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## Predicting what we will like: Asking a stranger can be as good as asking a friend

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## ABSTRACT

When predicting how much they will like something they have not encountered before, people use three commonsense theories: It is better to have a description of the attitude object than to know how someone else felt about it (“I know better than others”), better to know how a friend felt about it than how a stranger felt (“birds of a feather”), and better to get advice from friends—how much they think we will like it—than to know how *they* felt about it (“my friends know me”). We present evidence that people endorse these lay theories but also that they overuse them. Sometimes people make better predictions by knowing how a stranger felt than by getting a description of the object, sometimes a stranger is as good as a friend, and sometimes advice is not any better than knowing how someone else felt.

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## Introduction

“Fools need advice most, but wise men only are the better for it.”  
Benjamin Franklin, *Poor Richard's Almanack* (1734/1914, p. 21)

To make good decisions, people need to make accurate forecasts about how they will feel in the future. For example, when deciding whom to date, where to spend the night, or what to read, people need to predict how much they will enjoy a particular dating partner, hotel, or book. What kinds of information do people use to make forecasts about future preferences? Do they, as Benjamin Franklin suggested, ignore advice from others, and are they worse off by doing so? We propose that people use three lay theories about what kinds of information will lead to accurate affective forecasts, but that these theories are not entirely correct.

To illustrate these theories, suppose that your local ice cream parlor has invented a new flavor of ice cream and you are deciding whether to give it a try. Suppose further that you could read a description of the flavor or find out how much someone else liked it. Research shows that people would rather have the description. After all, if we learned that the new flavor was vanilla mixed with bacon bits, why would we need to know how appealing this flavor is to someone else or that person's opinion of how much we would

like it? “I don't care what my friend thinks,” we would likely reason. “Ice cream mixed with pork products sounds awful.” We will refer to this as the “I know better than others” lay theory.

Often, of course, people do know what they will like, but overconfidence in personal knowledge often leads people to underutilize advice from others (Yaniv, 2004). And research suggests that at least under some circumstances, finding out how much a complete stranger enjoyed an experience (called “surrogation” information, because forecasters can use the stranger as a surrogate in place of themselves) produces more accurate forecasts about one's own enjoyment than receiving a description of that experience (called “simulation” information, because the description allows people to run a mental simulation of how much they would like it). In one study, for example, female college students were asked to predict how much they would enjoy a “speed date” with a male student. Some were given a profile and photograph of the potential dating partner (simulation information), whereas others were told only how much another woman had enjoyed a speed date with him (surrogation information). Although people believed that simulation would be much more useful, those given the surrogation information made more accurate forecasts about how much they would enjoy the date (Gilbert, Killingsworth, Eyre, & Wilson, 2009; see also Walsh & Ayton, 2009). In short, people's affective forecasts were more accurate when they knew nothing about the event other than how one person felt about it. And yet, people did not believe that surrogation information would be very useful, perhaps because they overestimated how much variation there was between individuals or because they

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overestimated how accurately they could simulate their future experiences based on descriptive information. Thus, people sometimes use the “I know better than others” theory at their peril.

But what happens when people do not have any information about an attitude object and thus cannot run a mental simulation of how much they will like it? Under these circumstances most people are willing to consider others’ opinions, by, for example, reading book reviews or consulting on-line travel sites to see what others have thought of hotels and restaurants. Little research has addressed the question, however, of which kinds of information people prefer to get from others when making affective forecasts and how useful this information is. We suggest that in the absence of information about an attitude object, people rely on two additional lay theories that are not always correct. The first is the “birds of a feather” theory, which asserts that people’s preferences are more aligned with their friends than with strangers. If people want to predict how much they will like a new book or hotel, better to find out how much a friend liked it rather than how much a single stranger liked it.

The “birds of a feather” theory has some basis in fact, in that friends do share more attitudes and values than strangers do (Huston & Levinger, 1978; Lee et al., 2009; McPherson, Smith-Lovin, & Cook, 2001; Newcomb, 1961). Most research on this topic, however, has focused on the similarity of core values and attitudes such as religious beliefs and political views, and less on the similarity of preferences for such things as food, books, and movies. Just because two people are both Jewish Democrats or Baptist Republicans does not necessarily mean that they like the same flavors of ice cream. Even if people do share preferences with their friends, research shows that they overestimate the degree of that similarity (Jussim & Osgood, 1989; Locke, Craig, Baik, & Gohil, 2012).

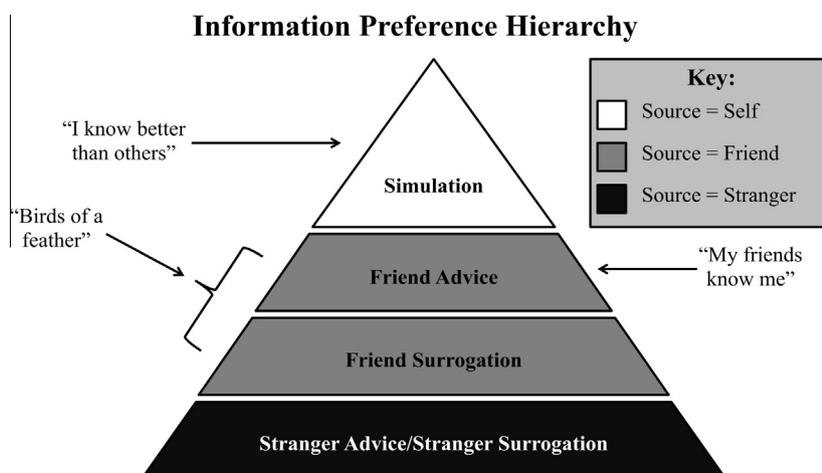
Further, research shows that stranger surrogation information leads to accurate forecasts, at least in some domains, suggesting that there is less variance in judgments than people think. If so, then there might not be much of an advantage to knowing how a friend feels over how a stranger feels. New ice cream flavors become best sellers because most people like them, regardless of whether those people are our friends or enemies. And yet, people show a preference for guidance from similar others (Gino, Shang, & Croson, 2009; Yaniv, Choshen-Hillel, & Milyavsky, 2011) and from close others (Feng & MacGeorge, 2006), which suggests that they may exaggerate the usefulness of the “birds of a feather” theory (see Fig. 1).

There is an alternative to finding out how our friends feel, and that is finding out what advice our friends have specifically for

us. That is, regardless of how similar our friends’ preferences are to ours, they might know us well enough to guess how we will feel. Joe may hate spicy food but know that his friend Anthony loves it, and Sofia may love science fiction films but know that Kate prefers romantic comedies. Thus, if we had the choice of finding out how much a friend liked a new movie, or their advice about how much we will like it, we would probably choose the advice, which we will refer to as the “my friends know me” theory (see Fig. 1).

There is reason to believe, however, that advice from friends is not as valid as people think. First, people believe that they express their emotional reactions on their faces more than they do, suggesting that they overestimate the degree to which their friends can detect how they feel (Barr & Kleck, 1995; Ickes, 2003). Second, research on false consensus finds that people overestimate the extent to which others feel the way they do (Marks & Miller, 1987; Ross, Greene, & House, 1977), suggesting that our friends overweigh their own preferences when guessing how we feel. Thus, because of misperceptions by the receivers of advice (overestimating how well their friends can detect their preferences) and the givers of advice (overestimating how similar their preferences are to their friends’), advice might not be as useful as people think it is, limiting the efficacy of the “my friends know me” theory. This supposition is supported by evidence that individuals tend to overestimate the accuracy of advice from a close friend (Gershoff & Johar, 2006) and that even romantic partners are not very good at predicting each others’ preferences (Lerouge & Warlop, 2006). Of course, these limitations of advice do not mean that it is useless. In fact, if friends base their advice on how they feel, then giving advice would be the same as surrogation information (knowing how our friend feels), which, as noted, has been found to lead to accurate affective forecasts. Our point is that advice may not be as superior to surrogation as people think it is.

The present studies go beyond the existing literature by examining different types of information from other people—both its source (friends vs. strangers) and its degree of personalization (surrogation vs. advice). We seek to show that, despite people’s theories, knowing how a stranger felt can lead to substantial accuracy in affective forecasts, and that there is sometimes no added benefit to knowing how a friend felt or what that friend’s advice is for us. In Study 1 we tested the hypothesis that people endorse the “I know better than others,” “birds of a feather,” and “my friends know me” theories by asking participants to rank different types of information according to how much the information would help them predict their liking for an unfamiliar stimulus (e.g., a novel food item). In Studies 2 and 3, we examined how



**Fig. 1.** Hierarchy of preferences for types of information about an unfamiliar attitude object, in descending order of perceived usefulness for predicting liking. Three lay theories that influence the preference hierarchy are indicated with arrows pointing to the relevant preference order.

much these types of information actually influence the accuracy of affective forecasts, with the hypothesis that the three theories do not lead to forecasts that are as accurate as people think.

### Study 1: Lay theories about simulation, advice, and surrogation

#### Method

##### Participants

Participants were recruited from psychology classes or at a table set up in the psychology building and were compensated with a small snack or candy bar. A total of 53 students (16 men, 37 women) with an average age of 20.06 ( $SD = 1.69$ ) completed the study. Most participants identified their race as White (49.1%) or Asian (32.1%).

##### Procedure

Participants read a description of a study in which they came to the laboratory with a friend and rated two stimuli, a food item and a short video. First, they were asked to think about which friend they would bring. Next, they imagined that they arrived at the study, were separated from their friend, and asked to predict how much they would like either a food item or a video. They were asked to rank five types of information according to how much they would like to receive each one when predicting their liking for the stimuli. One type was simulation information (a description of the food or video). The remaining four were about other people's ratings and followed a 2 (Source: friend vs. stranger)  $\times$  2 (Personalization: surrogation vs. advice) scheme: friend's surrogation (how much a friend actually liked the food), friend's advice (how much a friend thought the participant would like the food), stranger surrogation (how much a stranger actually liked the food), and stranger advice (how much a stranger thought the average student at their university would like the food). The information types were presented to participants in one of two orders, the first beginning with simulation information and the other with simulation information listed last. Participants ranked the information for the video and food stimuli separately in counterbalanced order. Finally, participants provided some demographic information and answered two manipulation check questions to ensure they had paid attention to the details of the study.

#### Results and discussion

Nine participants failed one of the manipulation check questions. The results were very similar when these participants were included or excluded, so we included them. Consistent with the "I know better than others" theory, people preferred simulation information over all the other types of information (see Fig. 2). In order to test the statistical significance of this preference we compared participants' ranking of simulation information to their ranking of the next most preferred type of information, advice from a friend, with a 2 (Stimulus Type: food vs. video)  $\times$  2 (Information Type: simulation vs. advice from friend) within-participants ANOVA.<sup>1</sup> The main effect of Information Type was significant,

<sup>1</sup> We recognize that the use of ANOVA to analyze these data is unusual, but we were unable to identify a comparable non-parametric test that could incorporate simultaneously the within-participants nature of the data as well as the presence of multiple factors with potential interactions. All of the individual contrasts of interest were also compared using a series of Wilcoxon Signed-Ranks Tests (a non-parametric equivalent to a paired  $t$ -test) which showed that the majority of individual contrasts (such as the mean rank of friend surrogation for the food compared to the mean rank of stranger surrogation for the food) were also significant or marginally significant, despite the power limitations of not collapsing across stimulus type, information type, or information source. These results suggest that our conclusions would be similar regardless of the specific statistical analysis method used.

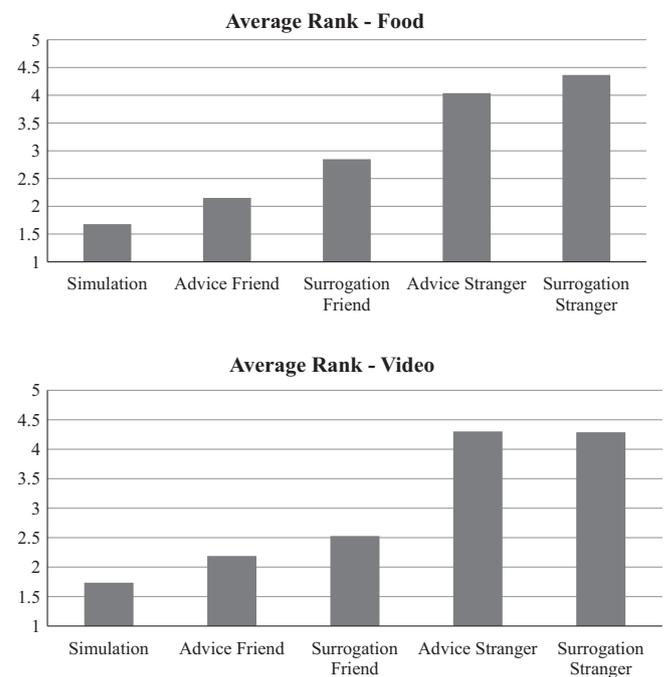


Fig. 2. Average rank for types of information about an unfamiliar attitude object. Each average rank can range from 1 (most preferred) to 5 (least preferred).

$F(1, 52) = 5.75, p = .020$ , reflecting the fact that people preferred simulation information to advice from a friend. Neither the main effect of Stimulus Type nor the interaction was significant,  $F_s(1, 52) < 1.00, ns$ . Having established that simulation was the most preferred type of information, we dropped rankings of simulation information and performed a 2 (Source: friends vs. strangers)  $\times$  2 (Personalization: surrogation vs. advice)  $\times$  2 (Stimulus: food vs. video) ANOVA to examine preferences for the remaining types of information. As expected, there was a strong main effect of Source,  $F(1, 49) = 169.34, p < .001$ , reflecting the fact that people ranked information from friends higher than information from strangers. Also as expected, there was a significant effect of Personalization,  $F(1, 49) = 7.62, p = .008$ , reflecting the fact that people ranked advice higher than surrogation information. The Source  $\times$  Personalization interaction was nearly significant,  $F(1, 49) = 4.02, p = .051$ , reflecting the fact that the preference for advice over surrogation was greater for a friend than a stranger. In other words, people did not see much value in information from a stranger, regardless of whether it was advice or surrogation, but when it came to a friend, they valued advice over surrogation.

This pattern of results differed slightly depending on whether people were rating the food or the video, as indicated by a significant Source  $\times$  Stimulus interaction,  $F(1, 49) = 4.73, p = .035$ , and a significant Personalization  $\times$  Stimulus interaction,  $F(1, 49) = 5.81, p = .020$ . The former interaction reflects the fact that the preference for information from a friend, while strongly present for both the food and the video, was slightly stronger for the video. The latter interaction reflects the fact that the preference for advice over surrogation information, while present for both the food and the video, was stronger for the food. Although there were slight variations that depended on the stimulus, the main pattern of results was a strong preference for simulation information, followed by advice from a friend, surrogation information from a friend, and either advice or surrogation information from a stranger.

To summarize the results of Study 1, participants preferred simulation information the most, consistent with the "I know better than others" theory. Consistent with the "birds of a feather" theory,

participants preferred information from friends over information from strangers. And, consistent with the “my friends know me” theory, they preferred advice over surrogation, particularly from a friend. A possible limitation of these findings is that we asked people to rank the different types of information, which did not allow for the possibility that they found two or more information types to be of no use. We addressed this in Study 2 by asking participants to pick the one type of information they found most useful, and in Study 3 by asking participants to rate the usefulness of each type of information separately instead of ranking them.

The main purpose of Studies 2 and 3 was to test whether people’s theories led to accurate forecasts about their preferences. To find out, we conducted an experiment (the one we described to participants in Study 1) in which pairs of friends came to the lab and made predictions about their liking for a target stimulus. Before making their prediction, participants received one of the five types of information described to participants in Study 1. We predicted that, consistent with previous research, simulation information would lead to less accurate forecasts than surrogation information, contrary to the “I know better than others” theory. We also predicted that the “birds of a feather” theory would prove to be wrong, in that receiving information from a friend would not produce any more accuracy than receiving information from a stranger. As noted, friends are not as similar in their preferences for everyday things as they think, thus finding out how much a stranger liked a film or food item might be as useful as finding out how much a friend liked it. Finally, we predicted that the “my friends know me” theory would also prove to be inaccurate, in that people would make just as accurate forecasts using surrogation information as advice. The reason for this is that advice givers might not be particularly good at guessing how others will feel, and instead assume that others will feel the same way they do. If so, forecasters will be just as accurate when they rely on surrogation information (how someone else felt) as advice.

## Study 2: Friends vs. strangers and surrogation vs. advice

### Method

#### Participants

Participants were recruited from introductory psychology classes and were granted course credit or \$5 for participating. They were asked to bring with them a good friend of the same gender. Anyone who arrived to the lab without a friend or who reported a food allergy or dietary restriction that would prevent them from experiencing all of the stimuli was excluded from participation. A total of 220 students (80 men, 140 women) with an average age of 19.12 ( $SD = 1.72$ ) completed the study. Most participants identified their race as White (50.9%) or Asian (30.7%).

#### Stimuli

We chose two stimuli for people to evaluate, based on pilot testing, with two goals in mind. First, in order to test our hypotheses, we selected stimuli about which people made forecasting errors when given simulation information alone. If people made highly accurate forecasts based on a description of the stimulus, we could not test our hypotheses that surrogation information and advice would improve these forecasts (we return to this issue in the Discussion). Second, we attempted to select stimuli from different domains, to make sure that our results were not limited to one type of stimulus. This resulted in the selection of two stimuli: a short video and novel food combination. The video was a 3 min, 55 s portion of a news broadcast in which a sports announcer flubs his description of a sporting event. We obtained this video clip from <http://www.youtube.com/watch?v=W45DRy7M1no>. The

second stimulus was a serving of plain yogurt with a small slice of cheddar cheese. It should be noted that we began the study using two videos and two foods per experimental session. This original procedure required a large amount of preparation for each participant pair, which resulted in a slow pace of data collection. After 49 pairs of participants were run, we elected to simplify the procedure by including just one video and one food combination per session, choosing to keep the food and video pair that preliminarily showed the most inaccuracy in predictions based on simulation information (as this was a necessary condition for testing our hypotheses).

#### Procedure

Friends were seated in separate rooms and randomly assigned to taste either the novel food combination or view the short video. Participants rated how much they liked the stimulus to which they were assigned on a 7-point scale, where 1 = *not at all* and 7 = *extremely*. These ratings served as a measure of how much participants from this population actually liked each stimulus.

Next, participants estimated how much the average student at their university and the friend they had come with would like the stimulus they had just evaluated, on the same 7-point scale. Participants then switched rooms with their friends and made predictions about how much they would like the other stimulus (the one they had not yet experienced). Before making their predictions, participants were randomly assigned to receive one piece of information: A description of the stimulus (simulation information); how much another student at their university had liked it, which was randomly chosen from our pilot testing of the stimuli (stranger surrogation); how much their friend had liked it (friend surrogation); how much another student at their university thought the average student would like the stimulus, which was randomly chosen from our pilot testing of the stimuli (stranger advice); or how much their friend thought they would like it (friend advice). The information participants received was always based on real ratings, either drawn from pretest data for the stranger conditions or taken from their friend’s initial ratings for the friend conditions (see Appendix A for exact wording of each information type). As in prior research (e.g., Gilbert et al., 2009), the source of stranger information was an unidentified member of the participant’s broad social network (in this case, another student at the same university). After receiving the single piece of information, participants predicted how much they would like the food or video.

All participants then experienced and rated the stimulus about which they had just made a prediction, which allowed for the possibility of using participants’ own ratings of the stimulus as a measure of the accuracy of their forecasted liking. In order to ensure that participants rated the stimulus on an equal footing, we first gave them whatever information they had not yet received. For example, after making their prediction, participants in the simulation condition received the stranger surrogation, stranger advice, friends’ surrogation, and friends’ advice before tasting the food or watching the video. Participants then completed manipulation checks and demographic information, and indicated which type of information they would most prefer to have before making a prediction (e.g., simulation information or friend advice).

#### Results and discussion

There are a variety of ways of assessing the accuracy of people’s forecasts about how much they would like the video or food combination. The ideal approach would be to use their own subsequent evaluation of the stimulus as the standard, and this within-participants design has been employed successfully in some past studies

(e.g., Kermer, Driver-Linn, Wilson, & Gilbert, 2006). However, other studies have found that the mere act of making a prediction can alter people's reported experiences (e.g., Hahn, Wilson, McRae, & Gilbert, 2013). The present study appears to fall in this latter category, in that there was evidence that participants' ratings of the stimuli were influenced by the type of information they received first (e.g., friend surrogation). This was also the case in another study in our lab that used similar food stimuli (Lee, Wilson, Eggleston, Gilbert, & Ku, 2015). It thus appears that people's own ratings of the stimuli were "contaminated" by the information they first received about it, making it advisable to use a between-participants design, whereby people's predictions about how much they would like the food or movie were compared to other participants' liking ratings who had not made predictions first or received any information about other people's ratings of the stimuli. For convenience, we will call the former group "forecasters" and the latter group "experiencers" (although the study design ensured that each participant was an experiencer for one stimulus and a forecaster for another). We assessed the accuracy of participants' affective forecasts by computing the absolute value of the difference between each forecaster's prediction and every individual experiencer's rating, and then averaging those error estimates. In other words, if a particular forecaster predicted that she would like the movie a 5 on the 7-point scale, we took the absolute value of 5 minus every individual's rating of actual liking for the movie who saw it first without prior information about it, and then averaged those values. Subtracting participants' predictions from all experiencers' ratings provided a more stable estimate of accuracy than subtracting their predictions from one experiencer's rating. (Note that in Study 3 we altered the procedure in a way that allowed us to use participants' own experience ratings as the standard of accuracy.)

We performed a multiple regression on these error values that included the following predictor variables: the stimulus about which people made predictions (video or food), a contrast variable that tested the simulation condition vs. all other conditions; a contrast that tested the source of the information (stranger vs. friend); a contrast that tested the personalization of the information (surrogation vs. advice); and a contrast that tested the interaction between source and personalization.<sup>2</sup>

#### Simulation vs. other information

As predicted, participants in the simulation condition made less accurate forecasts than did participants in the other four conditions. For the food combination, the mean error in the simulation condition was 1.85 ( $SD = 0.86$ ), compared to 1.52 ( $SD = 0.74$ ) in the other four conditions. For the video, the mean error in the simulation condition was 2.44 ( $SD = 0.86$ ), compared to 1.92 ( $SD = 0.54$ ) in the other four conditions (see Table 1 for means by condition). The contrast testing this difference was significant,  $B = -0.34$  ( $SE = 0.09$ ),  $t(212) = 3.56$ ,  $p < .001$ . The effect of stimulus was also significant,  $B = -0.43$  ( $SE = 0.09$ ),  $t(212) = 4.59$ ,  $p < .001$ , reflecting the fact that in all conditions people made more accurate forecasts about the food than the video.

#### Source: friend vs. strangers

As predicted, information from strangers produced as much accuracy as information from friends. That is, there was no significant difference in accuracy between the stranger and friends conditions,  $B = -.18$  ( $SE = .21$ ),  $t(212) = -.87$ , *ns*.

<sup>2</sup> As noted earlier, a small proportion of participants run at the beginning of the experiment made predictions about both stimuli. In the regression analyses described here, we included both of their ratings. The results are very similar when we analyzed participants' ratings of the video and food separately, though the significance levels were lower, given the loss of power that was achieved by combining stimuli into one analysis.

**Table 1**  
Study 2 absolute error by condition and stimulus.

	Mean absolute error					
	Video			Food		
	M	SD	N	M	SD	N
Simulation	2.44	0.86	20	1.85	0.86	24
Advice from friend	1.85	0.38	21	1.47	0.95	21
Surrogation: friend	1.86	0.53	20	1.49	0.69	19
Advice from stranger	2.06	0.70	29	1.54	0.62	24
Surrogation: stranger	1.86	0.45	20	1.58	0.71	20

#### Personalization: surrogation vs. advice

As predicted, surrogation information led to as much accuracy as advice information. That is, there was no significant difference in accuracy between the surrogation and advice conditions,  $B = 0.02$  ( $SE = 0.05$ ),  $t(212) = .33$ , *ns*.

#### Interaction between types of information

Nor was there a significant interaction between source (friend vs. stranger) and personalization (surrogation vs. advice),  $B = -.095$  ( $SE = 0.21$ ),  $t(212) = -0.45$ , *ns*. In short, regardless of the source or personalization of the information, participants were more accurate when making a prediction based on the information of another person as opposed to making a prediction based on mental simulation alone.<sup>3</sup>

#### Information preferences

To assess participants' beliefs about the benefits of the different sources of information, we asked each participant at the end of the study to indicate which one of the five types of information (simulation, friend-surrogation, etc.) they thought would have been most useful to have had before making their prediction. The question was not specific to the type of stimulus (food or video) they made a prediction about.

Even though we asked participants for this rating after they had made a prediction, most participants (58.1%) still reported that simulation information would have been the most useful. The second most popular choice, not surprisingly, was advice from a friend (19.1%), followed by surrogation information from a friend (17.2%), advice from a stranger (3.7%), and surrogation information from a stranger (1.9%). The distribution of preferences for the different types of information did not differ significantly by condition,  $\chi^2(16, N = 214) = 22.50$ ,  $p = .13$ . Thus, regardless of what information participants initially received, most believed that simulation

<sup>3</sup> It could be argued that using people's own ratings of the stimuli would be a better measure of accuracy, to the extent that people's own ratings were influenced by the information they initially received. Suppose, for example, that a participant learned that her friend thought she would dislike the food item. Based on this information she predicts that she will dislike it, and further, her friends' advice colors her actual rating of the food when she tastes it—she gives it a lower rating than she would have without knowing her friends' advice. In this case, using the person's own rating as the standard would lead to a higher estimate of accuracy than using other people's ratings of the food as the standard. Further, it might be the case that receiving advice from a friend colors one's own experiences more than receiving advice from a stranger. We believe it is debatable which is the best standard of accuracy, but in any case, there is little evidence that the scenario we have outlined occurred. That is, when using participants' own ratings of the stimuli as the standard of accuracy, it was not the case that people were more accurate in the friend than stranger conditions, or more accurate in the advice than the surrogation conditions. Rather, using people's own estimates seemed to introduce noise, in that the standard deviations of the error estimates tended to be higher. None of the comparisons of different types of information were significant, except for the effects of surrogation vs. advice for ratings of the video,  $t(104) = 1.98$ ,  $p = .051$ . But, this result was in the opposite direction to participants' lay theories, i.e., people who received surrogation information were *more* accurate than people who received advice.

information would be the most helpful, that information from a friend would be better than information from a stranger, and that advice would be better than surrogation, replicating the results of Study 1.

#### *Basis of advice to friend vs. stranger*

The “my friends know me” theory assumes that people know their friends well enough to make different (and better) predictions about their friends’ preferences than about strangers’ preferences. We found little evidence that this was the case. For the yogurt and cheese, participants seemed to assume that their friends would be like the average student: The correlation between their estimates of their friends’ liking and the average student’s liking was high,  $r(107) = .57, p < .001$ . Further, participants seemed to assume that others would feel similarly to how they did about the food: The correlation between their own liking and their advice to a friend, and the correlation between their own liking and advice to the average student, were high,  $rs(107) = .53$  and  $.50$ , respectively, and did not differ significantly.

Correlations do not reveal, however, whether there were shifts in people’s mean estimates of liking for their friends vs. strangers. For example, if all participants estimated that their friends would like the food 1 scale point less than they did, the two ratings would still be perfectly correlated. To see if there were such mean shifts, we computed the absolute differences between participants’ own liking and their estimates of their friends’ liking, and between their own liking and their estimates of the average student’s liking. There was no evidence that people departed more or less from their own liking when guessing for their friends vs. the average student,  $Ms = .71$  and  $.81$ , respectively ( $SDs = .87, .74$ ),  $t(108) = 1.23, ns$ . In other words, when estimating how much their friends and the average student would like the yogurt and cheese, participants did not distinguish between the two and stuck pretty close to their own liking—contrary to the “my friends know me” theory.

A slightly different picture emerged for people’s estimates of how much their friend vs. the average student would like the video. The correlations between participants’ estimates of their friends’ liking and the average student’s liking was high,  $rs(108) = .75, p < .001$ . Participants’ advice to a friend, however, was correlated more with their own liking,  $r(108) = .86$ , than was their advice to the average student,  $r(108) = .67, z = 4.97, p < .001$  with a Meng, Rosenthal, and Rubin (1992) test. Similarly, in terms of the absolute shifts from their own liking, participants shifted less when estimating their friends’ liking than the average student’s liking,  $Ms = .60$  vs.  $1.04$  ( $SDs = .78, 1.02$ ),  $t(110) = 4.66, p < .001$ . In other words, participants seemed to believe that their friends would share their liking of the video more than the average student would, consistent with the “my friends know me” theory. However, as seen in Table 1, this did not result in greater accuracy of forecasts in the friend advice condition, suggesting that participants’ estimates of their friends’ liking for the video were not especially accurate.

Note that we could not directly assess whether two friends actually had more similar preferences than two strangers, because we assessed each friend’s preferences under different circumstances. One friend judged the stimuli upon first arriving without any information about how others felt about it, whereas the other judged it later in the study after receiving friends’ and strangers’ surrogation information and friends’ and strangers’ advice. In Study 3 we changed the procedure such that we could assess actual similarity.

To summarize, consistent with Study 1, participants preferred to receive a description of a video or novel food combination when predicting how much they would like it (the “I know better than others” theory), preferred information from their friends over strangers (the “birds of a feather” heuristic), and preferred advice

over surrogation (the “my friends know me” theory). But, people who received simulation information made less accurate predictions than did people who got any sort of information about another person’s liking, regardless of whether it was how that person felt or his/her advice about others’ liking (personalization), or whether that person was a friend or stranger (source)—inconsistent with all three of the theories.

### **Study 3: Friends vs. strangers revisited**

A weakness of Study 2 is that we were forced to use other people’s ratings of the stimuli as the standard of accuracy, because people’s own ratings were contaminated by the type of information they initially received about the stimuli. It would be more compelling to show that relying on strangers’ or friends’ ratings leads to accurate forecasts about how people themselves will feel. But how can someone both make a prediction based on information about a stimulus and also experience the stimulus without having any information about it? One solution is to lead participants to believe they are experiencing and rating two different things. In Study 3, participants first experienced and rated a food combination (yogurt with cheese) and then were asked to predict how much they would like a *different* food combination, after receiving surrogation information from a stranger or friend. In actuality, the surrogation information they received was from strangers’ or friends’ ratings of the yogurt and cheese which they had already experienced. We could thus assess the accuracy of participants’ forecasts about their liking for this food (after receiving the surrogation information) to their initial ratings of that same food. Note that to simplify the procedure, Study 3 examined the effect of only the source component (friend vs. stranger) of the information and not the personalization element (surrogation vs. advice).

A disadvantage of this procedure is that it eliminated the possibility of including a simulation condition, in which participants were given a description of the stimulus before predicting how much they would like it, because that would spoil the ruse that they were making predictions for a different food than the one they had just tasted. We could, however, compare conditions in which people got surrogation information from different sources with a new control condition that allowed us to rule out an alternative explanation of the results of Study 2. In Study 2, as well as in others that have presented people with surrogation information alone (e.g., Gilbert et al., 2009), it is not entirely clear whether participants used the surrogation information at all or used a different strategy to make a prediction in the absence of simulation information. For example, when people learn that another person rated a food a 3 on a 7-point scale, they might disregard that information and use some other theory to forecast their liking, such as adopting the midpoint of the scale or assuming that because they dislike most novel foods they will dislike this one as well.

In contrast, we believe that people who receive surrogation values use that information and that doing so increases the accuracy of their forecasts. To show that people are actually using the surrogation information they are given, in Study 3 we included a control condition in which people were given no information about the stimulus other than that it was a novel food combination. Under these circumstances, we assume that participants would gravitate toward the midpoint of the scale when forecasting how much they would like the food, perhaps adjusting for their sense of how much, in general, they like novel foods. Importantly, including this condition allows us to test whether people who receive surrogation information are actually using that information or acting as if they had received no information at all. If the latter, their forecasts should be no more accurate than those made by people in the no-information control condition. In contrast, we predicted

that participants would use the surrogation information, resulting in more accurate forecasts than those made by people in the no-information control condition.

Finally, the design of Study 3, in which pairs of friends each rated the food without any prior information about it, allowed us to test the “birds of a feather” theory more directly: Do friends have more similar attitudes toward this food item than strangers do?

## Method

### Participants

Participants were recruited from introductory psychology classes and received course credit or \$5 for participating. They were asked to bring with them a good friend of the same gender. Anyone who arrived to the lab without a friend or who reported a food allergy or dietary restriction that would prevent them from experiencing all of the stimuli was excluded from participation. A total of 96 students (59 women, 37 men) with an average age of 19.07 ( $SD = .97$ ) completed the study. Fifty percent of participants were White, 20.2% were Asian, 8.7% were African American, 13.5% were other, and 7.7% did not respond to this item.

### Stimuli

To test our hypothesis efficiently, we selected just one of the stimuli used in Study 2 for all participants to experience – a serving of plain yogurt with a small slice of cheddar cheese – because the mean liking for this stimulus was farthest from the midpoint, which would make random guessing an ineffective prediction strategy and thereby make more apparent any differences across conditions.

### Procedure

Participants learned that the study was about people's attitudes toward unusual food combinations and that they would be asked to try two such combinations. They were told that the two food combinations would be selected at random from a sample of foods that varied in how much they were liked by prior participants, from a little to a lot. The friends were then seated in separate rooms and asked to taste the first novel food combination, yogurt and cheese. They rated how much they liked the food on a 7-point scale, where 1 = *not at all* and 7 = *extremely*.

Next, participants estimated how much the average student at their university and the friend they had come with would like the food combination they had just evaluated, on the same 7-point scales. Participants were then told they would now be making a prediction about how much they would like another food combination, which was different from the one they had already tried and had been selected randomly from the sample of foods that prior participants had rated. In reality, the food they would be making a prediction for was the one they had already experienced. Before making their predictions, participants were randomly assigned to receive one piece of information: No additional information, how much another student at their university had liked it, which was taken from the ratings of participants in Study 2 who evaluated that stimulus first in the absence of any other information (stranger surrogation); or how much their friend had liked it (friend surrogation). As in Study 2, the information participants received was always based on real ratings, either drawn from Study 2 for the stranger condition or taken from their friend's initial ratings for the friend condition (see Appendix B for exact wording of each information type).<sup>4</sup> After receiving the single piece of information, participants predicted how much they would like the

new food. Then participants completed manipulation checks and demographic information, and rated how useful each of three types of information would be in predicting their liking for the food combination: a description of the food (simulation), how much their friend liked it (friend surrogation), and how much a stranger liked it (stranger surrogation). Unlike in Study 1, in which participants rank-ordered their preference for these types of information, participants rated how useful each would be on a 7-point scale, where 1 = *not at all* and 7 = *extremely*. Finally, participants were informed that they would not taste a second food after all and were debriefed.

## Results and discussion

Participants' ratings of how much they liked the yogurt and cheese did not differ by condition,  $F(1,91) = 1.40$ ,  $p = .25$ , indicating that random assignment was successful. To assess the accuracy of participants' forecasts about how much they would like the food, we computed the absolute value of the difference between their predicted and actual liking. As hypothesized, the mean absolute error of people's forecasted liking was lower in both the stranger surrogation condition ( $M = .97$ ,  $SD = 1.09$ ) and friend surrogation condition ( $M = 1.06$ ,  $SD = 1.01$ ) than in the no information condition ( $M = 1.57$ ,  $SD = .97$ ). A one-way ANOVA revealed an overall effect of condition,  $F(2,90) = 3.01$ ,  $p = .054$ . As hypothesized, a planned contrast revealed that there was no significant difference in mean absolute error according to information source (friend surrogation vs. stranger surrogation),  $t(90) < 1$ , *ns*, replicating Study 2. Also as predicted, the mean absolute error in the no information conditions was significantly higher than the average level of accuracy in the stranger and friend conditions,  $t(90) = 2.45$ ,  $p = .015$ .<sup>5</sup>

### Information preferences

Participants rated the usefulness of three types of information when predicting how much they would like a food combination. As in Studies 1–2, participants found simulation information to be the most useful ( $M = 5.49$ ,  $SD = 1.43$ ), friend surrogation to be the next most useful ( $M = 4.93$ ,  $SD = 1.45$ ), and stranger surrogation to be the least useful ( $M = 3.90$ ,  $SD = 1.54$ ). A 3 (information condition)  $\times$  3 (type of information rated) between-within ANOVA revealed a highly significant effect of type of information,  $F(2,174) = 37.76$ ,  $p < .001$ . Neither the main effect of information condition nor the interaction was significant,  $ps > .310$ . The results of paired samples *t*-tests revealed that all ratings differed significantly from each other, all  $ts(89) > 2.79$ ,  $ps < .010$ . These results further demonstrate that, as we proposed, participants believe simulation information is the most useful for making predictions and that they expect information from a friend to be more useful than information from a stranger.

<sup>5</sup> We removed two outliers from these analyses whose absolute value error scores were more than 3 *SD* above the mean, both from the friend surrogation condition. When they are included, the mean absolute error in this condition increases ( $M = 1.31$ ,  $SD = 1.43$ ). The mean error in the no information and surrogation conditions remained unchanged and differed significantly,  $t(92) = 1.99$ ,  $p = .0497$ . Note that including the outliers changes the results in a direction away from participants' lay theories, which are that surrogation information from a friend should be better than surrogation information from a stranger (the “birds of a feather” theory). In addition, we note that despite our instructions to bring a friend of the same gender, nine participants arrived with a friend of the opposite gender. The results are nearly identical when these participants were included in the analysis; all of the analyses reported in the main text that were significant remain so. We opted not to include these participants in order to maintain comparability with Study 2, which included only same gender friends, and also because when they are included there is an anomaly in the data, namely a significant difference between conditions in their liking for the yogurt and cheese, before they were randomly assigned to condition.

<sup>4</sup> The surrogation values were randomly chosen from the ratings of participants in Study 2, with the restriction that the mean of these values approximated the mean liking in Study 2.

### Actual similarity

Were pairs of friends more similar in their liking of the food combination than pairs of strangers? Contrary to the “birds of a feather” theory, they were not. The correlation between friends’ liking of the yogurt and cheese was not significant,  $r(45) = .13$ , *ns*, and was of similar magnitude to the correlation between participants’ liking of the yogurt and cheese and the liking of a randomly-paired stranger (i.e., the surrogate ratings of liking),  $r(92) = -.03$ , *ns*. Thus, participants’ assumption that it would be better to rely on how a friend felt than how a stranger felt was misplaced, in that friends were barely more similar in their liking than were strangers.

### Basis of advice to friend vs. stranger

We did not include “advice” conditions in this study, in which some participants learned how much a friend or stranger thought they would like the stimulus. We asked participants to provide such advice, however, allowing us to examine the accuracy of the “my friends know me” theory, which assumes that people make different (and better) predictions about how their friends will like something than they do about strangers. As in Study 2 with the yogurt and cheese, we found little evidence for this assumption. The correlation between participants’ estimates of their friends liking and the average students’ liking was high,  $r(92) = .63$ ,  $p < .001$ , suggesting that people did not make much of a distinction between the two. In both cases, people seemed to assume that others would feel the same way they did. The correlation between people’s own liking of the food and how much they thought their friend would like it,  $r(92) = .68$ ,  $p < .001$ , was little different from the correlation between how much they liked it and how much they thought a stranger would like it,  $r(92) = .60$ ,  $p < .001$ .

As in Study 2, we also computed the absolute value of the difference between people’s predictions of their friends’ rating and their own ratings, and the absolute value of the difference between their predictions of the average student’s ratings and their own ratings. There was no evidence that people departed more from their own liking when guessing for friends,  $M = .74$  ( $SD = .83$ ), than when guessing for the average student,  $M = .84$  ( $SD = .81$ ),  $t(93) = 1.03$ ,  $p = .310$ .

Finally, we can ask the question of how good people were at guessing how their friends would feel. According to the “my friends know me” theory, it is better to take advice from a friend than a stranger because our friends can accurately guess our preferences. We found no evidence for this assumption, at least when it comes to guessing how one’s friend would like the yogurt and cheese: The correlation between people’s estimates of their friends’ liking, and their friends’ actual liking, was minimal;  $r(92) = .12$ , *ns*.

## General discussion

When deciding whether to see a movie or try a new flavor of ice cream, people overwhelmingly prefer to find out something about that movie or the ice cream so that they can make up their own minds, rather than finding out how other people felt. Consistent with prior research, however, we found that this “I know better than others” theory led to inaccurate affective forecasts. In Study 2, participants were *less* accurate when they received descriptions of the food item and video than when they found out how others had felt about them. Our participants also strongly endorsed the “birds of a feather” theory, which is the idea that it is better to receive guidance from friends than from strangers when making affective forecasts. But this theory did not produce more accurate forecasts either. In Studies 2 and 3, people were as accurate when they found out how a stranger felt as they were when they found out how a friend felt. Lastly, people strongly endorsed the “my

friends know me” theory, or the idea that it is better to receive advice (how others think we will feel) than surrogation (how others felt), particularly from a friend. But once again, this theory did not produce more accurate affective forecasts: In Study 2, people were just as accurate when they received surrogation information as they were when they received advice.

We are not suggesting that these three theories are completely wrong and will always lead to inaccurate affective forecasts. Indeed, a reasonable question is whether we can generalize from the particular food and video stimuli used in our study. The short answer is that we cannot, because laboratory experiments do not typically sample either participants or stimuli randomly. One way in which our studies could have produced skewed results is if the simulation information we provided was an unfaithful description of the actual stimuli. Suppose, for example, that we told people that they would be eating a piece of expensive, aged cheddar cheese with a dollop of gourmet Greek yogurt, but then fed them an odoriferous piece of limburger cheese smothered with cheap sour yogurt that was a month past its expiration date. It would not be very interesting to show that people’s forecasts were incorrect under these circumstances.

Although it is impossible to capture in words exactly what our video and food combination would be like, we believe we gave participants a reasonably accurate description of what they would encounter. This was especially true of the food, which was described as “plain yogurt with a small slice of cheddar cheese,” and which is precisely what people received. Further, in a prior study of simulation vs. surrogation information, people took a personality test and were then asked to predict how they would feel if they received negative feedback (Gilbert et al., 2009). They were shown the exact feedback they might receive, thus there was no ambiguity about what it would entail. In that study, as well as ours, people made more accurate forecasts when they received surrogation than when they instead received simulation information.

Even if our simulation information was reasonably accurate, the question remains as to how much we can generalize our results to other types of stimuli. Is it always the case that surrogation information will lead to more accurate forecasts than simulation information? Surely not, because when there is high variance in opinions, one person’s view might be quite misleading. Suppose, for example, that we asked a sample of Americans to predict how likely they were to vote for a candidate who is running for the President of the United States in 2016, and told half of them the candidates’ political party (simulation information) and the other half how one randomly chosen American feels about this candidate (surrogation information). Because political preferences are about evenly split between the two parties, there is a 50% chance that the surrogate will prefer a different party than the participant making the forecast. Because party affiliation is a strong predictor of voter preference, knowing the candidate’s party would be a better guide. (This example ignores the fact that many Americans are independents who prefer neither party, but we presume that the point is clear: The higher the variance in opinion, the lower the validity of surrogation information.)

We cannot answer the question of whether the population of attitudes in the world is more like the ones we have studied, in which surrogation information leads to more accurate affective forecasts, or like our example of political preferences, in which surrogation information may lead to less accurate affective forecasts. One reason for this is that, as noted earlier we selected the stimuli for the present studies based on pilot testing, to ensure that people’s affective forecasts about how much they would like them, based on simulation information alone, were not very accurate. If people’s forecasts were highly accurate based on simulation information alone, we could not test our hypothesis that surrogation information would improve accuracy above and beyond simulation

information. Because we preselected stimuli on this basis, however, we cannot speak to the question of how often in the real world people will make better predictions based on surrogation vs. simulation information, other than pointing out that the kinds of preferences that we and Gilbert et al. (2009) examined, namely attitudes toward food, videos, dating partners, and personality tests, are relatively common in everyday life.

It is important to note, however, that the main purpose of the present studies was not to address the relative value of simulation vs. surrogation information. Rather, the present studies went beyond previous ones by examining different types of surrogation information—both its source (friends vs. strangers) and its degree of personalization (surrogation vs. advice). We did not “stack the deck” by piloting and selecting stimuli that showed a particular pattern of results for the different types of surrogation information. And, to increase the generalizability of the results, we included different types of stimuli in Study 2 (food and a video). Again, we did not choose these stimuli randomly from the population of all attitude objects, and thus cannot say for sure how well our results (e.g., participants’ incorrect assumptions that their friends know them better than strangers, and that advice is better than surrogation) will generalize to other stimuli. Although we acknowledge that there are surely situations in which advice from a friend is superior, we sought to demonstrate that there is not *always* an advantage to this type of information (despite lay theories to the contrary). The present studies show that at least in some domains, knowing how a stranger felt leads to substantial accuracy, and that there is no added benefit to knowing how a friend felt, or what that friend’s advice is for us. And since people are particularly likely to rely on advice when the decision is important (Harvey & Fischer, 1997), the practical implications of our findings may be even greater for major life choices than for the kinds of everyday judgments included in the present studies. Of course, it is also quite possible that the lack of accuracy benefits for friends’ information observed in these studies would not hold for significant life decisions, since the similarities and insider knowledge that friends share may be more valuable when it comes to fundamental choices. Additional research is needed to examine the value of different sources of information for more important life decisions.

Another question that cannot be answered by the present research is whether there is ever any *harm* to prioritizing information from a friend over a stranger. After all, if information from friends is occasionally more accurate than information from strangers and never any less accurate, it would make sense to prefer this type of information at all times. Given that information from friends is not always available, however, and that it may not always be as beneficial as people believe, we suspect that the strong preference for a friend’s information could actually harm decision making. Since we know that people suboptimally incorporate advice from others with their own opinions (Yaniv, 2004), it is likely that information preferences would lead people to use information from strangers in an even less beneficial way than information from friends. And since we do not always have information about how our friends feel (e.g., when no one in our social network has seen the new movie that’s coming out), decision making could be harmed by an unwillingness to use non-friend information that is available. However, even without direct evidence that the information preference hierarchy described above can hurt decision making, we feel it is worthwhile to learn more about the flaws or limitations of frequently-applied decision rules.

Further, our results (and previous findings) suggest one reason why strangers are surprisingly good sources of advice: Friends tend to overestimate how similar they are to each other (Jussim & Osgood, 1989; Locke et al., 2012). Although it is true that many friendships form on the basis of shared core beliefs about religion and politics, that does not mean that friends have the same tastes

in food, movies, or books. Consistent with this view, we found in Study 3 that friends were no more similar in their attitudes toward the yogurt and cheese than strangers were.

We also found evidence that helps explain why receiving advice was no better than finding out how someone else felt. In order for advice to produce accurate affective forecasts, at least two conditions have to be met: Advice givers have to recognize that the target of their advice might not feel the same way they do about a particular attitude object, and then they have to make accurate guesses about how the other person will feel. We found little evidence that either of these conditions was met. First, participants tended to assume that their friends would feel similarly to the way they did, consistent with a false consensus bias. Second, participants did not make much of a distinction between how their friend and a total stranger would feel, suggesting that they were not drawing on unique (and accurate) information about their friends’ preferences.

An interesting question is the extent to which our results are limited to people who grew up in individualistic cultures. The “I know better than others,” theory, for example, may not be as prevalent in collectivistic cultures that emphasize harmony with one’s social group. Because there was a relatively large number of Asian participants in our studies, we tested this hypothesis by comparing their responses to those of White participants. For the most part we found no differences in participants’ endorsements of the type of information they would prefer to have or their use of that information when making predictions. Further, in a cross-cultural study, we found that participants in both the United States and Korea used simulation information more than surrogation information when predicting how much they would like novel food combinations (Lee et al., 2015). Thus, to date, there is no evidence for cultural differences in the use of the “I know better than others” theory.

In sum, the present studies provide preliminary evidence that people may not be nearly as unique as they think, and would be well-served to attend to how other people feel about stimuli they are about to experience, even if those people are strangers. Benjamin Franklin may have been even more right than he knew: It is a wise person who heeds advice, even in the realm of attitudes and preferences, from strangers as well as friends.

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## Appendix A

### *Study 2 – Information for food:*

**Simulation**—The food you are about to eat is a piece of cheddar cheese with plain yogurt.

**Surrogation Stranger**—Another UVA student who participated in this study rated the Food \_\_\_\_ on a 1–7 scale. (This person was randomly selected from all those who previously participated in the study.)

**Surrogation Friend**—The friend who came with you today rated the Food \_\_\_\_ on a 1–7 scale.

**Advice Stranger**—Another UVA student who participated in this study predicted that the average UVA student would rate the Food \_\_\_\_ on a 1–7 scale.

**Advice Friend**—The friend who came with you today predicted that you would rate the Food \_\_\_\_ on a 1–7 scale.

### *Study 2 – Information for video:*

**Simulation**—The video you are about to watch is a clip from a college news program in which a student sports announcer has difficulty describing footage from a basketball game.

**Surrogation Stranger**—Another UVA student who participated in this study rated the Video \_\_\_\_ on a 1–7 scale. (This person was randomly selected from all those who previously participated in the study.)

**Surrogation Friend**—The friend who came with you today rated the Video \_\_\_\_ on a 1–7 scale.

**Advice Stranger**—Another UVA student who participated in this study predicted that the average UVA student would rate the Video \_\_\_\_ on a 1–7 scale.

**Advice Friend**—The friend who came with you today predicted that you would rate the Video \_\_\_\_ on a 1–7 scale.

## Appendix B

### Study 3 – Information for food:

**No-Information Control**—Even though you have no more information about it, please guess how much you think you will like Food B.

**Surrogation Stranger**—Another UVA student who participated in this study rated Food B \_\_\_\_ on a 1–7 scale. (This person was randomly selected from all those who previously participated in the study.)

**Surrogation Friend**—The friend who came with you today rated the Food \_\_\_\_ on a 1–7 scale.

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