the magnitude of the imbibing idiot bias is likely to diminish (cf. Herr, 1986; Herr, Sherman, & Fazio, 1983). Conversely, alcohol could serve to amplify perceptions of intelligence when targets perform brilliantly. A target who manages to impress others while coping with the presumably dampening influence of alcohol may be perceived as particularly intelligent.

In addition to characteristics of the target, characteristics of the observer should also moderate the magnitude of the imbibing idiot bias. Whether the observer routinely drinks alcohol is likely to be important. Non-drinkers are more likely than drinkers to think that consuming alcohol will impair cognition (Leigh, 1987). Paradoxically, non-drinkers may be the most likely to commit the imbibing idiot bias.

Future work should also explore whether the implicit association between alcohol and cognitive impairment is strong enough to influence one's own cognitive performance. A future experiment could examine whether administering an alcohol placebo drink or implicitly priming the concept of alcohol diminishes participants' subsequent cognitive performance. Perhaps even more important is whether (actual or placebo) alcohol consumption influences perceptions of one's own intelligence, which could in turn inform many important decisions (e.g., whether to get behind the wheel, or whether to leave the casino).

Finally, although we identify a harmful effect of alcohol consumption, our work does not imply that consuming alcohol in professional settings is always a mistake. There are situations in which alcohol consumption offers important benefits. For example, alcohol often curtails anxiety (Christenfeld & Creager, 1996), which may facilitate impression management. In negotiations,

sharing a drink can signal openness and facilitate relationship development and information exchange (Schweitzer & Kerr, 2000). In addition, there may be situations in which alcohol can be strategically consumed to capitalize on the imbibing idiot bias (e.g., when intellectual politicians do not want to be perceived as eggheads).

Conclusion

Although people often choose whether to consume alcohol based on its anticipated pharmacological effects (e.g., Capell, 2008), we identify a very different factor that decision-makers should consider. Our work reveals that consuming alcohol can diminish perceived intelligence even when it has no influence on actual performance. Unfortunately, people in a position to be judged largely fail to anticipate the bias. Taken together, the results suggest that what we drink may say more about us than we think.

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Authors' Note

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Table 1. Influence of alcohol consumption, or alcohol primes, on mean intelligence ratings across experiments.

Condition			
Alcohol	Control	Effect size and significance	Sample
Experiment 1A: Targets photographed holding beer or nothing			
4.65 (0.80)	5.19 (0.88)	d = .63 p < .05	53 adults
Experiment 1B: Target photographed holding wine, soda, or nothing (pooling across soda and nothing conditions)			
5.43 (1.00)	5.75 (0.78)	d = .35 p < .01	243 adults
Experiment 1C: Targets photographed holding beer or water			
4.50 (1.34)	5.15 (0.97)	d = .55 p < .01	109 adults
Experiment 2: Target makes persuasive argument while holding beer or soda (pooling across Agency conditions)			
3.05 (1.15)	3.29 (1.19)	d = .21 p < .05	427 undergrads
Experiment 3: Participants primed via exposure to alcohol or neutral ads. (Target photographed holding nothing.)			
4.44 (1.18)	4.77 (1.04)	d = .30 p < .05	176 adults
Experiment 4: Job candidate drinks wine or soda during informal interview (pooling across Manager Drink conditions)			
3.38 (1.42)	4.20 (1.32)	d = .60 p < .0001	610 mid-level managers
Experiment 5: Job candidates drink beer or soda during informal interview			
3.89 (1.35)	4.52 (0.99)	d = .53 p < .06	61 inebriated MBA students

Note. We report between-subjects comparisons for each experiment with standard deviations in parentheses. To facilitate comparisons across experiments, we collapse across conditions when applicable and omit detailed analyses described in the text, such as the within-subject analyses for Experiments 1A and 1C. All p-values (in the table and the paper) are two-tailed.

Appendix A: Experiment 1 Stimuli

Experiment 1A




Experiment 1B



Experiment 1C




Appendix B: Experiment 2 Stimuli

Speaker Script

Ok, so I guess I'm just supposed to tell you what I think about this proposal to start giving seniors comprehensive exams. Umm… I've heard a little about this and I actually do have a pretty strong opinion about it, especially after reading the fact sheet. I really think [our university] should institute comprehensive exams.

Ummm… So, one reason why is that Cornell and Brown have just approved the institution of comprehensive exams beginning with the class of, I think 2007. (look at sheet) Yeah 2007. So, if other Ivies like [our university] want to stay at the same level as Cornell and Brown, then they probably need to make the comprehensive exam a requirement for their students as well.

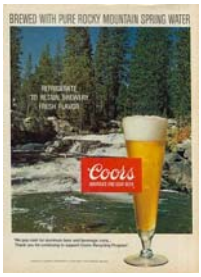
Aahhhh…Let's see…One of the statistics also shows that you would be more likely to get into grad school if [our university] did this. Um, it said how Harvard Law, for example, really likes to see undergrads who have passed these comprehensive exams.

So, it seems pretty clear to me that [our university] should start having seniors take comprehensive exams.

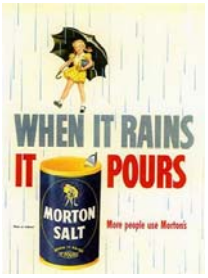
Speaker Screen Shots

Appendix C: Experiment 3 Stimuli

Alcohol-Related Advertisements



Neutral Advertisements



The target

Appendix D: Experiment 4 Stimuli

Interview Text

Screen 1
In a moment, you will see a portion of an interview between a manager and a job candidate the manager is thinking about hiring. The position the candidate is interviewing for involves managing three to five people who do entry-level marketing and advertising. The candidate has a few years of work experience and meets the technical requirements for the job. In this final stage of evaluating the candidate, the manager wants to get to know this person and see if they would be a good fit for the company.

Screen 2
[The job candidate is on the left. The manager is on the right, with his arm raised.]

Manager: I hope you enjoyed your tour of the branch today and talking with some of our employees.

Candidate: I did get a good sense of the operation.

Manager: Do you feel like getting wine?

Candidate: I'm not sure. What are you having?

Manager: I'm still thinking about it, myself.

Screen 3
Waitress: Good evening, I'll be taking care of you tonight. May I start you off with something to drink? We have a nice house Merlot and a nice house Chardonnay.

Manager: I'll have [a Coke / a glass of the house Merlot].

Candidate: I'll [also] have [a Coke / a glass of the house Merlot].

Waitress: Great, thank you. I'll bring your drinks right out.

Screen 4
Manager: So, why are you leaving EGR?

Candidate: I don't think I'm valued as much as I should be at EGR. I think that my best growth opportunities are somewhere else.

Manager: If I were to ask your former supervisors to describe you, what would they say?

Candidate: Well, I'm really energetic and dependable, so I hope they would say that. I have their letters of recommendation here in my briefcase if you'd like to see them.

Manager: I try not to read too much over dinner; I can just take your word for it for now.

Candidate: Ha, of course.

Screen 5
Manager: Have you ever had a conflict with a supervisor or coworker?

Candidate: Nothing major, but there have been little incidents…little disagreements. I'm human. I try to keep the other person's perspective in mind. It's hard to do in the heat of the moment, but I try.

Manager: Well I know you've had some good experience at the junior level, but the position you're applying for now is at a more senior level. Why are you the best person for this job?

Candidate: I really learned a lot in college, and now I also have experience in the consulting field. I guess there is still a lot to learn, but I think I'm a fast learner. I should be able to hit the ground running.

Interview Pictures

Screen 2

Screen 3

Screen 4 (varies across conditions)

Screen 5 (varies across conditions)

Appendix E: Experiment 5 Stimuli

Interview Dialogue

Below are the questions that participants (playing the role of "senior manager") were instructed to ask, and the responses candidates memorized and delivered in response to the questions.

Manager: Why are you leaving your current job?

Candidate: I've learned a lot in my current position, and the experience was generally a good one. But I don't think my supervisors value me as much as they should. So I think that my best growth opportunities are somewhere else.

Manager: Have you ever had a serious conflict with a supervisor?

Candidate: Nothing major, but there have been little incidents…little disagreements. I'm human. I try to keep the other person's perspective in mind. It's hard to do in the heat of the moment, but I try.

Manager: I know you've had some good experience at the junior level, but the position you're applying for now is at a more senior level. Why are you the best person for this job?

Candidate: I really learned a lot in college, and now I have a lot of relevant real-world experience as well. I guess there is still a lot to learn, but I think I'm a fast learner. I should be able to hit the ground running.

Thank you for your time.

The Candidate then left the interview booth. The participant (i.e., the Manager) then evaluated the Candidate.

A sample interview booth

The manager is on the left, holding a list of assigned questions to ask. The candidate is on the right, wearing a nametag. In this sample interview, the manager is drinking beer, and the candidate is drinking what appears to be beer (in fact, O'Douls, a non-alcoholic beer).

Appendix F: Experiment 6 Stimuli

Female participants saw the following pictures:

Male participants saw the following pictures: