




# Rejections Are More Contagious than Choices: How Another's Decisions Shape Our Own

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Every day, we learn about others' decisions from various sources. We perceive some of these decisions as choices and others as rejections. Does the mere perception of another's decision as a choice versus as a rejection influence our own behavior? Are we more likely to conform to another's decision if we view it in one way or the other? The current research investigates the social influence of decision frames. Eight studies, including a field study conducted during a livestreaming event hosted by an influencer with over 1.5 million followers, find that people are more likely to conform to another's decision if it is perceived as a rejection than if it is perceived as a choice. This effect happens because consumers are more likely to attribute another's decision to product quality as opposed to personal preference, when consumers perceive another's decision as a rejection than as a choice. The inference about quality versus personal preference in turn increases conformity. This research bridges the existing literatures on decision framing, social influence, and perceptions of quality and personal preference, and it offers important implications for marketers and influencers.

**Keywords:** framing effect, choice versus rejection, social influence, conformity, attribution, quality versus personal preference

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Technology has made it easier than ever to access other people's decisions. Every day, we learn about others' decisions on social media platforms (e.g., Facebook, Twitter, Instagram, TikTok) and online review sites (e.g., Amazon, Yelp, TripAdvisor) as well as through direct, in-person observations. Interestingly, we view some of these decisions as choices and some as rejections. For instance, the purchase of a product seems like a choice, while the return of a product could be seen as a rejection; a custom request to add components is perceived as a choice, while a custom request to remove components is considered a rejection; opting in to a subscription is a choice, while opting out of a subscription is a rejection. Even the same decision can be perceived as a choice in some circumstances and as a rejection in others—a purchase decision between two products may be seen as a choice of one product or as a rejection of the other, depending on the situation. Although choice decisions may be more common than rejection decisions, both choice and rejection decisions are

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prevalent: in a pilot study, we asked participants whether they had been exposed to others' choice and rejection decisions in various decision contexts, from selecting products and job offers to donating and voting. The vast majority of participants responded that they had been exposed to both types of decisions, either "frequently" or "occasionally" (web appendix A).

Despite the prevalence of both choice and rejection behaviors in our daily lives, little is known about how others' choice and rejection behaviors influence our own preferences. Holding another person's decision outcome constant, are we more or less likely to conform to that decision if we perceive it as a choice versus as a rejection? Although the decision framing literature has greatly advanced our understanding of how our *own* act of choosing versus rejecting influences our own decision processes and outcomes (Dhar and Wertenbroch 2000; Laran and Wilcox 2011; Perfecto et al. 2017; Shafir 1993; Sokolova and Krishna 2016), none of this work, to the best of our knowledge, has investigated how our perception of *another* person's decision as a choice or as a rejection may influence our behavior. Similarly, while the social influence literature has studied how our preferences can be shaped by another person's decision outcome (Cialdini and Goldstein 2004) and process (Lamberton, Naylor, and Haws 2013; Schrift and Amar 2015), it has yet to explore the possibility that our preferences may be influenced by our perception of the other's decision as a choice or as a rejection.

The current research fills this gap by investigating the social influence of decision framing (i.e., choice vs. rejection). We find that people have a greater tendency to conform to another's rejection than to another's choice, holding the decision outcome constant. This effect occurs because perceiving another person's decision as a rejection or as a choice prompts consumers to make different inferences about why the person made the decision. Specifically, while consumers tend to attribute another's choice to personal preference (i.e., she chose this option because she personally likes it more), they tend to attribute another's rejection to differences in product quality (i.e., she rejected this option because it is objectively inferior in quality). The quality attribution, in turn, increases the likelihood that consumers will conform to the decision.

Theoretically, this research bridges and contributes to the literatures on decision framing (Shafir 1993; Sokolova and Krishna 2016), social influence (Zhang 2010; Zhou and Lai 2009), and perceptions of quality and personal preference (Spiller and Belogolova 2017). Practically, this research provides implications for marketers and social media influencers by demonstrating that communicating a rejection decision is a stronger driver of behavior for word of mouth than a comparable choice decision and by offering an essentially costless, easy-to-implement, subtle, yet highly effective strategy for promoting conformity.

## THEORETICAL FRAMEWORK

### Choice versus Rejection

People make decisions by either choosing the more-preferred options or rejecting the less-preferred options. Although the two decision frames normatively should lead to the same outcome, the decision framing literature demonstrates, in various contexts, that choosing and rejecting involve different decision processes and lead to significantly different outcomes (Dhar and Wertenbroch 2000; Huber, Neale, and Northcraft 1987; Laran and Wilcox 2011; Park, Jun, and MacInnis 2000; Perfecto et al. 2017; Shafir 1993; Xu and Yang 2023). For instance, people deliberate more when rejecting than when choosing (Sokolova and Krishna 2016) and are often left with a larger consideration set when deciding by rejecting (Yaniv and Schul 2000).

All prior work on this topic, however, concerns whether our decision processes and outcomes are influenced by our *own* decision task (choosing vs. rejecting). The current research extends this stream of literature by investigating whether our decisions are influenced by our perception of *another's* decision as a choice versus as a rejection. Here, we define a decision as a set of actions related to the choice or the rejection of alternatives (Bachrach and Baratz 1963; Tversky 1972). We gain information about others' decisions every day through various sources such as direct observation, in-person communication, social media, online reviews, and third parties. We construe some decisions as choices and others as rejections based on the most salient cues. For example, we may observe a consumer either buying products in the checkout area (choices) or returning products at the customer service counter (rejections). Alternatively, we may learn about another's decision indirectly from an online product review or from a sales representative (e.g., "she bought the house in Neighborhood A" is a choice; "she did not buy the house in Neighborhood B" is a rejection).

Note that a consumer's *perception* of another's choice or rejection does not necessarily correspond to the actual decision task implemented by the other person. For example, a friend may tell you about accepting a job offer (ostensibly a choice), even though she made her final decision by turning down the less-preferred offers (rejections). Thus, this research resembles but departs from the existing literature on choosing versus rejecting in that we investigate how the perception of another's decision as a choice versus as a rejection may change our behavior, not how the act of choosing versus rejecting alters our own decision processes and outcomes.

### Social Influence

Nobody lives in a social vacuum, so the social context plays a pivotal role in people's behaviors and preferences.

People may conform to or diverge from another's behavior to be liked by others (i.e., normative social influence) or to be correct (i.e., informational social influence; Asch 1955; Bearden, Netemeyer, and Teel 1989; Cialdini and Goldstein 2004; Deutsch and Gerard 1955; Liu, McFerran, and Haws 2020). Extensive research has studied how others' decisions and decision processes shape people's preferences in various decision contexts (Argo, Dahl, and Manchanda 2005; Gardete 2015; Goldstein, Cialdini, and Griskevicius 2008; Lamberton et al. 2013). Critically, prior research on social influence has always studied choices and rejections in separate contexts. Some work portrayed another's decision as a choice between products (Chan, Berger, and Van Boven 2012; Tu and Fishbach 2015) or charities (Schrift and Amar 2015), while other studies presented another's decision as a rejection, such as rejecting a kidney (Zhang 2010), quitting smoking (Chassin et al. 1984), and resisting unhealthy food (Bublitz, Peracchio, and Block 2010). Without studying choices and rejections side by side, the extant research provides little insight into the relative strengths of their social influence. The current research aims to fill this gap by holding the decision outcome constant and experimentally manipulating the decision frame as either a choice or a rejection.

### Rejections Are More Contagious than Choices

We propose that rejections are more contagious than choices. In other words, consumers are more likely to conform to another's decision if they perceive it as a rejection than if they perceive it as a choice. It is important to make two clarifications. First, we define conformity in terms of the decision *outcome*, not the decision *task*. That is, when we say that a consumer "conformed to another's decision," we mean that the consumer arrived at the same decision outcome as the other person, not that the consumer used the same decision task (either choosing or rejecting) as the other person. Second, as we discussed earlier, "conformity" can involve a normative influence (i.e., conforming to maximize social outcomes) or an informational influence (i.e., using another's action as a source of information and conforming because it is perceived to be diagnostic; Deutsch and Gerard 1955). As will become apparent later, the framing effect on conformity is a type of informational influence.

Our theorization is based on the notion that people act like "naive psychologists" in everyday life, trying to understand why other people behave in certain ways (Heider 1958). The literature on causal attribution identifies two general categories to which actions are attributed (Kelley 1967): internal reasons (i.e., a behavior was caused by personal disposition, characteristics, personal preferences, etc.) and external reasons (i.e., a behavior was caused by environmental factors, external rewards, product qualities, etc.). For example, consumers may attribute another

person's product evaluation to either the characteristics of the person or the product experience itself (Chen and Lurie 2013; He and Bond 2015; Mizerski 1982). Likewise, we expect that when consumers learn about another person's decision, they will spontaneously infer the underlying reason for the decision, attributing it to personal preference (i.e., the product is well suited/not well suited to her personal preference) or product quality (i.e., the product is objectively better/worse). Note that we define quality as the *perceived* quality—that is, the subjective evaluation of whether a product is objectively superior, in line with the definition used by Spiller and Belogolova (2017) and Zeithaml (1988).

We propose that another's rejection-framed decision, relative to an equivalent choice-framed decision, is more likely to be attributed to product quality rather than personal preference. This prediction is informed by two streams of research. First, most rejection decisions involve setting a standard and eliminating alternatives that do not meet the standard (Huber et al. 1987; Yaniv and Schul 2000). The primary goal of rejection decisions is to avoid inferior options (Ordóñez, Benson, and Beach 1999; Tversky 1972), and therefore, rejected alternatives tend to be clearly substandard (Huber et al. 1987; Levin, Jasper, and Forbes 1998). The conservative and systematic nature of a rejection decision makes it more suitable for tasks that require objective judgments, such as selecting a correct answer, than for tasks that require personal judgments (Heller, Levin, and Goransson 2002). Given that rejection decisions are linked to objective tasks and involve the elimination of inferior options based on clear standards, we predict that consumers are more likely to infer that the rejected alternative is objectively worse (rather than simply unappealing to the decision-maker's idiosyncratic preference).

Second, our prediction is supported by the findings in the word-of-mouth literature that negative messages are perceived as stronger indicators of product quality than positive messages (Herr, Kardes, and Kim 1991; Mizerski 1982) and tend to be attributed to the product rather than to the person who experienced the product (Chen and Lurie 2013). Considering that choices are positive whereas rejections are negative (Levin, Schneider, and Gaeth 1998), we predict that consumers will be more likely to make the quality attribution for rejection decisions than for equivalent choice decisions.

We further propose that consumers are more likely to conform to another's decision if they attribute it to quality instead of personal preference. Compared with personal preference, quality is perceived as more objective and less likely to vary across people (Zeithaml 1988). Indeed, there is usually a consensus among people about quality (Spiller and Belogolova 2017) such that what one person considers as lower quality is likely to be deemed so by others as well. By contrast, personal preference is, by definition, *personal*—so one person's tastes may not align with others' tastes. Therefore, we expect that consumers will feel less

inclined to conform to another's decision if they attribute the decision to personal preference, which we predict is more likely if the decision is perceived as a choice than if it is perceived as a rejection.

Taken together, we propose the following hypotheses:

**H1:** Consumers are more likely to conform to another's decision if they perceive the decision as a rejection than if they perceive it as a choice.

**H2:** Consumers are more likely to attribute another's decision to product quality rather than to personal preference if the decision is perceived as a rejection than if the decision is perceived as a choice.

**H3:** The inference about quality versus personal preference mediates the framing effect (rejection vs. choice) on conformity.

## OVERVIEW OF STUDIES

We test our hypotheses in eight main studies (including two field studies) as well as one pilot and one follow-up study. In study 1, we partnered with a social media influencer to demonstrate the proposed effect on a livestreaming commerce platform; consumers who were attending a livestreaming event made real product decisions. Study 2 replicates the framing effect with naturally occurring dyads and a consequential choice. Studies 3a–3c test the generalizability of the effect in diverse consumer decision contexts and rule out alternative explanations based on the oddness, informativeness, difficulty of understanding, unexpectedness, and preference strength of rejection-framed decisions. Importantly, the follow-up study of study 3c shows that most people, including sales professionals, do not intuit that rejection framing leads to higher rates of conformity than choice framing. We provide direct evidence for the proposed mechanism by showing that the framing effect is both mediated by the attribution of the other's choice to quality versus personal preference (studies 4 and 5) and moderated when the attribution is manipulated (study 6).

We report all data exclusions (if any), all manipulations, and all measures across all of our studies (Simmons, Nelson, and Simonsohn 2011). To provide adequate statistical power to detect a medium-size effect, we predetermined a sample size of 100–200 for each condition in all studies. All study materials, pre-registrations, and data are publicly archived at [https://osf.io/8xvcp/?view\\_only=6cfa231d1bac426e9f4567fe06e60ff8](https://osf.io/8xvcp/?view_only=6cfa231d1bac426e9f4567fe06e60ff8).

### STUDY 1: DEMONSTRATING THE FRAMING EFFECT IN A LIVESTREAMING EVENT

Study 1 is a field experiment that tests the framing effect (hypothesis 1) among real consumers in the context of live

commerce. Live commerce is a fast-growing shopping channel where influencers promote products online through livestreaming services such as Amazon Live, Instagram Live, YouTube Shopping, TikTok Shopping, and Douyin (the Chinese version of TikTok, developed by the same company). We partnered with an influencer who has 1.5 million followers on Douyin. During a livestreaming event, the influencer displayed two insulated water bottles and told viewers that her friend recently had either chosen one bottle (the choice frame) or rejected the other bottle (the rejection frame). Then, viewers participated in a lucky draw to win the bottle of their choice. We expected that viewers would be more likely to conform to the decision made by the influencer's friend when it was conveyed in the rejection frame than when it was conveyed in the choice frame.

## Method

On July 26, 2022, our partner influencer hosted a livestreaming event on Douyin to promote a variety of children's products including blocks, trikes, and books. She also did several lucky draws to engage her audience, gauge their preferences, and attract new followers. Unbeknownst to the audience, two of the lucky draws were designed to test our framing effect. The first took place from 9:41 to 9:43 a.m., with an audience size ranging from 800 to 1,000; the second took place from 10:11 to 10:13 a.m., with an audience size ranging from 1,100 to 1,200. The audience size fluctuates every second because Douyin users are allowed to enter or leave livestreaming rooms whenever they desire. On average, users spend 5 minutes in her livestreaming room per visit, so there should be little overlap in the audiences of the two lucky draws.

During each of the two lucky draws, the influencer first presented two insulated water bottles for kids (web appendix B): the two bottles were from different brands, Babycare and Bei Ju Xiong, and had similar features and prices. Before the audience participated in the lucky draw, the influencer mentioned that one of her friends recently decided between the two bottles; she framed her friend's decision as either a choice of the Bei Ju Xiong bottle in one lucky draw (i.e., the choice condition) or a rejection of the Babycare bottle in the other lucky draw (i.e., the rejection condition). Specifically, in the choice condition, the influencer said, "I asked my friend to decide between the two bottles the other day, and she chose the Bei Ju Xiong bottle." In the rejection condition, the influencer said, "I asked my friend to decide between the two bottles the other day, and she did not choose the Babycare bottle." In this way, she held the friend's decision outcome constant (i.e., selecting the Bei Ju Xiong bottle) while manipulating the audience's perception of the decision as either a choice or a rejection.

Finally, the influencer gave detailed instructions for participating in the lucky draw. After the influencer said

“Start” (and before the influencer said “End”), viewers simply needed to indicate their choice in the chat by typing 1 for the Babycare bottle or 2 for the Bei Ju Xiong bottle (each viewer could choose only one of the two bottles; figure 1). Eight winners were randomly selected to receive the bottle of their choice for free.

Results and Discussion

First, we excluded responses that did not follow the instructions. Specifically, we excluded responses submitted before the influencer said “Start” and responses submitted after the influencer announced that the lucky draw had ended. If a person submitted multiple responses, we only included the first response. After exclusions, we retained 170 unique and valid responses (88 in the choice condition and 82 in the rejection condition).

The dependent variable is the percentage of participants who conformed to the friend’s decision (i.e., choosing Bei Ju Xiong). Participants were marginally more likely to choose the same bottle as the influencer’s friend in the rejection condition (36.6%) than in the choice condition (23.9%;  $\chi^2(1, N = 170) = 3.27, p = .071$ ). The results support hypothesis 1: consumers were more likely to conform to another’s decision if the decision was framed as a rejection rather than as a choice. One may wonder why the rate of conformity is relatively low in both the choice and rejection conditions. We speculate that consumers’ baseline preference for the bottle selected by the influencer’s friend may have been lower compared with the other bottle, which could have resulted in a low overall choice rate. More importantly, independent of the absolute choice rate, the effect of framing of other’s decision was consistent with our prediction.

Study 1 establishes the framing effect on a livestreaming commerce platform with real consumers and real decisions. Due to the nature of the field setting, however, there were a few uncontrollable factors. First, we had no control over who participated. The two lucky draws were conducted at different times (9:41 a.m. and 10:11 a.m.), and the Douyin users who were present for the first versus second event may have differed systematically in ways that affected the dependent measure. Second, we had no control over when Douyin users joined the event. If some users participated in the lucky draw despite joining after the influencer administered the manipulation, then the effect size likely was underestimated. Therefore, in study 2, we tested the proposed effect in a different real-world setting that offered greater control over such issues.

STUDY 2: REPLICATING THE FRAMING EFFECT AMONG NATURAL DYADS

Study 2 aimed to replicate the framing effect in a field setting involving real product decisions. We approached

FIGURE 1  
SCREENSHOT OF A LUCKY DRAW IN STUDY 1



natural dyads (i.e., pairs of friends) on campus. Participants first watched their friend either choose or reject one of two granola bars, depending on the experimental condition; then, participants indicated which granola bar they would like to receive for themselves. We predicted that participants would be more likely to conform

to their friend's decision if he or she rejected (vs. chose) one of the options.

## Method

**Participants.** As pre-registered (<https://aspredicted.org/8tq5j.pdf>), 201 natural dyads of students (71.2% female;  $M_{\text{age}} = 20.7$ ) from a large US university participated in this study in exchange for a free granola bar of their choice.

**Procedure.** An experimenter approached natural dyads around campus, one at a time and introduced herself as a business school research assistant who was studying people's preferences for granola bars. The experimenter said, "We have two types of granola bars from different brands. One is from Sunrise, and the other one is from Kashi," and showed both products to the dyad ([web appendix B](#)). The order of the two brands was counterbalanced. Next, the experimenter randomly selected one student in the dyad as the first decision-maker, handed her the two granola bars, and asked her to either choose or reject one of the bars, depending on the condition. Specifically, the experimenter said, "You can get one of them. Please take a look at both and tell me which one you want" (choice condition) or "...tell me which one you don't want" (rejection condition). Once the first decision-maker made her decision, the experimenter restated the decision (e.g., "So you want Sunrise" in the choice condition or "So you do not want Kashi" in the rejection condition) to ensure the accurate communication of the decision and gave the selected granola bar.

Next, the experimenter turned to the second decision-maker, handed her the same two granola bars, and said, "Now it is your turn. Please pick one." The second decision-maker then made her decision and received the granola bar of her choice. Finally, both participants verbally indicated their ages and whether they had heard of the two brands before.

## Results and Discussion

**Manipulation Check.** To check whether the framing manipulation worked as intended, 103 Amazon Mechanical Turk participants ( $N = 103$ ; 32.7% female;  $M_{\text{age}} = 34.3$ ) imagined that they were the second decision-maker in the main study and reported their perception of the first decision-maker's behavior ("What does your friend's decision feel like to you?" 1 = It feels like a choice of [the selected bar], 7 = It feels like a rejection of [the unselected bar]). The framing manipulation was successful: compared with those in the choice condition, participants in the rejection condition perceived the first decision-maker's behavior as more of a rejection ( $M_{\text{choice}} = 1.98$ ,  $SD = 1.55$ ,  $M_{\text{rejection}} = 5.04$ ,  $SD = 2.32$ ;  $F(1, 101) = 61.21$ ,  $p < .001$ , Cohen's  $d = 1.54$ ).

**Conformity.** Consistent with hypothesis 1, the framing of the first decision-maker's behavior affected the second decision-maker's behavior: the second decision-maker was more likely to choose the same granola bar as the first decision-maker in the rejection condition (56.1%) than in the choice condition (28.2%;  $\chi^2(1, N = 201) = 16.15$ ,  $p < .001$ ). In other words, participants were more likely to conform in the rejection condition than in the choice condition.

Note that the decision outcome may change depending on whether the decision is made by choosing or rejecting (Dhar and Wertenbroch 2000; Laran and Wilcox 2011; Perfecto et al. 2017; Shafir 1993; Sokolova and Krishna 2016). Although previous research on this topic does not yield a clear prediction for our scenario, it is important to examine the first decision-maker's selection (i.e., Sunrise or Kashi) to rule out the possibility that our effect may have been caused by a difference in the first decision-maker's selection. We found that our manipulation did not significantly influence the first decision-maker's selection ( $\chi^2(1, N = 201) = 0.36$ ,  $p = .550$ ), and the framing effect (hypothesis 1) remained significant when we included the first decision-maker's selection as a covariate in the regression ( $\beta = 1.18$ ,  $SE = 0.30$ , Wald  $\chi^2(1, N = 201) = 15.31$ ,  $p < .001$ ). Also, the first decision-maker's selection did not interact with the effect of decision frame on conformity ( $\beta = 0.53$ ,  $SE = 0.63$ , Wald  $\chi^2(1, N = 201) = 0.71$ ,  $p = .401$ ), indicating that our framing effect held no matter which granola bar the first decision-maker received.

## STUDIES 3A–3C: TESTING THE GENERALIZABILITY

Having demonstrated the framing effect on conformity in naturalistic field settings with incentive-compatible decisions, we sought to test the generalizability of the effect in diverse consumer decision contexts: an online hotel room purchase (study 3a), in-store grocery shopping (study 3b), and personal selling (study 3c).

### Study 3a: Online Hotel Room Purchase

Before making purchase decisions, consumers frequently read reviews written by other consumers and learn about others' decisions. Consumers are especially reliant on reviews when shopping online, where they cannot observe or experience the product. Study 3a examined the proposed framing effect on conformity among participants who imagined that they were booking a hotel room online and needed to decide whether to book a breakfast-included room. To this extent, study 3a also extended the effect to a choice set that includes a single option and a no-choice option (rather than a choice between two options).

We predicted that a rejection-framed review would drive a higher rate of conformity than a choice-framed review.

Furthermore, we tested an alternative explanation based on the relative uncommonness of a rejection-framed response. Because choices occur more frequently than rejections, it is possible that participants perceive rejection-framed decisions as more odd or unexpected. This could increase the salience or perceived informativeness of a rejection decision, which may increase the likelihood of conformity. Or, people might consider rejections more carefully because they seem odd and thus are more difficult to process. We tested these possibilities associated with the relative uncommonness of rejection decisions by measuring oddness, informativeness, unexpectedness, and processing difficulty.

Lastly, although our hypotheses are about the comparison between the choice and rejection conditions, we also included a baseline condition in which participants simply made a choice without learning another person's decision, for exploratory purposes.

*Participants.* Four hundred fifty participants from Prolific completed the study. We excluded 10 participants who failed the attention check question (“... Select 1 if you are reading this instruction”; 1 = Not at all, 7 = Very much) as specified in the pre-registration (<https://aspre-dicted.org/y4vv2.pdf>), leaving 440 participants for analyses (60.9% female;  $M_{\text{age}} = 36.2$ ).

*Procedure.* Participants were randomly assigned to a choice condition, a rejection condition, or a baseline condition. All participants imagined that they were booking a hotel room for a trip. They were told that the hotel offered a buffet-style breakfast for an additional \$9, and the meal seemed attractive based on the photos. Before deciding whether to book a breakfast-included room or the room-only option, participants in the choice and rejection conditions were presented with a review, purportedly written by a consumer on a travel website. The review in the choice condition read, “We were there last week and we chose the room-only option after doing some research. The room was nice and we enjoyed our stay,” while in the rejection condition, it read, “We were there last week and we did not choose the breakfast-included option after doing some research. The room was nice and we enjoyed our stay.” (Note that the review favored the room-only option in both conditions.) Participants in the baseline condition did not read a review. All participants decided whether to book the room-only option or the breakfast-included option.

Participants in the choice and rejection conditions also rated the extent to which the review writer's decision seemed like a choice or a rejection (1 = It feels like a choice of the room-only option, 7 = It feels like a rejection of the breakfast-included option) as a manipulation check. They also indicated how informative, difficult to understand, odd, and unexpected the review was on four 7-point

scales (1 = Not at all, 7 = Very much) to test the aforementioned alternative explanations.

*Results and Discussion.* As expected, compared with participants in the choice condition, participants in the rejection condition perceived the review as more of a rejection ( $M_{\text{choice}} = 2.96$ ,  $SD = 1.98$  vs.  $M_{\text{rejection}} = 4.10$ ,  $SD = 2.14$ ;  $F(1, 286) = 21.7$ ,  $p < .001$ , Cohen's  $d = 0.55$ ), confirming the success of the framing manipulation. Also, we replicated the framing effect on conformity (hypothesis 1): the choice share of the room-only option was higher in the rejection condition than in the choice condition (choice: 23.2% vs. rejection: 45.2%;  $\chi^2(1, N = 288) = 15.40$ ,  $p < .001$ ), indicating higher conformity.

We found that participants in the choice condition perceived the review as more informative than those in the rejection condition ( $M_{\text{choice}} = 3.51$ ,  $SD = 1.42$  vs.  $M_{\text{rejection}} = 3.16$ ,  $SD = 1.42$ ;  $F(1, 286) = 4.20$ ,  $p = .041$ ), which is opposite from the prediction of the alternative explanation. Participants in the rejection condition found the other's decision to be more difficult to understand ( $M_{\text{choice}} = 1.53$ ,  $SD = 1.01$  vs.  $M_{\text{rejection}} = 1.84$ ,  $SD = 1.22$ ;  $F(1, 286) = 5.41$ ,  $p = .021$ ), more odd ( $M_{\text{choice}} = 1.75$ ,  $SD = 1.18$  vs.  $M_{\text{rejection}} = 2.50$ ,  $SD = 1.46$ ;  $F(1, 286) = 23.22$ ,  $p < .001$ ), and more unexpected ( $M_{\text{choice}} = 1.99$ ,  $SD = 1.32$  vs.  $M_{\text{rejection}} = 2.72$ ,  $SD = 1.47$ ;  $F(1, 286) = 19.79$ ,  $p < .001$ ) than those in the choice condition. However, these measures did not mediate the framing effect on conformity (95%  $CI_{\text{difficulty of understanding}} [-0.09, 0.08]$ , 95%  $CI_{\text{oddness}} [-0.28, 0.05]$ , 95%  $CI_{\text{unexpectedness}} [-0.13, 0.16]$ ), and the effect remained significant after including the measures as covariates ( $\beta = 1.08$ ,  $SE = 0.27$ , Wald  $\chi^2(1, N = 288) = 15.52$ ,  $p < .001$ ). Therefore, the alternative accounts based on the oddness, unexpectedness, informativeness, and difficulty of understanding rejection decisions are not likely to drive the framing effect.

In the baseline condition, 19.1% of participants chose the room-only option (the option selected by the other person in the choice and rejection conditions). This choice share was not significantly different from that in the choice condition (19.1% vs. 23.2%;  $\chi^2(1, N = 294) = 0.76$ ,  $p = .382$ ) but was significantly lower than that in the rejection condition (19.1% vs. 45.2%;  $\chi^2(1, N = 298) = 23.41$ ,  $p < .001$ ).

### Study 3b: Grocery Shopping

Study 3b tested the robustness of the decision framing effect on conformity in the offline grocery shopping context. When shopping in brick-and-mortar stores, consumers can easily access others' decisions by observing their behavior. For instance, a consumer who holds and examines two products side by side is comparing the products and has yet to make a decision; a consumer who puts a product in the shopping cart is choosing that product; and a

consumer who puts a product back on the shelf is rejecting that product. Thus, whether consumers construe another's purchase decision as a choice or as a rejection depends on which aspect of the decision process is more salient in the moment, holding the behavioral aspect constant. Study 3b presented participants with a typical grocery shopping scenario in which a consumer puts one product in the shopping basket (i.e., choice) or puts the other product back on the shelf (i.e., rejection). We predicted that participants would naturally perceive the former as a choice and the latter as a rejection, and this difference in perception would lead to different rates of conformity.

We also tested an alternative explanation based on preference strength: although the decision outcome was held constant across conditions, the act of rejecting may be perceived as a stronger expression of preference than the act of choosing. That is, participants may perceive a person who rejects product B to prefer product A more strongly than a person who chooses product A over product B. This perception of a stronger preference may increase conformity. We tested this account by asking participants to predict the strength of the other consumer's preference.

**Participants.** Four hundred six MTurk participants completed this study. Following the pre-registration (<https://aspredicted.org/hi6zu.pdf>), we excluded 30 participants who failed the attention check question (a recall question at the end of the survey: "According to the instruction, which of the following is correct? 1. Sam put ramen A in the shopping basket. 2. Sam put ramen B in the shopping basket. 3. Sam put ramen A back on the shelf. 4. Sam put ramen B back on the shelf."), leaving 376 participants for analyses (54.3% female;  $M_{\text{age}} = 38.4$ ).

**Procedure.** Participants imagined that they were visiting a convenience store with their coworker, Sam, to buy an instant ramen for lunch. The store had two types of instant ramen in stock ([web appendix B](#)). Participants were told that Sam held both types of ramen side by side and carefully examined them. Participants in the choice condition learned that Sam eventually put the ramen she wanted—ramen A (or B, counterbalanced)—in the shopping basket, whereas participants in the rejection condition learned that Sam eventually put the ramen she did not want—ramen B (or A)—back on the shelf. Next, all participants indicated which instant ramen they would like to purchase.

Afterward, participants were asked to predict how strongly Sam preferred the product she selected ("How strong is her preference for [the selected Ramen]?" 1 = Very weak, 7 = Very strong; [Spiller and Belogolova 2017](#)). Note that preference strength is orthogonal to the attribution of the other consumer's decision (i.e., to quality or personal preference) since the attribution concerns *why* the consumer made the decision, whereas preference

strength refers to the magnitude of the consumer's liking of one option over the other.

Lastly, as a manipulation check, we measured the extent to which participants perceived Sam's behavior as a choice or a rejection ("What does this action feel like to you?" 1 = It feels like a choice of [the selected ramen], 7 = It feels like a rejection of [the unselected ramen]).

**Results and Discussion.** The framing manipulation was successful: compared with those in the choice condition, participants in the rejection condition perceived Sam's behavior as more of a rejection ( $M_{\text{choice}} = 2.07$ ,  $SD = 1.48$  vs.  $M_{\text{rejection}} = 3.50$ ,  $SD = 2.24$ ;  $F(1, 374) = 52.87$ ,  $p < .001$ , Cohen's  $d = 0.75$ ). Replicating the framing effect on conformity (hypothesis 1), participants in the rejection condition were more likely to choose the same ramen as Sam (64.4%) than were those in the choice condition (51.9%;  $\chi^2(1, N = 376) = 6.04$ ,  $p = .014$ ).

The perceived strength of Sam's preference did not differ between conditions ( $M_{\text{choice}} = 5.37$ ,  $SD = 1.26$  vs.  $M_{\text{rejection}} = 5.16$ ,  $SD = 1.70$ ;  $F(1, 374) = 1.85$ ,  $p = .175$ ), and the perceived preference strength did not mediate the framing effect on conformity (95% CI = [-0.08, 0.01]). When we controlled for the perceived preference strength, the framing effect on conformity remained significant ( $\beta = 0.53$ ,  $SE = 0.21$ , Wald  $\chi^2(1, N = 376) = 6.32$ ,  $p = .012$ ). Therefore, the effect is unlikely to be driven by the difference in the perceived strength of the other consumer's preference.

Study 3b provides additional evidence for the proposed effect with a subtle and natural manipulation of the decision frame through behavior.

### Study 3c: Personal Selling

Studies 2–3b demonstrated the framing effect on conformity in situations where consumers learned about another's decision directly from the decision-maker. Alternatively, as we demonstrated in study 1, consumers may learn about another's decision indirectly from a third person such as a salesperson, friend, or influencer. Study 3c aimed to replicate the framing effect in a controlled scenario involving a third person in another important shopping context: personal selling.

A salesperson often learns about the needs of individual consumers through personal communication and then offers goods or services that satisfy those needs. Prior literature has identified several techniques (e.g., using stronger sales messages, claiming scarcity, mentioning social norms) to steer consumers toward products or services with higher profit margins. These tactics, though generally effective, risk revealing the salesperson's persuasive intent and triggering consumer reactance ([Campbell and Kirmani 2000](#)).



The current research introduces a subtler and easier-to-implement persuasion tactic: the strategic framing of another's decision. In study 3c, we propose and empirically demonstrate that, by manipulating the current consumer's perception of a previous consumer's decision, a sales representative can alter the likelihood that the current consumer will choose one product over the other. In a follow-up study, we also provide evidence that both sales professionals and laypeople have no insight into this influence.

*Participants.* Four hundred five MTurk participants completed this study. We excluded 26 participants who failed the attention check question (as in study 3a), leaving 379 participants for analyses (52.3% female;  $M_{\text{age}} = 39.1$ ).

*Procedure.* Participants imagined that they were looking for a new house and were considering two neighborhoods, Oakland and Squirrel Hill. Along with a brief description of each neighborhood (figure 2), participants read, "Imagine today you meet with your realtor to see a few houses in Oakland (or Squirrel Hill, counterbalanced). While you two are in the car, you recall that Susie, a mutual friend, was also interested in these two neighborhoods. 'I heard Susie was also deciding between these two neighborhoods. Did she choose Oakland?' you ask your realtor." The realtor's response differed by condition: "I heard she decided to choose Squirrel Hill" in the choice condition versus "I heard she decided not to choose Oakland" in the rejection condition. Finally, participants indicated which neighborhood they would like to choose as well as the extent to which they perceived Susie's decision as a choice or a rejection ("What does Susie's decision feel like to you?" 1 = It feels like a choice of [the selected neighborhood], 7 = It feels like a rejection of [the unselected neighborhood]).

*Results and Discussion.* The manipulation check revealed that participants in the rejection condition indeed perceived Susie's decision as more of a rejection than did those in the choice condition ( $M_{\text{choice}} = 2.07$ ,  $SD = 1.46$  vs.  $M_{\text{rejection}} = 4.00$ ,  $SD = 2.20$ ;  $F(1, 377) = 101.99$ ,  $p < .001$ , Cohen's  $d = 1.06$ ). In support of hypothesis 1, the

proportion of participants who chose the same neighborhood as Susie was significantly larger in the rejection condition (60.5%) than in the choice condition (46.9%;  $\chi^2(1, N = 379) = 7.08$ ,  $p = .008$ ). The results suggest that sales representatives can influence their clients' decisions simply by responding to inquiries with different decision frames.

This raises an interesting question: do laypeople and sales professionals intuit this framing effect? In a pre-registered follow-up study with 364 participants (see web appendix C for details), we provided the beginning of the study 3c scenario and asked participants which response from the realtor would increase the client's likelihood of conforming to Susie's decision; we provided three options: "My client will be more likely to choose Squirrel Hill if I respond 'I heard she decided to choose Squirrel Hill'" (i.e., choice frame; chosen by 55.2% of all participants), "My client will be more likely to choose Squirrel Hill if I respond 'I heard she decided not to choose Oakland'" (i.e., rejection frame; 23.6%), and "My client's choice will not be influenced by whether I respond by saying 'I heard she decided to choose Squirrel Hill' or 'I heard she decided not to choose Oakland'" (21.2%).

We categorized the results by the participant's relevant work experience: laypeople (i.e., participants without relevant work experience in sales, marketing, or real estate) versus sales professionals (i.e., those with relevant work experience in sales, marketing, or real estate). We found that a majority of laypeople intuited the opposite of our framing effect on conformity: 52.7% expected the *choice-framed* response to be the most effective at increasing conformity (significantly higher than chance: 52.7% vs. 33.3%;  $\chi^2(1, N = 226) = 38.12$ ,  $p < .001$ ), while only 24.8% expected the *rejection-framed* response to be the most effective (significantly lower than chance: 24.8% vs. 33.3%;  $\chi^2(1, N = 226) = 7.39$ ,  $p = .007$ ). Interestingly, the proportion of sales professionals who chose the *rejection-framed* response to be the most effective were no different from that of laypeople ( $\chi^2(1, N = 364) = 0.44$ ,  $p = .508$ ): a majority predicted that the *choice-framed* response would achieve the most conformity (59.4% vs. 33.3%;  $\chi^2(1, N = 138) = 42.39$ ,  $p < .001$ ), whereas only 21.7% chose

FIGURE 2

STIMULI IN STUDY 3C

**Oakland** is a place where boutiques, shops and galleries mingle with national retailers, historic homes, hip events and distinctive restaurants. The large residential area includes beautifully restored Victorian mansions, modern homes and condos alongside a beautiful public park.

**Squirrel Hill** combines tree lined residential streets, a bustling business district, educational institutions and two museums. Squirrel Hill is home to many authentic eateries for its residents to enjoy.

the rejection-framed response (21.7% vs. 33.3%;  $\chi^2(1, N = 138) = 8.30, p = .004$ ). This result suggests that most people, including sales professionals, are not aware of the framing effect on conformity. In fact, a majority have the opposite intuition, indicating an opportunity for sales professionals to learn a new persuasion tactic.

In the remaining studies, we provide evidence for the underlying mechanism through both mediation and moderation approaches.

### STUDY 4: MEDIATION BY THE ATTRIBUTION OF THE OTHER'S DECISION

The goal of studies 4 and 5 was to test our proposed mechanism (i.e., hypotheses 2 and 3) by directly measuring participants' causal attributions about the other consumer's decision. Study 4 also established the generalizability of the effect by replicating the effect in the context of a three-option choice set, in which consumers learned that another consumer either chose one of three hotels or rejected two of them. We predicted that consumers would be more likely to follow the other consumer's decision if it was framed as a rejection than if it was framed as a choice (i.e., a replication of our framing effect). Furthermore, we predicted that participants would be more likely to make the product quality attribution (instead of the personal preference attribution) for the rejection-framed decision than for the choice-framed decision (hypothesis 2), and we expected that this inference would mediate the framing effect on conformity (hypothesis 3).

In addition, study 4 tested the alternative explanations based on oddness and unexpectedness (as in study 3a) and also tested three new alternative explanations. First, previous research has found that people are more likely to use deliberative processing when they reject than when they choose (Sokolova and Krishna 2016). If consumers are intuitively aware of this tendency, then they may be more likely to conform to a rejection because they perceive that a rejection, relative to an equivalent choice, is the result of greater deliberation. To test this account, we measured participants' perceptions of the deliberation involved in the other consumer's decision. Second, because negative information attracts attention (Rozin and Royzman 2001), people may pay more attention when the decision involves negatively valenced information (other's rejection) compared with positively valenced information (other's choice), and the increased attention could lead to a higher rate of conformity. To test this possibility, we measured self-reported deliberation. Third, an outcome can be viewed as a result of either action or inaction (Gilovich and Medvec 1995; Kahneman and Tversky 1982), and the decision frame could influence perceptions of whether

another's decision is an action or inaction—choosing an option may seem like an action, whereas not choosing an option may seem like inaction (Yaniv and Schul 2000). Based on the existing literature, it seems unlikely that a perception of action versus inaction contributes to the framing effect on conformity given that action signals greater commitment than inaction (Cioffi and Garner 1996) and therefore makes a prediction opposite to the effect we demonstrate. Nevertheless, we test the possibility empirically by measuring the extent to which participants perceived the other person's decision to be an action or inaction.

### Method

*Participants.* Three hundred two participants from Prolific completed this 2 (decision frame: choice vs. rejection) between-subjects study. Nine participants were excluded for failing the pre-registered attention check question (<https://aspredicted.org/i3x46.pdf>), leaving 293 participants for analyses (68.6% female;  $M_{\text{age}} = 35.6$ ).






*Procedure.* Participants imagined that they were planning a summer getaway to Miami and found three hotels on Tripadvisor: Hotel Soho, Ivy Hotel, and Hotel Urbanica. All three options offered a discount on the dates of the participant's visit and were in the same price range. The three hotels were described with three attributes: the room size, a concierge rating, and the distance from downtown (figure 3, top). Concierge ratings were held constant at 4 stars across the three options, but the room size and distance from downtown varied slightly such that the hotel with a bigger room was located farther from downtown.

Before making the final decision, participants imagined that they posted a question on Tripadvisor to solicit opinions about the three hotels. We provided participants with one reply, designed to simulate typical replies on Tripadvisor, and the content of the reply contained the manipulations of the independent variable. Specifically, in the choice condition the reply read, "I was deciding between these three hotels. I did some research and decided to stay at Ivy" to convey the other consumer's decision, whereas in the rejection condition the reply was, "I was deciding between these three hotels. I did some research and decided not to stay at Urbanica or Soho."

Recall that we have conceptualized that people are more likely to attribute another consumer's decision to quality rather than personal preference if the decision is perceived as a rejection than if it is perceived as a choice (hypothesis 2). To test our mechanism, we asked participants to infer the cause of the other consumer's decision (adapted from Spiller and Belogolova 2017). For example, in the choice condition, participants answered why they thought the person decided to stay at Ivy on a scale from 1 = "More likely because Ivy might be of a higher quality than Urbanica and

FIGURE 3

HOTEL OPTIONS (TOP) AND ONLINE REPLIES (BOTTOM) IN STUDY 4

Hotel options	
 <b>Hotel Urbanica</b> Room Size: 340 sq. ft. Concierge: ★★★★★ Distance from Downtown: 2 mi.	 <b>Ivy Hotel</b> Room Size: 375 sq. ft. Concierge: ★★★★★ Distance from Downtown: 8 mi.
 <b>Hotel Soho</b> Room Size: 380 sq. ft. Concierge: ★★★★★ Distance from Downtown: 9 mi.	
Replies	
<p style="text-align: center;"><b>Choice condition:</b></p> <div style="display: flex; align-items: flex-start;">  <div> <p>GO731   San Diego, California</p> <p>I was also deciding between these three hotels. I did some research and decided to stay at Ivy. By the way, if it is your first time going to Miami, you should also check out the northern beaches. South Beach is more popular, but it isn't as clean as it used to be a few years ago.</p> </div> </div>	<p style="text-align: center;"><b>Rejection condition:</b></p> <div style="display: flex; align-items: flex-start;">  <div> <p>GO731   San Diego, California</p> <p>I was also deciding between these three hotels. I did some research and decided not to stay at Urbanica or Soho. By the way, if it is your first time going to Miami, you should also check out the northern beaches. South Beach is more popular, but it isn't as clean as it used to be a few years ago.</p> </div> </div>

Soho” to 7 = “More likely because the person personally likes Ivy more than Urbanica and Soho, although they are of the same quality.”

Afterward, participants completed three sets of measures designed to test alternative accounts. First, we asked participants to rate the extent to which the other person seemed to have deliberated on the three options (1 = Not at all, 7 = Very much) and the extent to which participants themselves deliberated on the three options before making their decision (1 = Not at all, 7 = Very much). Second, participants reported how informative, difficult to understand, odd, and unexpected the person’s decision was, as in study 3a; the measures also included a manipulation check question. Third, participants rated the extent to which they perceived the other person’s decision to be an action versus inaction (1 = I would describe it to be more of an inaction, 7 = I would describe it to be more of an action).

## Results and Discussion

**Manipulation Check.** The framing manipulation was successful: participants in the rejection condition indeed perceived the other person’s decision as more of a rejection than did those in the choice condition ( $M_{\text{choice}} = 2.26$ ,

$SD = 1.31$  vs.  $M_{\text{rejection}} = 4.29$ ,  $SD = 2.05$ ;  $F(1, 289) = 101.77$ ,  $p < .001$ , Cohen’s  $d = 1.18$ ).

**Conformity.** In line with our prediction, participants in the rejection condition were more likely to conform to other consumer’s decision (54.5%) than were those in the choice condition (29.7%;  $\chi^2(1, N = 293) = 18.43$ ,  $p < .001$ ). Supporting hypothesis 2, participants in the rejection condition, relative to those in the choice condition, were more likely to attribute the other’s decision to matters related to quality than personal preference ( $M_{\text{choice}} = 4.70$ ,  $SD = 1.54$  vs.  $M_{\text{rejection}} = 4.15$ ,  $SD = 1.72$ ;  $F(1, 291) = 8.14$ ,  $p = .005$ , Cohen’s  $d = 0.33$ ). In addition, the difference in attribution mediated the framing effect on conformity (95% CI [0.05, 0.40]), supporting the underlying mechanism (hypothesis 3).

**Other Measures.** We found no support for the alternative explanations based on oddness/unexpectedness, increased attention, or action/inaction. We summarize the findings here and report the detailed analyses in [web appendix D](#). First, while participants found the rejection-framed decision to be more odd, unexpected, and difficult to understand than the choice-framed decision, these measures did not mediate the framing effect on conformity, and the main effect remained significant after controlling for

these measures. Second, we found that the framing manipulation had no effect on self-reported deliberation, and it did not mediate the framing effect. Third, we found no difference in the perception of the choice versus rejection decision as an action/inaction, and the perception did not mediate the main effect.

Participants in the rejection condition, relative to participants in the choice condition, perceived that the other person deliberated marginally more ( $M_{\text{choice}} = 4.84$ ,  $SD = 1.34$  vs.  $M_{\text{rejection}} = 5.10$ ,  $SD = 1.17$ ;  $F(1, 291) = 3.27$ ,  $p = .072$ ). The difference is not surprising given that the rejection condition essentially featured two decisions (two rejections), while the choice condition featured only one decision (a choice). The difference in perceived deliberation marginally mediated the framing effect on conformity (90% CI [0.00, 0.18]), but the main effect remained significant after controlling for perceived deliberation ( $\beta = 1.00$ ,  $SE = 0.25$ , Wald  $\chi^2(1, N = 293) = 16.24$ ,  $p < .001$ ). Given the results, we tested this alternative explanation again in study 5 and found the reverse pattern, suggesting that perceived deliberation is unlikely to drive the effect.

Taken together, study 4 extends the generalizability of our effect to choice contexts involving more than two alternatives, rules out several alternative explanations, and provides evidence for the proposed mechanism: the framing effect on conformity is driven by the consumer's causal attribution (quality or personal preference) of the other person's decision.

## STUDY 5: ESTABLISHING THE ROBUSTNESS OF MEDIATION

Study 5 bolsters the mediation analysis in study 4 by counterbalancing the order of the measures of the dependent variable and mediator. Study 5 also extends study 4 by giving participants the flexibility to choose both of the two alternatives, as often is an option in reality.

This study had two new measures. First, to further rule out the alternative account based on attention, we asked participants to rate the amount of time they spent considering each option (Wilcox et al. 2009) instead of self-reported deliberation about the decision as a whole (as in study 4). Second, our theory based on attributions (quality vs. personal preference) suggests that we might also observe a difference in whether participants perceive the alternatives to be differentiated vertically or horizontally (Spiller and Belogolova 2017). We measured this perception to test the extent to which the attribution process affects perceived product differentiation rather than to test an alternative explanation.

### Method

*Participants.* Six hundred participants from Prolific were randomly assigned to a condition in a 2 (decision

frame: choice vs. rejection)  $\times$  2 (counterbalanced order: choice-first vs. mediator-first) between-subjects design. As pre-registered, we excluded 18 participants who failed the attention check questions, leaving 582 participants (53.3% female;  $M_{\text{age}} = 38.3$ ) for analyses (<https://aspredicted.org/s68ir.pdf>).

*Procedure.* Participants imagined buying a pair of Bluetooth headphones on Black Friday. They were told to examine two pairs of headphones, labeled with fictitious model numbers (WH-L600 and HQX700; figure 4) and both offering deep discounts. The two headphones were very similar except that one model had a slightly longer battery life, while the other weighed less.

After reviewing the information about the two pairs of headphones, participants were told to imagine that they had posted a question on an online forum to ask for input on their headphone purchase, and they recently received a reply from another consumer. The consumer's reply was framed either as a choice (i.e., "he also saw the deal and decided to buy HQX700 after doing some research") or as a rejection (i.e., "he also saw the deal and decided not to buy WH-L600 after doing some research").

Next, participants answered the dependent and mediation measures in a counterbalanced order. For the dependent measure, participants indicated their purchase decision by choosing one or both of the headphones. We operationalized conformity conservatively as the selection of the pair of headphones selected by the other consumer; we considered the selection of both pairs of headphones to be non-conformity. To test our proposed mechanism, we asked participants to indicate their causal attribution about the other person's decision (e.g., "Why do you think the person decided to buy HQX700? 1 = More likely because HQX700 might be of a higher quality than WH-L600, 7 = More likely because the person likes HQX700 more

FIGURE 4

THE STIMULI PRESENTED IN STUDY 5

**WH-L600**



**HQX700**



- |                |                |                |                |
|----------------|----------------|----------------|----------------|
| • Weight       | 8.1 oz         | • Weight       | 8 oz           |
| • Battery      | Up to 30 hours | • Battery      | Up to 22 hours |
| • Connectivity | Bluetooth 5    | • Connectivity | Bluetooth 5    |

than WH-L600, although they are of the same quality”). The order in which purchase decision and causal attribution were measured was counterbalanced: half of the participants indicated their choice first, while the other half indicated their causal attribution of the other person’s decision first.

In addition, participants answered a series of measures related to alternative accounts used in study 4: other’s deliberation, perception of other’s decision as an action or inaction, and the oddness, unexpectedness, informativeness of the decision as well as the difficulty of understanding the decision. To test the attention alternative account, we asked participants to rate how much time they personally spent considering each option (1 = Not at all, 7 = Very much; Wilcox et al. 2009). We also included a manipulation check. Finally, for exploratory purposes, we included a binary measure of the perception of the two products as vertically or horizontally differentiated: “Which of the following statements best describes the comparison between WH-L600 and HQX700?” (1 = “One option is objectively better than the other,” 2 = “Neither one is objectively better, it is a matter of opinion”; Goodwin and Darley 2008, 2012; Spiller and Belogolova 2017).

## Results and Discussion

**Manipulation Check.** A  $2 \times 2$  ANOVA revealed only a main effect of the decision frame, such that participants in the rejection condition perceived the reply to be more of a rejection than did those in the choice condition ( $M_{\text{choice}} = 2.56$ ,  $SD = 1.59$  vs.  $M_{\text{rejection}} = 4.35$ ,  $SD = 2.04$ ;  $F(1, 578) = 135.6$ ,  $p < .001$ , Cohen’s  $d = 0.97$ ). Thus, the decision framing manipulation was successful, and it was not affected by the counterbalancing procedure ( $F(1, 578) = 0.53$ ,  $p = .465$ ). The order of the dependent and mediation measures did not interact with the effect of the decision frame on conformity (Wald  $\chi^2(1, N = 582) = 0.176$ ,  $p = .674$ ) or on causal attribution ( $F(1, 578) = 0.216$ ,  $p = .643$ ), so we collapse the participants across the two counterbalancing conditions.

**Conformity.** As predicted, participants in the rejection condition were more likely to conform to the other consumer’s decision (34.6%) than were those in the choice condition (25.9%,  $\chi^2(1, N = 582) = 5.25$ ,  $p = .022$ ). In addition, participants in the rejection condition, relative to those in the choice condition, were significantly more likely to attribute the other’s decision to quality-related considerations over personal preference ( $M_{\text{choice}} = 4.46$ ,  $SD = 1.75$  vs.  $M_{\text{rejection}} = 3.84$ ,  $SD = 1.75$ ;  $F(1, 580) = 18.41$ ,  $p < .001$ , Cohen’s  $d = 0.36$ ), consistent with hypothesis 2. Finally, the difference in attribution mediated the framing effect on conformity (95% CI [0.14, 0.44]), supporting hypothesis 3.

**Other Measures.** We found no support for any of the four alternative explanations we tested in this study, so we summarize the main findings here and report the detailed analyses in [web appendix D](#). First, in contrast to the findings in study 4, the decision frame had the opposite effect on participants’ perceptions of the other person’s deliberation: participants in the choice condition, relative to those in the rejection condition, thought the other person deliberated marginally more ( $M_{\text{choice}} = 5.33$ ,  $SD = 1.20$  vs.  $M_{\text{rejection}} = 5.15$ ,  $SD = 1.31$ ;  $F(1, 580) = 3.12$ ,  $p = .078$ ). The indirect effect of the other person’s deliberation was in the opposite direction of the main effect of framing (90% CI [−0.12, −0.01]), which indicates that the other’s deliberation *reduced* conformity. Second, participants found the rejection-framed decision less informative than the choice-framed decision, which is inconsistent with the alternative explanation that informativeness of rejection-framed decisions may lead to higher conformity. Third, while participants found the rejection-framed decision to be more odd, unexpected, and difficult to understand, these measures did not mediate the framing effect on conformity, and the effect remained significant after controlling for these measures. In fact, the indirect effects of oddness (95% CI [−0.18, −0.02]) and unexpectedness (90% CI [−0.10, −0.01]) were in the opposite direction of the main effect of framing, indicating that these two measures *reduced* conformity. Fourth, we found that the framing manipulation had no effect on the self-reported amount of time participants spent considering each option (the measure of attention), and the amount of time did not mediate the framing effect, as in study 4. Together, the results of studies 4 and 5 suggest that inferred deliberation is at best an inconsistent predictor of our effect. Lastly, participants in the rejection condition, relative to those in the choice condition, perceived the other person’s decision to be more indicative of inaction, but this perception did not mediate the framing effect.

We did not find any effect of the framing condition on perceived product differentiation (60.7% chose horizontal differentiation in the choice condition vs. 63.4% in the rejection condition;  $\chi^2(1, N = 582) = 0.44$ ,  $p = .507$ ; [web appendix D](#)). This result suggests that perceived product differentiation is not the same as the quality versus personal preference attribution. Vertical versus horizontal differentiation is related to perceptions of the products themselves, while the quality versus personal preference attribution is related to perceptions of why the other consumer made a certain decision. The former likely depends on factors other than decision framing, such as prior beliefs about variation among the products in a certain category, so we speculate that it may have a weaker relationship with the framing effect on conformity.

The results of study 5 corroborate the mediation evidence in study 4 and extend the framing effect on

conformity to a scenario in which consumers could choose both options in the choice set. Next, study 6 demonstrates the mechanism through moderation.

### STUDY 6: ATTENUATION OF THE FRAMING EFFECT ON CONFORMITY THROUGH THE MANIPULATION OF ATTRIBUTION

Study 6 adopted the moderation-of-process approach to test the underlying mechanism (Bullock, Green, and Ha 2010; Spencer, Zanna, and Fong 2005) by directly manipulating whether the other consumer's choice was attributable to quality or personal preference. Specifically, we informed participants that the other consumer's choice was based on either the quality of the materials used for the headphones or the consumer's personal preference for the appearance of headphones. Based on our conceptualization, we predicted that the framing effect on conformity would attenuate in both conditions; the rate of conformity would be high in both the choice and rejection conditions when the decision was explicitly attributed to quality, whereas the rate of conformity would be low in both the choice and rejection conditions when the decision was explicitly attributed to personal preference.

#### Method

**Participants.** Eight hundred ninety-seven participants (53.8% female;  $M_{\text{age}} = 40.6$ ) from MTurk completed this study in exchange for a nominal payment. As specified in the pre-registration (<https://aspredicted.org/fy9eb.pdf>), we excluded 42 participants who failed an attention check question (as in study 3a), leaving 855 participants for analyses (53.3% female;  $M_{\text{age}} = 40.4$ ).

**Procedure.** This study employed a 2 (decision frame: choice vs. rejection)  $\times$  3 (attribution: control vs. quality vs. personal preference) between-subjects design. The procedure of study 6 was identical to that of study 5 except that participants in the quality and personal preference conditions also learned the reason for the other consumer's decision (web appendix E). Those in the quality condition learned that the other person purchased HQX700 "because the material used for HQX700 is of higher quality, making it more durable and more comfortable to use," while those in the personal preference condition learned that the other person purchased HQX700 "because he personally likes the appearance of HQX700 more even though the sound quality of the two headphones is basically the same." Participants in the control condition did not receive any additional information. Finally, all participants indicated which pair of headphones they wanted to purchase.

A pretest confirmed that participants believed that appearance was a matter of personal preference ( $M = 6.11$

vs. 4,  $t(97) = 17.06$ ,  $p < .001$ ) and materials used for production were a matter of quality ( $M = 2.83$  vs. 4,  $t(97) = -6.72$ ,  $p < .001$ ; web appendix E). The pretest also revealed that participants considered appearance more important than materials ( $M_{\text{appearance}} = 4.95$ ,  $SD = 1.47$  vs.  $M_{\text{materials}} = 4.58$ ,  $SD = 1.59$ ;  $t(97) = 1.89$ ,  $p = .062$ ), which suggests that if we observe higher conformity in the quality condition, it is not because the provided information about product quality (i.e., materials) is more important than the provided information about personal preference (i.e., appearance).

#### Results and Discussion

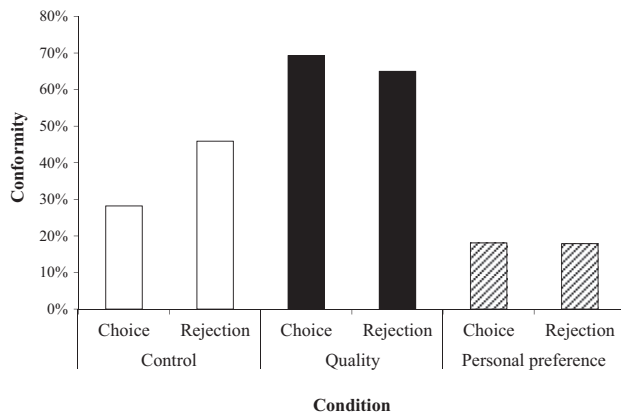
We predicted that the framing effect on conformity would be replicated in the control condition but not in the quality or personal preference conditions. To test this prediction, we performed a logistic regression of conformity on the decision frame, attribution, and their interaction. The analysis revealed a significant 2  $\times$  3 interaction (Wald  $\chi^2(2, N = 855) = 8.27$ ,  $p = .016$ ), as we expected. We unpacked the interaction with two separate logistic regressions that compared the control condition with each of the attribution conditions.

Focusing on the control and quality conditions, we found a significant 2  $\times$  2 interaction ( $\beta = -0.97$ ,  $SE = 0.36$ , Wald  $\chi^2(1, N = 571) = 7.44$ ,  $p = .006$ ), a significant main effect of attribution ( $\beta = 1.75$ ,  $SE = 0.26$ , Wald  $\chi^2(1, N = 571) = 45.45$ ,  $p < .001$ ), and a significant main effect of framing ( $\beta = 0.77$ ,  $SE = 0.25$ , Wald  $\chi^2(1, N = 571) = 9.89$ ,  $p = .002$ ). Decomposing the interaction, a significant framing effect on conformity occurred in the control condition (choice: 28.2% vs. rejection: 45.9%;  $\chi^2(1, N = 297) = 10.04$ ,  $p = .002$ ) but not in the quality condition (choice: 69.3% vs. rejection: 65.0%;  $\chi^2(1, N = 274) = .60$ ,  $p = .440$ ); as expected, conformity was high in the quality condition regardless of the decision frame. Focusing on the control and personal preference conditions, we also found a significant 2  $\times$  2 interaction ( $\beta = -0.39$ ,  $SE = 0.20$ , Wald  $\chi^2(1, N = 581) = 3.96$ ,  $p = .047$ ), a significant main effect of attribution ( $\beta = -0.29$ ,  $SE = 0.14$ , Wald  $\chi^2(1, N = 581) = 4.16$ ,  $p = .041$ ), and a significant main effect of framing ( $\beta = 0.77$ ,  $SE = 0.25$ , Wald  $\chi^2(1, N = 581) = 9.89$ ,  $p = .002$ ). Decomposing the interaction, the framing effect on conformity was not significant in the personal preference condition (choice: 18.1% vs. rejection: 17.9%;  $\chi^2(1, N = 284) < 0.01$ ,  $p = .965$ ); also as expected, conformity was low in the personal preference condition regardless of the decision frame (figure 5).

The results provide support for our theorization by demonstrating that the attribution of another's decision to quality increases conformity, while the attribution to personal preference decreases conformity. By measuring attributions (studies 4 and 5) and manipulating attributions (study 6), we provide converging evidence that the inferred causal

FIGURE 5

INFLUENCE OF THE DECISION FRAME AND CAUSAL ATTRIBUTION ON CONFORMITY IN STUDY 6



attribution of another’s decision drives the framing effect on conformity.

Study 6 further casts doubt on the alternative accounts based on oddness, unexpectedness, and experimental demand by orthogonally manipulating the decision frame and attribution. The significant differences in conformity among the control, quality, and personal preference conditions cannot be explained by idiosyncrasies in the phrasing of the choice-framed or rejection-framed decisions.

Study 6 also rules out the alternative explanation based on attention. If another’s rejection (relative to an equivalent choice) increases conformity by increasing a consumer’s attention to negative aspects of the alternatives, then the consumer’s attribution of the other’s decision should not matter, and the framing effect on conformity should not be moderated by the attribution manipulation. This prediction is inconsistent with the moderation pattern we found in study 6.

## GENERAL DISCUSSION

As consumers, we are often exposed to other consumers’ decisions in various decision contexts. Before making decisions, we also frequently seek information regarding other consumers’ choices through online reviews or social media sites. Other consumers’ decisions may be portrayed as choices of the more-preferred alternatives or as rejections of the less-preferred alternatives. Our research shows that merely perceiving another’s decision as a choice or rejection, holding the decision outcome constant, can affect consumer choice. Across eight main studies and four supplementary studies with more than 5,000 participants, we find that rejections lead to more conformity than choices. We also provide evidence for the underlying mechanism:

people are more likely to attribute others’ rejection decisions, relative to equivalent choice decisions, to differences in product quality rather than personal preference.

## Theoretical Contributions

The current research makes several theoretical contributions. First, to the best of our knowledge, we are the first to connect the decision framing literature with the social influence literature and to offer a unique contribution to both. Specifically, while prior research on choosing versus rejecting is limited to individuals’ own decision processes and outcomes, the current research significantly broadens the scope of this literature by exploring the consequences of the decision frame in an interpersonal setting. Furthermore, the social influence literature has studied the social influences of choices and rejections separately and in different contexts—it has yet to explore the potential difference in the strength of these social influences. The current research fills this gap by demonstrating that rejection decisions lead to more conformity than choice decisions, holding the decision outcomes constant.

Second, the current research contributes to the recent theoretical development on perceptions of quality versus personal preference. Although the vast majority of marketing literature assumes that the nature of product differentiation (i.e., vertical or horizontal) depends on inherent product characteristics and therefore should not be perceived variably among consumers (Sutton 1986), more recent research has found that consumers’ perceptions of quality and personal preference are malleable (Rozenkrants, Wheeler, and Shiv 2017; Spiller and Belogolova 2017) and may vary dramatically across individuals (Spiller and Belogolova 2017). For example, consumers are more likely to infer that a choice set differs in personal preference (vs. quality) when observing other consumers making contradictory choices (e.g., Mary chose A over B, Kay chose B over C, but Liz chose C over A; Spiller and Belogolova 2017) and when product ratings follow a bimodal distribution instead of a unimodal distribution (Rozenkrants et al. 2017). The current research extends this nascent work by investigating the perception of another’s decision frame (rejection vs. choice) as a novel antecedent of perceptions of quality and preference.

Third, extensive research has documented negativity bias in many domains (see Baumeister et al. 2001 for a review) including decision-making (Kahneman and Tversky 1984), impression formation (Skowronski and Carlston 1989), information processing (Skowronski and Carlston 1987), emotions and moods (David et al. 1997), and well-being (Sheldon, Ryan, and Reis 1996). The proposed effect of the decision frame on conformity is also a form of negativity bias in the sense that, holding another’s decision outcome constant, the negative (i.e., a rejection) is more socially influential than the positive (i.e., a choice).

This new form of negativity bias is not driven by consumers' inferences about another decision-maker's preference strength or degree of deliberation; rather, it is driven by consumers' inferences about whether the decision was based on differences in product quality or personal preference.

## Practical Implications

Marketers, sales representatives, and influencers alike are interested in learning ways to nudge consumer choices. Our research demonstrates, in both the real world and lab experiments, an easy and cost-free tactic to influence consumers: characterizing another consumer's decision as a rejection of the alternative(s) rather than as a choice of the target increases the consumer's likelihood of choosing the target. Influencers and salespeople often reference decisions made by other consumers when attempting to sell products to prospective consumers. In study 1, a real influencer with over 1.5 million followers used either the choice or rejection frame to convey a decision made by her friend, and we found that the decision frame influenced the product choices of viewers. In study 3c, framing another consumer's decision as a rejection of the alternative (vs. choice of the target) increased the choice share of the target.

Moreover, influencers and content creators can entice more audience members to conform to their decisions by expressing their own decisions as rejections (e.g., by indicating, either explicitly or implicitly, which major competing products they do not use). For instance, when writing a review or posting a comment online, highlighting the rejected rather than the chosen alternative(s) increases conformity (studies 3a, 4a, 4b, and 5). In fact, even an implicit form of rejection (putting a product back on the shelf) boosted conformity by 12.5%age points in study 3b, demonstrating the versatility of rejection framing in different situations. Thus, our framing effect on conformity has clear practical implications for those who wish to influence consumers by expressing their own decisions or others' decisions.

## Open Questions and Future Research Directions

*The Use of Choice and Rejection Frames Together.* Although we isolated choices and rejections to test the effect of framing, in real life, it is possible to use the two frames together by stating both the option that was chosen and the option that was rejected. We speculate that in such cases, the relative salience of the decision frames will determine whether people perceive the decision as more of a choice or rejection. The salience of information is known to be affected by order—information presented first has a stronger influence (Bagchi and Davis 2012; Hogarth and Einhorn 1992). We reason that consumers

perceive “I chose A and rejected B” as less of a rejection than “I rejected B and chose A.” We empirically tested this possibility in a study ( $N = 549$ ; reported in [web appendix F](#)). Consistent with our speculations, we found that stating the choice first and the rejection second led to a conformity rate (27.2%) similar to that in the choice-only condition (25.3%), whereas stating the rejection first and the choice second led to a conformity rate (34.3%) similar to that in the rejection-only condition (39.2%). The conformity rate in the rejection-first-and-choice-second condition was marginally higher than in the choice-only condition ( $p = .099$ ). Future research may investigate when and why one frame may have a stronger influence than the other when used together.

*Decisions versus Recommendations.* Prior work makes a conceptual distinction between a *decision made for oneself*, for which the decision-maker's best interests are paramount (e.g., preferences, constraints, or other considerations; Bettman, Luce, and Payne 1998), and a *recommendation for a recipient*, which is based on the recommender's understanding of what is best for the recipient (Feng 2009; Gershoff and Johar 2006; MacGeorge and Van Swol 2018; Packard and Berger 2017). For instance, an expert consumer may buy a more advanced option for themselves but recommend a basic option for novice consumers. Because recipients know that recommendations are tailored to them, we expect that recipients would be more likely to follow a recommendation (vs. conform to an equivalent decision) and less likely to make quality versus personal preference inferences about a recommendation (vs. decision). If so, then our framing effect should attenuate for recommendations, especially when it is salient that the recommender considered the needs of the recipient. We tested this prediction empirically in a study ( $N = 544$ ; reported in [web appendix G](#)). As predicted, we replicated the framing effect on conformity only in the decision condition, not in the recommendation condition. The results suggest that recommendations do not necessarily lead to the same framing effect as decisions. Also, consistent with our conceptualization that recommendations reflect the receiver's needs, conformity was higher overall in the recommendation condition than in the decision condition.

*Existing Beliefs about Product Differentiation.* People may hold certain beliefs about whether products in a particular category are differentiated by quality or personal preference (Spiller and Belogolova 2017), but in many categories (e.g., clothes, cars, and those used in the current research), the type of differentiation in a choice pair is ambiguous and malleable (i.e., it could be perceived as vertical or horizontal). In other cases, the type of differentiation is unequivocal. For instance, a decision between two flavors of sparkling water is obviously a matter of personal preference, whereas a decision between two otherwise



identical water filters that remove 99.9% versus 99% of contaminants is clearly a matter of quality (Spiller and Belogolova 2017). According to our theory, the framing effect on conformity should attenuate in unequivocal cases because the attribution is clear, regardless of the decision frame of other consumers' decisions. Future research is needed to test this hypothesis.

*Normative Social Influence.* The current research provides converging evidence that the effect of another's decision frame on conformity operates through an *informational* route—consumers infer the reasons behind another's decision to make an optimal decision for themselves. It would be interesting, however, to investigate a *normative* route, by which the effect might be moderated by a consumer's need to be liked and accepted by the other person. We believe that the effect of framing on conformity will hold regardless because we replicated the effect when the other person was a friend (study 2), a coworker (study 3b), a salesperson (study 3c), and a stranger (studies 1, 3a, 4, 5, and 6) as well as when the other person was physically present (studies 2, 3b, and 3c) and not present (studies 1, 3a, 4, 5, and 6). It is unclear, however, whether the effect would be weaker or stronger among consumers with a greater need to belong. Future research could manipulate social closeness or the physical presence of another person to examine this question.

### Concluding Remarks

Thanks to technology, we can effortlessly learn about others' decisions, be they choices or rejections. However, the social influence literature previously lacked an understanding of the impact of another's decision frame—a choice versus a rejection—on our own decisions. In the current research, eight studies, including a field study conducted during a livestreaming event hosted by an influencer with over 1.5 million followers, identify a robust decision framing effect on conformity: another consumer's decision is more contagious when framed as a rejection than when framed as a choice. We provide evidence for the underlying mechanism: rejections, relative to choices, increase the likelihood of attributing the decision to product quality rather than personal preference. Our findings not only enrich and bridge the decision framing literature and the social influence literature but also yield clear guidance about how marketers, sales representatives, and influencers can nudge consumers more effectively.

### DATA COLLECTION INFORMATION

Study 1 was conducted by a partner influencer in summer 2022 on Douyin, under the supervision of the third author. Study 2 was conducted by the first author in winter 2020 at the University of Florida. Studies 3–6 were

conducted on Amazon Mechanical Turk or Prolific from spring 2020 to spring 2022. Studies 3a–3c, 4, 5, and the two follow-up studies in the General Discussion were conducted by the first author. The pilot study, the follow-up of study 3c, and study 6 were conducted by the second author. The first author and the second author jointly analyzed the data. All study materials and data are publicly archived at [https://osf.io/8xvcp/?view\\_only=6cfa231d1bac426e9f4567fe06e60ff8](https://osf.io/8xvcp/?view_only=6cfa231d1bac426e9f4567fe06e60ff8).

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