

## Homework 4

For this homework, focus on interpretation of the results (think APA-style results/discussion section). At the same time, you need to consider homogeneity of variance issues when appropriate, estimate the effect size of the interaction (at least), and other related issues.

1. [M&D] During the 1980's, social psychologists renewed their investigation of how participants are influenced by persuasive information. The following study is modeled after an experiment reported by DeBono, K. G. and Harnish, R. J. (1988), "Source expertise, source attractiveness, and the processing of persuasive information: A functional approach." *Journal of Personality and Social Psychology*, 55, 541-546. Participants listened to a tape-recorded speech criticizing a university calendar picturing members of the pom-pom (cheerleading) squad. All participants listened to the same speaker, but participants were randomly assigned either to an expert condition (where they were led to believe that the speaker was a nationally known research psychologist) or to an attractive source condition (where they were led to believe that the speaker was a leader in student government). Within each source condition, participants were randomly assigned to hear one of two versions of the tape, one of which presented strong arguments and the other of which presented weak arguments. Finally, participants were classified as either low or high self-monitoring based on their responses to the Self-Monitoring Scale. The dependent variable was a 7-point Likert scale item (1 = worthless, 7 = valuable) measuring how valuable they thought the calendar was. Analyze the data below as completely as you can.

High Self-Monitors				Low Self-Monitors			
Strong		Weak		Strong		Weak	
Expert	Attractive	Expert	Attractive	Expert	Attractive	Expert	Attractive
4	4	3	5	3	5	5	6
3	4	5	5	5	4	6	4
4	2	3	7	5	3	4	4
5	3	2	5	4	2	7	2
2	5	6	6	3	4	6	4
5	3	4	4	2	6	7	5
4	2	4	3	1	2	5	4
6	3	3	5	5	4	6	3
3	4	5	6	3	4	4	4
4	3	3	7	4	3	6	2
5	2	2	7	3	4	7	3
4	4	3	6	4	3	5	4

2. [Howell] In a study of the way children and adults summarize stories, we select 10 fifth graders and 10 adults. These are further subdivided into equal groups of good and poor readers (on the hypothesis that good and poor readers may store or retrieve story information differently). All participants read 10 short stories and were asked to summarize each story in their own words immediately after reading it. All summaries were content analyzed and the number of statements related to settings (where the story took place), goals (what the actors in the stories were hoping to accomplish), and inferred dispositions (what happened as a result of the actions) were recorded. The data are given below, collapsed across the 10 stories.

	ADULTS			CHILDREN		
	Setting	Goal	Disposition	Setting	Goal	Disposition
Good Readers	8	7	6	5	5	2
	5	6	4	7	8	4
	5	5	5	7	7	4
	7	8	6	6	4	3
	6	4	4	4	4	2
Poor Readers	7	6	3	2	2	2
	5	3	1	2	0	1
	6	6	2	5	4	1
	4	4	1	4	4	2
	5	5	3	2	2	0

Describe the design of this study. Conduct the appropriate analyses to explain the results of this study as completely as possible.

3. [Howell] In an investigation of cigarette smoking, an experimenter decided to compare three different procedures for quitting smoking (Tapering Off, Immediate Stopping, and Aversion Therapy). She took five participants in each group and asked them to rate (on a 10-point scale) their desire to smoke “right now” in two different environments (Home vs. Work) both before and after quitting. Can you describe the design? Analyze the data and interpret as completely as you can.

	Before Quitting		After Quitting	
	Home	Work	Home	Work
Taper	7	6	6	4
	5	4	5	2
	8	7	7	4
	8	8	6	5
	6	5	5	3
Immediate	8	7	7	6
	5	5	5	5
	7	6	6	4
	8	7	6	5
	7	6	5	4
Aversion	9	8	5	4
	4	4	3	2
	7	7	5	3
	7	5	5	0
	8	7	6	3

4. Saguy et al. (2010) published an article titled: Interacting Like a Body: Objectification Can Lead Women to Narrow Their Presence in Social Interactions. Here's their *Method* section:

## **Method**

### ***Participants and design***

Participants, who earned research credit, were 207 undergraduate students (93 men, 114 women; mean age = 18.73 years,  $SD = 1.24$ ). Each was randomly assigned to have either a male or a female alleged interaction partner and to participate in one communication condition (body, face, or audio). Thus, the study involved a 2 (participant's gender: male, female) x 2 (alleged partner's gender: male, female) x 3 (communication condition: body, face, audio) between-subjects design.

### ***Procedure and measures***

Participants were tested individually. A same-sex experimenter led each participant to a room equipped with a computer, headphones, audio recorder, and video camera. The experimenter explained that the study was examining "what makes an interaction successful" and that the participant would interact with another student in the adjacent cubicle through a close-circuit system. To manipulate the gender of the alleged partner, the experimenter mentioned that the partner was "another female [male] student" and referred to the interaction partner with gendered pronouns (e.g., *he* or *she*) throughout the session. To manipulate objectification, the experimenter explained that the study was examining how people use different channels of communication ("facial expressions, body gestures, and vocal cues") and that the interaction would therefore be conducted through either an audio or a video channel. The participant then randomly chose one of three folded notes that determined assignment to the communication condition. In the body condition, the experimenter explained that the interaction would be conducted through a video device (which the experimenter angled down to focus on the participant's body) such that the participant and the partner would view each other only "from the neck down." In the face condition, the experimenter directed the video camera toward the participant's face and explained that the interactants would view each other only "from the neck up." In the audio condition, the experimenter explained that the interaction would be conducted through an audio device and would involve no videotaping. To strengthen the objectifying treatment, the experimenter flipped the camera's screen to face participants in the video conditions (body and face), so that they saw how they were ostensibly viewed by their partners. In the audio condition, the experimenter covered the camera's lens, instructing participants to use the audio recorder.

Participants were then instructed to introduce themselves to their (alleged) partner for 2 min, prior to viewing the partner's introduction. To standardize the introductions, the experimenter handed participants topics to refer to ("four things you like doing the most," "four things you like doing the least," "plans for the future," "your biggest fear"). The experimenter explained that the recording device would stay on for the full 2 min regardless of how long the participant talked. If the participant stopped talking before 2 min passed, the experimenter, who remained in the room during the introduction, said, "There are \_\_\_ seconds left. It's up to you whether you want to keep going or not." A research assistant, unaware of the hypotheses and conditions, listened to the audio recordings of all participants and timed each participant's speech.

From their Results:

### ***Talking time***

A 2 (participant's gender) x 2 (partner's gender) x 3 (communication condition) ANOVA on talking time, measured in seconds, revealed a main effect for participant's gender. Women ( $M = 107.25$ ,  $SD = 20.70$ ) talked less than men ( $M = 114.68$ ,  $SD = 9.65$ ),  $F(1, 195) = 16.29$ ,  $p < .01$ ,  $\eta_p^2 = .08$ . A main effect for partner's gender further revealed that participants who believed they were interacting with a man talked less ( $M = 106.15$ ,  $SD = 21.73$ ) than those who believed they were interacting with a woman ( $M = 114.28$ ,  $SD = 10.57$ ),  $F(1, 195) = 13.56$ ,  $p < .01$ ,  $\eta_p^2 = .07$ .

The predicted three-way interaction was obtained,  $F(2,195) = 3.07$ ,  $p < .05$ ,  $\eta_p^2 = .03$  (see Fig. 1).

Using the information provided and the tools at your disposal, make the best sense you can of the significant interaction.

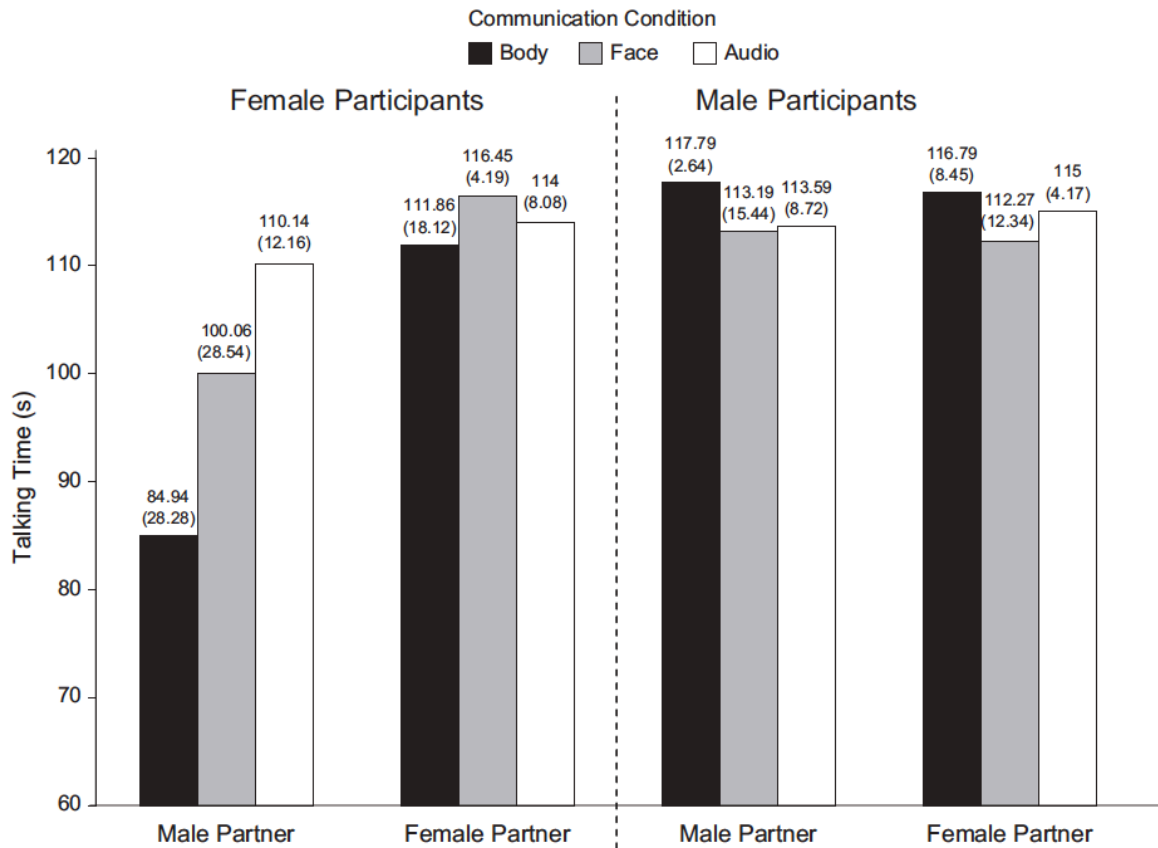


Fig. 1. Talking time as a function of participant's gender, partner's gender, and communication condition. Standard deviations are presented in parentheses.