

THE EFFECTS OF GRAMMATICAL STRUCTURE AND FEELINGS OF POWER ON RISK  
BEHAVIOR PREVENTION

BY

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THESIS

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## **ABSTRACT**

The strategic use of questions and assertions within an interpersonal interaction can indicate and alter the relative power levels of each dyad member. The current research examined the effect of grammatical category (question vs. assertion) on the outcomes of an interaction in which one member is designated to help the other change a risky behavior. In two studies, participants were primed to feel powerful or powerless via a writing task and then matched by assigned power condition to act as the provider (powerful) or recipient (powerless) of help regarding binge drinking. Study 1 established that powerful subjects express stronger intentions to engage in risky behavior when they make statements, but powerless subjects intend to act riskiest when they ask questions. Study 2 tested the hypothesis that questions are particularly risky for powerless participants because they encourage biased recall, which simultaneously influences perceived subjective norms.

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# **CHAPTER 1**

## **INTRODUCTION**

Our lives are full of many different social situations in which there is a power differential created by the fact that one person is helping another. When people seek therapy or counseling for certain lifestyle choices (such as binge drinking, dietary needs, or sexual behavior), the counselor is typically in a position of power, whereas the client is relatively powerless. However, there are a lot more characteristics about these interactions impacting their potential persuasive efficacy than power differentials. Although many people do not give much conscious thought to the subtle syntactic qualities of their communications, past research has demonstrated that the simple difference between asking a question and making a statement can have a significant impact on resulting behavior. For example, motivational interviewing, which elicits and motivates a solution through questions (as opposed to direct solution provision), can successfully promote changes in risky behaviors such as alcohol abuse (Miller & Rose, 2009). This effect extends beyond explicit dyadic communication; interrogative forms of introspective self-talk also relate more strongly to performance and intentions to implement behaviors than declarative forms, mediated by increased intrinsic motivation (Senay, Albarracin, & Noguchi, 2010). Given the omnipresent nature of social power differentials in everyday life, it is crucial to examine how these power differentials interact with this phenomenon. The current research connects two phenomena that have not been previously linked, either in general or in relation to risk behavior change. The following studies were designed to examine the interaction between social power and the use of questions vs. statements in a persuasive interaction.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Power**

Power is a core social motive that impacts the way in which people interact with others and engage with their environments. Social power in particular is derived through one's relationships with other people (Fiske, 1993; Overbeck & Park, 2001) and may be defined as the ability to control one's own and others' resources without social interference (Galinsky, Gruenfeld, & Magee, 2003), the capacity to influence and control the behaviors of others (Copeland, 1994; French & Raven, 1959), relative control over another's valued outcomes (Keltner, Gruenfeld, & Anderson, 2003), or any means by which one can control others and get one's way (Berdahl & Mertorana, 2006).

Past research on power has determined that it has a wide variety of cognitive and behavioral effects. Most notably, power leads to action (Galinsky et al., 2003) and approach behavior (Anderson & Berdahl, 2002). One unfortunate consequence of the link between power and action/approach is that power can often lead to increased engagement in risk behavior (Anderson & Galinsky, 2006). However, there is also reason to believe that power creates a sense of perceived control and enhanced intrinsic motivation for positive behavioral change (Albarracin, Kumkale, & Johnson, 2004), which would then predict better, less risky outcomes (Bandura, 1989). It is yet unclear whether power always facilitates risk (Anderson & Galinsky, 2006), or if the approach behavior encouraged by power could be positive if the powerful person is encouraged to act by changing negative behavior. Furthermore, there is evidence that feeling powerless might also be beneficial in certain situations. Although one would expect that lacking power would lead to inhibition (Anderson & Berdahl, 2002) and therefore hinder positive

behavioral change, experts are more effective than lay community members in HIV prevention campaigns (Durantini et al., 2006), primarily when the targets of the campaign are racial or gender minorities. This suggests that when a person is made to feel powerless, as is presumably the case when minorities are counseled by more powerful experts rather than equally powerful peers, this may actually be beneficial for persuasion and behavioral change.

## 2.2 Questions vs. Statements

Previous research has established that seemingly minor changes in the grammatical structure of a communication, such as its tense or syntax, can have surprisingly strong effects on subsequent persuasion, intentions, and behavioral change. Interrogative forms of self-talk relate more strongly to performance and intentions to implement target behaviors than declarative forms (Senay, Albarracin, & Noguchi, 2010). Furthermore, the common therapeutic tactic of *motivational interviewing* relies on the strategic use of questions in a counseling situation to encourage a client to question his/her behavior and enact necessary changes (Miller & Rose, 2009; Rollnick & Miller, 1995). Motivational interviewing is based on the logic that questions encourage the counseling recipient to generate thoughts about a given goal without feeling like the therapist is attempting to forcefully impose these thoughts (Sheldon, Williams, & Joiner, 2003) and consequently engaging in psychological reactance (Brehm, 1966) or defensive avoidance (Hovland, Janis, & Kelly, 1953). In support of this claim, rhetorical questions have demonstrably increased message persuasion by inducing message-related thoughts (Burnkrant & Howard, 1984) without simultaneously encouraging a perception of the message source as pressuring or threatening (Ahluwalia & Burnkrant, 2004; Holtgraves & Yang, 1990).

Given the differential effects of questions and statements and the logic behind these effects, it is particularly important to examine this phenomenon in conjunction with explicit

power disparities. According to the theory behind motivational interviewing, questions are an effective persuasive strategy because they avoid sending the message that the therapist is somehow “imposing” or “threatening.” As the very definition of being powerless implies that the other, more powerful person is capable of imposing his/her thoughts and feelings, it is therefore crucial to understand how explicit power differentials interact with (and potentially alter) the effects of questions and statements in an interpersonal interaction. I will now summarize two compelling theories that predict competing hypotheses for this interaction.

### 2.3 Hypothesis 1: Self-Determination Theory

According to *basic psychological needs theory* (BPNT; Deci & Ryan, 2000), a subtheory of *self-determination theory* (SDT; Deci & Ryan, 1985; Ryan & Deci, 2002), people function optimally when they operate within environments that support the core social needs of autonomy, competence, and relatedness. Based on the logic that questions increased autonomy as mediated by an effect on intrinsic motivation (Senay et al., 2010), self-determination theory would predict two main effects of power and question condition. First, powerful participants should report more intended behavior change than powerless participants due to their increased levels of both autonomy and competence. Second, participants who ask questions should report more intended behavior change than those who make declarative statements, similarly mediated by one’s sense of agency and autonomy.

### 2.4 Hypothesis 2: Fluency

According to research on processing fluency, people process information more shallowly when the information is fluent, and are more analytic when information is disfluent (Alter, Oppenheimer, Epley, & Eyre, 2007; Song & Schwarz, 2008). Extending this logic to the current study, we hypothesized that, given a persuasive message to change one’s risky behavior,

intentions to change this behavior would be highest when the experimental condition is counter-normative (and therefore the situation is disfluent). Given that counselors typically ask questions and clients typically respond by making statements, the situation would be most disfluent when these conditions were reversed (counselors made statements and clients asked questions).

Therefore, both of the disfluent, counter-normative conditions should induce higher levels of thought about the persuasive message and a higher likelihood of reducing risky behavior as a result. In other words, powerful participants should most extensively process the message and subsequently intend to reduce their risky behavior the most when they ask questions, and powerless participants when they make statements. Conversely, powerful participants should report the riskiest intentions when they make statements, and powerless participants should report the riskiest intentions when they ask questions.

## 2.5 Summary and Overview of Present Research

Existing research has demonstrated that the strategic use of questions and assertions within an interpersonal interaction can indicate and alter the relative power levels of each dyad member. High levels of power may be linked to action (Galinsky et al., 2003), but this greater sense of action could either be adaptive by fostering a sense of perceived behavioral control (Albarracin et al., 2004; Bandura 1989) or lead to risky behavior (Anderson & Galinsky, 2006). Research on the impact of questions vs. assertions on behavior has also demonstrated that interrogative statements may lead to stronger behavioral intentions than assertive declarations, such as with introspective self-talk (Senay et al., 2010). The present research was undertaken to examine how, specifically, social power differentials within an interpersonal interaction interact with questions vs. statements to impact intended behavioral change.



## CHAPTER 3

### STUDY 1

This study was largely intended as an exploratory study to examine the interactive effects of questions/statements and power level on risky behavior.

#### 3.1 Participants

Participants were 98 undergraduates (50% female) at the University of Illinois who participated in the study for course credit. The ethnicity breakdown of the sample was 57% White/European-American, 22% Asian/Asian-American, 8% Latino/Hispanic, 6% Black/African-American, and 6% who self-identified as “Other.” The participants ranged in age from 18 to 33; all but one of the participants were between the ages of 18 and 23 ( $M_{age} = 19.66$ ).

#### 3.2 Materials and Procedure

*Power.* Power was manipulated using a standard recall-based writing task (Galinsky et al., 2003). All participants were informed that they were helping the experimenters create a “Life Experience Questionnaire,” and would be randomly assigned to a “life experience” about which they should write. Half of the participants were randomly assigned to write about a time when they felt powerless, and half of the participants were randomly assigned to write about a time when they felt powerful.

*Counseling Task.* After the power manipulation, participants were then told that the second, unrelated task would involve participating in a mock peer counseling interaction. All participants were assigned a role based on their assigned power condition from the previous manipulation; powerful participants were assigned to take the role of “counselor,” and powerless participants were assigned to take the role of “client.” Participants were then told that they should imagine that they were participating in a counseling session for binge drinking, and were

instructed to read a paragraph on the dangers of binge drinking. This paragraph served as the persuasive message.

*Question/Statement Manipulation.* Once the counseling task was explained, participants were instructed to write sentences directed at the other, imaginary member of the dyad. Importantly, half of the participants were randomly assigned to write *questions*, while the other half was randomly assigned to write *statements*. In other words, counselors were instructed to write either questions or statements directed at the imaginary client (e.g. “How much do you typically drink?” or “You should keep track of how much you drink”), and clients were instructed to write either questions or statements about their own behavior directed at the imaginary counselor (e.g. “How much should I drink?” or “I should keep track of how much I drink.”)

*Attitudes.* Participants’ attitudes regarding binge drinking were assessed via five semantic differential scales regarding excessive drinking (bad-good, negative-positive, foolish-wise) and alcohol (bad-good, negative-positive) ( $\alpha = .81$ ).

*Perceived Behavioral Control.* Perceived behavioral control over binge drinking was assessed via three items using a “Strongly Disagree (1)” to “Strongly Agree (4)” scale: “I am certain that I can control myself to reduce my alcohol consumption,” “I am certain that I can control myself to not drink any alcohol at all,” and “I am certain that I can control myself to drink only on special occasions” ( $\alpha = .76$ ).

*Subjective Norms.* Perceived subjective norms regarding binge drinking were assessed by asking participants to rate on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree) the extent to which their peers who are important to them, their doctors, their friends and acquaintances, and their family members think that they should not drink ( $\alpha = .63$ ).

*Motivation.* Participants were asked to report agreement on a 1-4 scale with two items, “I would like to drink less” and “I would like to learn more about how to reduce my drinking” ( $\alpha = .75$ ).

*Intentions.* Participants responded to four items measuring intentions: “How many alcoholic beverages do you intend to consume next week *overall*?” “How many alcoholic beverages do you intend to consume next month *overall*?” “How many times in the next week do you intend to ‘get drunk’?” and “How many times in the next month do you intend to ‘get drunk’?” ( $\alpha = .61$ ).

*Past Behavior.* Participants responded to the same five items as were used to measure intentions, except that they reported behavior for the past week/month as opposed to intended behavior for the next week/month ( $\alpha = .62$ ).

*Manipulation Check.* Participants were given the prompt, “While writing about my life experience for the ‘life experience questionnaire,’ I felt...” and then presented with fourteen adjectives on a 0-10 scale. Critically, the participants were asked to rate how powerful (from not at all to extremely) they felt while writing about their experiences.

*Demographics.* At the end of the study, all participants reported their gender, age, ethnicity, religion, and whether or not they were members of a Greek organization.

### 3.3 Results

*Manipulation Check.* As expected, participants in the powerful condition reported feeling significantly more ‘powerful’ while writing about their experiences ( $M = 5.22$ ) than those in the powerless condition ( $M = 2.82$ ),  $F(1,94) = 16.60$ ,  $p < .0001$ . There was no main effect of question vs. statement condition on reported feelings of power,  $p = .24$ , and no interactive effect,  $p = .14$ .

*Intentions.* Four participants reported intended future drinking behavior that was over 3 standard deviations above the mean; these four participants were excluded from these analyses and analyses of past behavior. There was a significant two-way interaction between power level and question condition on reported intentions to drink in the future, for all four items. Powerful participants who made statements and powerless participants who asked questions reported intentions to drink significantly more than powerful participants who asked questions and powerless participants who made statements, all  $p$ 's  $\leq .01$  (see Table 1 for statistics and Figures 1-4 for figures).

*Past Behavior.* Surprisingly, there was a significant two-way interaction between power level and question condition on reported past levels of drinking behavior, for all five items. Again, powerful participants who made statements and powerless participants who asked questions reported significantly higher levels of past drinking behavior than powerful people who asked questions and powerless participants who made statements, all  $p$ 's  $< .02$  (see Table 2 for statistics).

*Norms.* There was no significant main effect of question condition on perceived subjective norms,  $p = .41$ , nor was there a significant main effect of power level,  $p = .82$ . However, there was a significant two-way interaction between power level and question condition on perceived subjective norms,  $F(1,94) = 9.99$ ,  $p < .01$ . Powerful people who made statements perceived significantly less positive norms in favor of reduced drinking than powerless people who made statements,  $t(48) = 2.62$ ,  $p < .02$ , and powerful people who asked questions,  $t(47) = 2.68$ ,  $p = .01$ .

*Other Dependent Variables.* There were no significant main or interactive effects of the manipulations on attitudes towards excessive drinking and alcohol (all  $p$ 's > .10), perceived behavioral control (all  $p$ 's > .20), or motivation to reduce drinking (all  $p$ 's > .30).

### 3.4 Summary

The main finding of this study was that power level and question condition interact to impact intended risky behavior, such that powerless people who ask questions and powerful people who make statements about their own drinking behavior report intentions to drink significantly more than powerful people who ask questions and powerless people who make statements about their behavior. This supports the fluency-based hypothesis that counter-normative conditions encourage higher levels of message processing and therefore lead to less risky behavior, in line with the recommendations of the message. Furthermore, the manipulations had no impact on any theoretically hypothesized mediators except for norms; as with intentions, the participants who intended to behave the riskiest also perceived significantly less favorable norms regarding drinking reduction.

However, perhaps most interestingly, the manipulations also had an unanticipated effect on reported past behavior, which mirrored the effect on intentions. As the conditions were randomly assigned and outliers were excluded, there is no reason to believe that participants in the different conditions truly engaged in differential levels of drinking. Therefore, we designed Study 2 to test the new hypothesis that the previously discussed manipulations were causing a biased, flawed recall of past behavior, which was then unduly influencing reported intentions.

## CHAPTER 4

### STUDY 2

The aim of Study 2 was to test the hypothesis that the question vs. statement manipulation led to biased recall of past behavior by manipulating the order in which participants reported past behavior, responded to the manipulation, and reported intended future behavior.

#### 4.1 Participants

Participants were 98 undergraduates (58% female) at the University of Illinois who participated in the study for course credit. The ethnicity breakdown of the sample was 59% White/European-American, 23% Asian/Asian-American, 10% Latino/Hispanic, 4% Black/African-American, and 4% who self-identified as “Other.” The participants ranged in age from 18 to 23 ( $M_{age} = 19.05$ ).

#### 4.2 Materials and Procedure

Similar to Study 1, all participants were informed that they would be participating in a mock peer counseling session. However, to simplify the study design, we chose to focus on the participants assigned to be clients rather than counselors. As a result, to remain consistent with the design of Study 1, all participants were primed with powerlessness and assigned to the role of “client.”

*Powerlessness.* Powerlessness was induced in an identical manner to Study 1. Participants were told to recall a time in which they felt powerless (Galinsky et al., 2003) and then assigned to the role of “client” in a mock peer counseling interaction.

*Order Manipulation.* The key manipulation in this study was the order in which participants completed the measures of past behavior, questions/statements, and intentions (see Table 3).

*Dependent Variables.* All dependent variables were identical to those collected in Study 1. Participants completed the same measures of past drinking behavior, intended future drinking behavior, attitudes, motivation, perceived behavioral control, and perceived subjective norms.

#### 4.3 Results

*Past Behavior.* As expected, the participants' reports of past drinking behavior varied based on the order manipulation. Participants who asked themselves questions about their intended drinking behavior before reporting past amounts of drinking reported significantly higher levels of intended drinking in the past month ( $M = 31.2$  drinks) than participants who simply reported past behavior without questioning their behavior first ( $M = 9.26$  drinks),  $t(29) = 2.38, p < .03$  (see Table 4 for statistics).

*Intentions.* Again, as hypothesized, participants who were instructed to recall past behavior *before* engaging in the question-asking manipulation reported significantly lower intentions to drink than participants who asked themselves questions without recalling past behavior first, all  $p$ 's  $< .03$  except for number of intended drinks in the next week (see Table 5 for statistics). Furthermore, there was no significant difference between participants who reported past behavior before engaging in the question-asking task and those who did not ask themselves questions at all on any of the intention items, all  $p$ 's  $> .05$ . This supports the finding from Study 1 that there is something particularly noteworthy about the act of asking questions that leads to higher intentions to drink, and that this effect relies on a biased recall of past behavior. When participants are prompted to accurately recall past behavior before asking questions about their behavior, the effect disappears.

*Norms.* Consistent with Study 1, there were significant differences in perceived subjective norms. Notably, participants who asked questions about their drinking behavior before

reporting past behavior and intentions perceived significantly less favorable norms regarding binge drinking reduction ( $M = 1.96$ ) than those who did not ask questions ( $M = 2.39$ ),  $t(29) = 2.29$ ,  $p < .03$ . Similarly, participants who reported past behavior before asking themselves questions perceived more favorable norms regarding binge drinking reduction ( $M = 2.34$ ) than those who did not ( $M = 1.90$ ),  $t(29) = 2.69$ ,  $p < .02$ . This suggests that there is a connection between biased recall of past behavior and perceived norms regarding binge drinking, and that accurately recalling past behavior before asking questions about one's behavior negates this effect.

*Other Dependent Variables.* There were no significant effects of the manipulations on attitudes, motivation, or perceived behavioral control (all  $p$ 's  $> .05$ ).

#### 4.4 Summary

Consistent with Study 1, Study 2 demonstrated that there is a significant effect of asking questions about one's own behavior on both intended future behavior and recalled past behavior. Namely, asking questions leads powerless participants to both report higher levels of past drinking behavior and also higher intended levels of future drinking behavior. When participants were instructed to accurately recall past behavior *before* asking these questions, however, the effect went away. Moreover, this effect also extended to perceived subjective norms. Namely, when participants asked questions of their behavior, they also reported perceiving less favorable norms regarding binge drinking reduction.



## CHAPTER 5

### DISCUSSION

#### 5.1 Summary

Although people often find themselves in dyadic persuasive communications, little is known about how the explicit power differentials within these pairings interact with more subtle aspects of the communication, like message syntax. In Study 1, we found that when participants imagined themselves to be participating in a mock counseling task and read a persuasive message intended to reduce binge drinking, powerless participants imagining themselves in the role of “client” intended to drink more when they asked questions about their behavior (vs. making statements), while the reverse was true for powerful participants imagining themselves in the role of “counselor.” Study 2 determined that this effect was driven, at least in part, by a biased recall of past behavior; when powerless clients asked questions about their behavior, they intended to drink more in the future and also reported drinking significantly more in the past, but this effect did not hold when participants were instructed to accurately report past behavior *before* asking themselves questions.

#### 5.2 Limitations

Although this study has important and promising findings, there are several limitations that will be addressed in future research. Primarily, although we determined that the effect was likely driven by a biased recall of past behavior, we are still uncertain as to what it is exactly about questions that causes this biased recall to occur. Future research will better examine potential mediators of this effect in an attempt to understand why questions would lead people to misremember their own past behavior, whereas affirmative statements would not. Secondly, for the sake of simplicity, we limited Study 2 to clients. In the future, we will continue to examine

the effects of the manipulations on participants assigned to act as counselors. On a similar note, the data are confounded by the fact that all counselors were primed with power and all clients were primed with powerlessness. Follow-up studies will disentangle the power prime from assigned role power in an attempt to examine what happens when these different sources of power are crossed (e.g. clients are primed with power and counselors are primed with powerlessness). Finally, there was no control condition collected, so it is difficult to know if the “riskier” conditions were actually intending to increase their drinking, or if the “safer” conditions were simply intending to reduce their drinking. Future research will include the collection of baseline data.

### 5.3 Implications and Future Directions

In any group or dyad, the relative power levels of each dyad or group member impact how persuasive communications are delivered and received. It is crucial to understand how the interpersonal power structure may be altered by the grammatical nature of the communication, and how this structure also impacts behavior change. Study 1 demonstrated that the manipulations even had an effect on participants assigned to act as a *counselor* in the mock peer counseling interaction. If something as simple as the grammatical structure of an interpersonal communication has the unintended impact of altering the attitudes, intentions, and behaviors of the *persuader* as well as the target, this must be taken into consideration when training counselors and designing persuasive communications. Future research will further examine the effects of the question/statement manipulation on people assigned to act as counselors.

Of note, this research has the potential to improve the efficacy of risk prevention in various communities, especially those that are considered to be socially powerless due to

socioeconomic status, gender, or race. Future work should examine further interactions of message content and sentence structure to help paint a better picture of optimal message design for health policymakers, counselors, mentors, doctors, and other relevant professionals. By connecting sociological factors (such as social power differentials) with grammatical aspects of message content, our eventual goal is the ability to more optimally tailor risk prevention messages based on demographic data and target audience.

## TABLES

Table 1.  
*Effect of manipulations on drinking intentions*

Variable	Powerless Subjects				Powerful Subjects				<i>F</i> (1, 90)	<i>p</i>
	<i>Questions</i>		<i>Statements</i>		<i>Questions</i>		<i>Statements</i>			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
# Intended Drinks Next Week Overall	7.31	6.29	4.02	4.33	3.66	5.85	7.60	7.40	8.22	.005
# Intended Drinks Next Month Overall	19.54	16.64	10.08	11.26	9.357	13.83	18.42	14.70	9.86	.002
# Times in Next Week Intend to “Get Drunk”	1.25	1.22	0.41	0.82	0.52	0.91	1.06	1.02	10.74	.001
# Times in Next Month Intend to “Get Drunk”	3.60	3.44	1.85	2.97	1.50	2.77	3.84	3.71	9.18	.003

Table 2.  
*Effect of manipulations on reported past drinking behavior*

Variable	Powerless Subjects				Powerful Subjects				<i>F</i> (1, 90)	<i>p</i>
	<i>Questions</i>		<i>Statements</i>		<i>Questions</i>		<i>Statements</i>			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
# Drinks Last Week	6.47	7.82	2.68	3.32	3.38	7.08	6.22	7.29	5.87	.017
# Drinks Last Month	18.45	16.45	9.02	9.10	9.14	13.89	19.04	18.10	9.91	.002
# Times “Got Drunk” Last Week	0.93	1.06	0.29	0.55	0.42	0.87	0.96	0.97	10.39	.001
# Times “Got Drunk” Last Month	3.14	3.27	1.54	2.20	1.83	3.18	3.88	3.37	8.42	.004

Table 3.  
*Study 2 Manipulations*

1	Past Behavior	Questions	Intentions
2	Past Behavior	.	Intentions
3	Questions	Past Behavior	Intentions
4	Questions	.	Intentions

Table 4.

*Study 2: Effect of Asking Questions on Reported Past Behavior.*

Variable	$Q - PB - I$		$PB - I$		$t(29)$	$p$
	$M$	$SD$	$M$	$SD$		
# Drinks Last Week	8.20	9.70	1.75	2.93	2.54	.016
# Drinks Last Month	31.20	33.71	9.26	14.47	2.38	.024
# Times "Got Drunk" Last Week	1.06	1.27	0.12	0.34	2.84	.008
# Times "Got Drunk" Last Month	5.13	5.38	0.83	1.62	3.05	.004

Table 5.

*Study 2: Effect of Reporting Past Behavior First On Intentions.*

Variable	<i>PB – Q – I</i>		<i>Q – I</i>		<i>t</i> (29)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
# Intended Drinks: Next Week Overall	6.23	7.08	15.96	14.06	2.4568	.020
# Intended Drinks: Next Month Overall	14.59	16.78	40.61	36.26	2.5915	.014
# Times Intending To “Get Drunk” Next Week	0.96	1.00	1.26	0.88	0.8736	.389
# Times Intending To “Get Drunk” Next Month	2.65	2.80	5.85	4.41	2.4241	.021



Table 6.  
*Study 2: Negating Effect Of Reporting Past Behavior Before Asking Questions.*

Variable	<i>PB – Q – I</i>		<i>PB – I</i>		<i>t</i> (30)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
# Intended Drinks: Next Week Overall	6.23	7.08	3.76	7.76	0.93	.355
# Intended Drinks: Next Month Overall	14.59	16.78	9.03	16.12	0.95	.346
# Times Intending To “Get Drunk” Next Week	0.96	1.00	0.40	0.84	1.72	.095
# Times Intending To “Get Drunk” Next Month	2.65	2.80	1.00	1.87	1.96	.059

Table 7.

*Study 2: Effect of Asking Questions on Other Dependent Variables*

Variable	<i>Q – PB – I</i>		<i>PB – I</i>		<i>t</i> (29)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>Norms</b>	<b>1.96</b>	<b>0.52</b>	<b>2.39</b>	<b>0.51</b>	<b>2.29</b>	<b>.029</b>
Motivation	2.06	0.45	1.96	0.71	0.44	.656
Attitudes	2.85	0.74	2.78	0.97	0.22	.825
Perceived Behavioral Control	3.60	0.44	3.37	0.51	1.31	.200

Table 8.

*Study 2: Effect of Reporting Past Behavior First On Other Dependent Variables*

Variable	<i>PB – Q – I</i>		<i>Q – I</i>		<i>t</i> (29)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>Norms</b>	<b>2.34</b>	<b>0.54</b>	<b>1.90</b>	<b>0.33</b>	<b>2.69</b>	<b>.011</b>
Motivation	2.03	0.61	2.16	0.72	0.56	.579
<b>Attitudes</b>	<b>2.92</b>	<b>0.69</b>	<b>3.68</b>	<b>0.97</b>	<b>2.49</b>	<b>.018</b>
Perceived Behavioral Control	3.37	0.51	3.33	0.66	0.19	.845

## FIGURES

Figure 1. Study 1: Number of drinks intended to consume in the next week (overall).

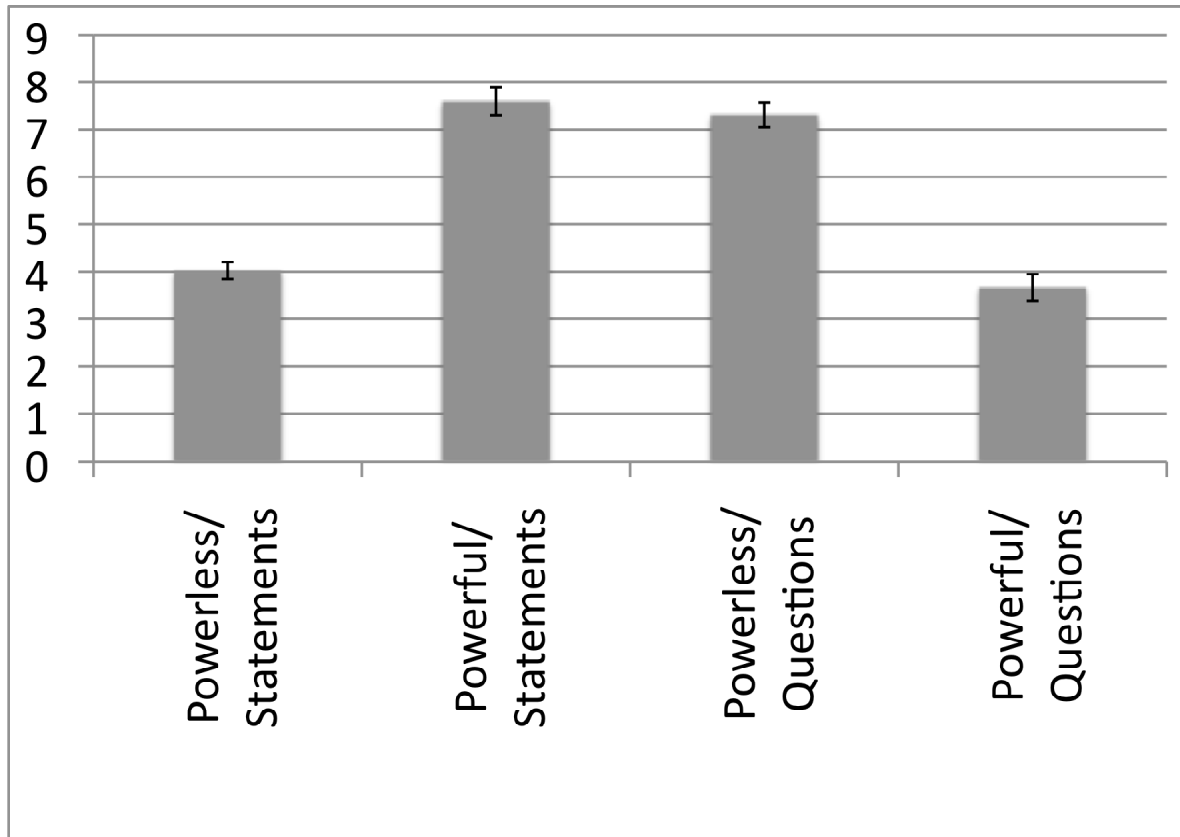


Figure 2. Study 1: Number of drinks intended to consume in the next month (overall).

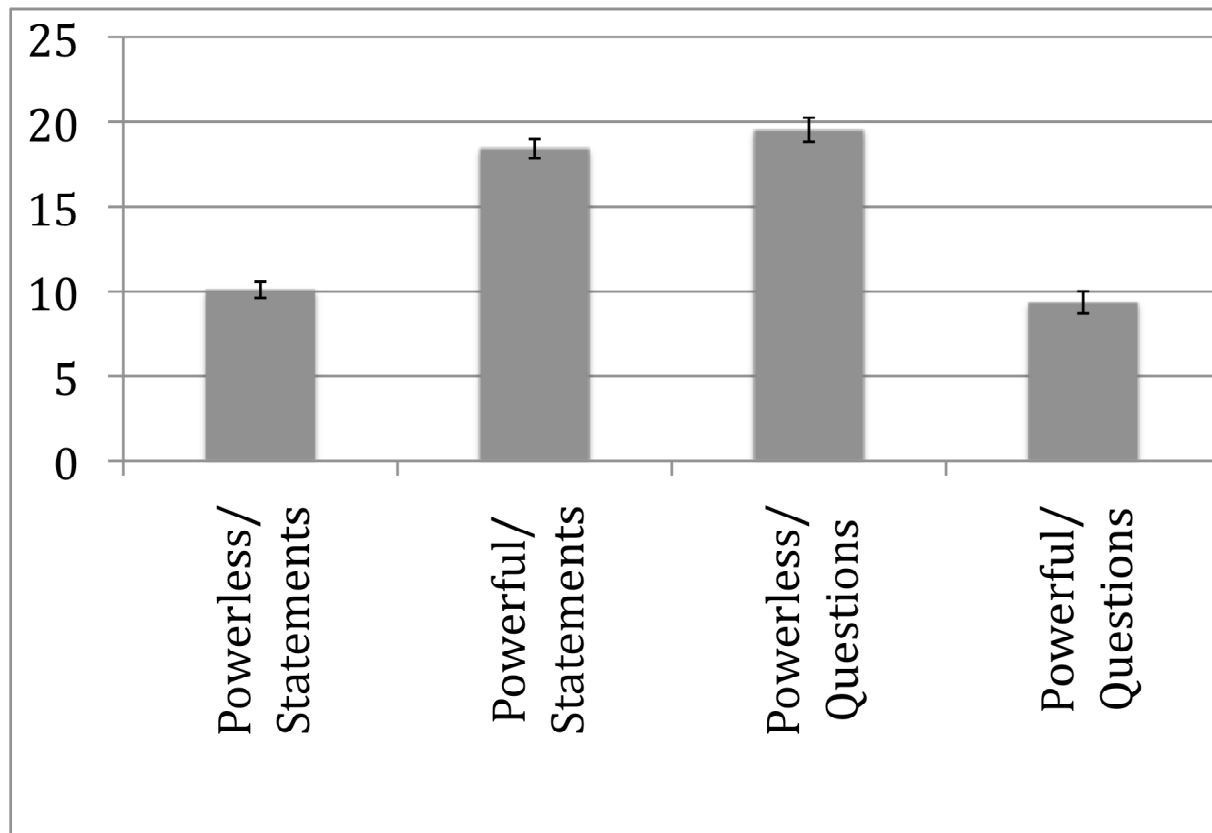


Figure 3. Study 1: Intended number of “nights out” in the next week

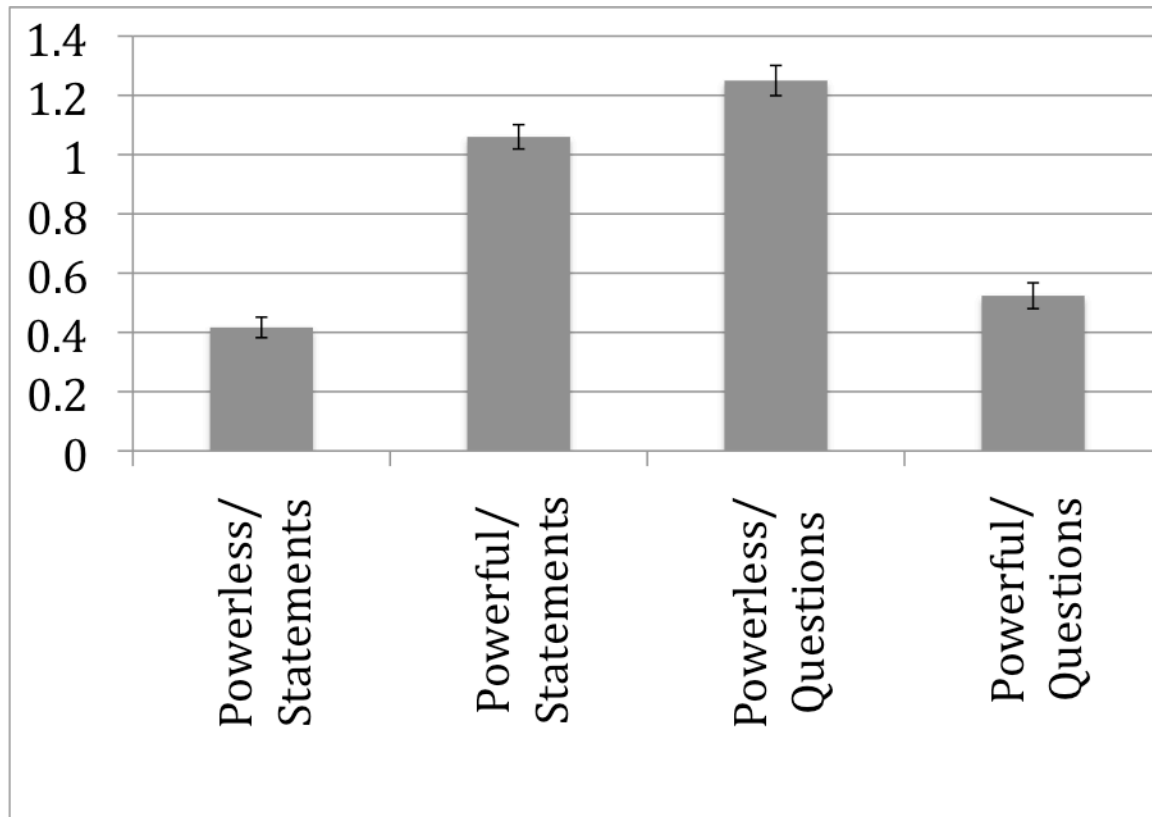
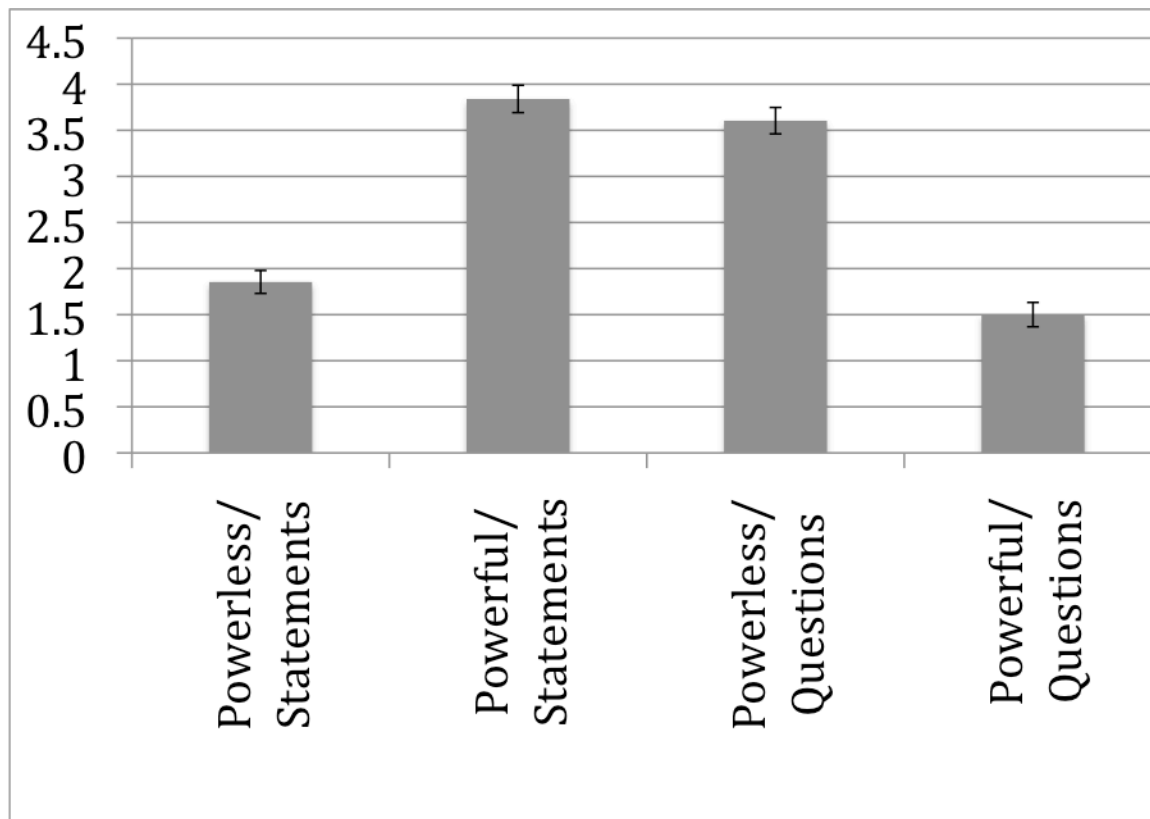


Figure 4. Study 1: Intended number of “nights out” in the next month



## REFERENCES

- Ahluwalia, R., & Burnkrant, R.E. (2004). Answering questions about questions: A persuasion knowledge perspective for understanding the effects of rhetorical questions. *Journal of Consumer Research*, 31, 26-42.
- Albarracin, D., Durantini, M.R., & Earl, A. (2006). Empirical and Theoretical Conclusions of an Analysis of Outcomes of HIV-Prevention Interventions. *Current Directions in Psychological Science*, 15, 73-78.
- Albarracin, D., Kumkale, G.T., & Johnson, B.T. (2004). Influences of social power and normative support on condom use decisions: A research synthesis. *AIDS Care*, 16, 700-723.
- Alter, A., Oppenheimer, D.M., Epley, N., & Eyre, R. (2007). Overcoming intuition: Metacognitive difficulty activates analytical thought. *Journal of Experimental Psychology: General*, 136, 569-576.
- Anderson, C., & Galinsky, A.D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology*, 36, 511-536.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175-1184.
- Berdahl, J.L., & Mertorana, P. (2006). Effects of power on emotion and expression during a controversial group discussion. *European Journal of Social Psychology*, 36, 497-509.
- Brehm, J.W. (1966). *A theory of psychological reactance*. Ann Arbor, MI: Academic Press.
- Burnkrant, R.E., & Howard, D.J. (1984). Effects of the use of introductory rhetorical questions versus statements on information processing. *Journal of Personality and Social Psychology*, 47, 1218-1230.
- Copeland, J. T. (1994). Prophecies of power: Motivational implications of social power for behavioral confirmation. *Journal of Personality and Social Psychology*, 67, 264-277.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Academic Press.



- Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Durantini, M.R., Albarracin, D., Mitchell, A.L., Earl, A., & Gillette, J.C. (2006). Conceptualizing the influence of social agents of behavior change: A meta-analysis of the effectiveness of HIV-prevention interventionists for different groups. *Psychological Bulletin*, 132, 212-248.
- Fiske, S.T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48, 621-628.
- French, J.R.P., & Raven, B. (1959). The bases of social power. In D. Cartwright and A. Zander (Eds.), *Group dynamics*. New York: Harper & Row.
- Galinsky, A.G., Gruenfeld, D.H., & Magee, J.C. (2003). From power to action. *Journal of Personality and Social Psychology*, 85, 453-466.
- Holtgraves, T., & Yang, J. (1990). Politeness as universal: Cross-cultural perceptions of request strategies and inferences based on their use. *Journal of Personality and Social Psychology*, 59, 719-729.
- Hovland, C., Janis, I., & Kelly, H. (1953). *Communication and persuasion*. New Haven, CT: Yale University Press.
- Keltner, D., Gruenfeld, D.H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110, 265-284.
- Miller, W.R., & Rose, G.S. (2009). Towards a theory of motivational interviewing. *American Psychologist*, 64, 527-537.
- Overbeck, J.R., & Park, B. (2001). When power does not corrupt: Superior individuation processes among powerful perceivers. *Journal of Personality and Social Psychology*, 81, 549-565.
- Rollnick, S., & Miller, W.R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, 23, 325-334.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3-33). Rochester, NY: University of Rochester Press.

- Senay, I., Albarracin, D., & Noguchi, K. (2010). Motivating goal-directed behavior through introspective self-talk: The role of the interrogative form of simple future tense. *Psychological Science, 21*, 499-504.
- Sheldon, K., Williams, G., & Joiner, T. (2003). *Self-determination in the clinic: Motivating physical and mental health*. New Haven, CT: Yale University Press.
- Song, H., & Schwarz, N. (2008). Fluency and the detection of misleading questions: Low processing fluency attenuates the Moses illusion. *Social Cognition, 26*, 791-799.