

Similarity as a Double-Edged Sword: The Positive and Negative Effects of Showcasing Similar Previous Winners on Perceived Likelihood of Winning in Sweepstakes

SANDRA LAPORTE
BARBARA BRIERS

This research demonstrates a new effect of consumer similarity in a chance context. Six studies show how similarity with previous winners can positively or negatively affect potential participants' perceived likelihood of winning the subsequent independent sweepstakes draw. Attributions of winning outcomes to a personal cause or randomness change potential participants' expectations regarding the sequence of more or less similar winners. **When personal attribution is prevalent, exposure to more (vs. less) similar winners causes potential participants to feel they are more likely to win and, as a consequence, judge the sweepstakes as more attractive.** This positive effect of similarity is mediated by the expectation of more repetitions of similar winners consistent with **the belief that luck can be transferred among similar people.** **When randomness is presented as the salient cause for winning, though, people's subjective conception of randomness leads them to expect more alternations in the sequence of more and less similar winners, thus prompting a reversal of the similarity effect.** That is, they feel less likely to win when the sweepstakes features a more compared to a less similar winner.

Keywords: similarity, perceived likelihood of winning, sweepstakes, hot hand fallacy, gambler's fallacy, sympathetic magic

Sandra Laporte (sandra.laporte@hec.ca) is an associate professor of marketing at HEC Montréal, 3000 Chemin de la Côte Ste Catherine, Montréal, Québec H3T 2A7, Canada. Barbara Briers (barbara.briers@vlerick.com) is an associate professor of marketing at Vlerick Business School, Vlamingenstraat 83, 3000 Leuven, Belgium. Please address correspondence to Sandra Laporte. This research was supported by the Social Sciences and Humanities Research Council of Canada. This article is based on the first author's dissertation. The authors acknowledge the helpful input of the editor, associate editor, and reviewers. In addition, the authors thank Pierre Chandon, Sandor Czellar, Yany Grégoire, Michael Haenlein, Anne-Kathrin Klesse, Mario Pandelaere, Raphaëlle Pandraud, Christian Pinson, Bernard Pras, Marc Vanhuele, Luk Warlop, Marcel Zeelenberg, and the members of the Tilburg Consumer Club and Tilburg-Rotterdam JDM camps for their comments and suggestions on this article. They are especially grateful to Gilles Laurent for his contributions to this article. Supplementary materials are included in the web appendix accompanying the online version of this article.

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Sweepstakes grant consumers opportunities to win prizes through a random draw and serve as commonly used sales promotions (Kalra and Shi 2010). Through sweepstakes, companies can capture data about participants for direct marketing purposes, so they seek to attract many participants (Blattberg, Kim, and Neslin 2008). In addition, sweepstakes can help the sponsoring company highlight a product or service, boost online or in-store traffic, or build brand image. Accordingly, they are popular tactics, especially for digital marketing: 63% of US consumer packaged goods companies use sweepstakes in their digital shopper marketing programs (Path to Purchase Institute and Shopper Marketing 2013), and for good reasons. For example, "contests and sweepstakes" is one reason why 33.2% of US Internet users would sign up for marketing emails and 40.8% would follow companies on social media (Map Digital 2016).

A common practice is to feature previous winners' photographs and demographic characteristics to advertise a new sweepstakes. For example, McDonald's launched the 2007 iteration of its *Monopoly* promotional game by featuring Charlotte Meade, a retired teacher and the 2006 winner of \$1 million, in its television commercials. In 2008, its advertising campaign showcased several previous winners from different states with various socioeconomic profiles (e.g., married women, students) in in-store promotions, television advertising, and online video clips (Quinton 2008). In 2012 and 2013, the company's dedicated *Monopoly* website invited viewers to "check out previous millionaires." Similarly, to advertise its "Insurance Meets Adventure" Select Sweepstakes, the Canadian insurer Economical Select updates its website with a list of past winners, all prominently featured in a captioned photo with their prize (a car or a travel certificate). By featuring actual previous winners, organizers show the legitimacy of their sweepstakes and hope to attract more participants, though research on sweepstakes has not determined the actual effects of this practice (Goldsmith and Amir 2010; Jiang, Cho, and Adaval 2009; Kalra and Shi 2010; Ward and Hill 1991; Yan and Muthukrishnan 2014).

With this research, we investigate whether featuring similar previous winners increases or decreases the perceived likelihood of winning for prospective participants of subsequent, independent draws. The extant literature documents cases in which similarity with others can influence consumers, but this lottery context offers an original opportunity to study a new similarity effect. We propose that potential participants use their similarity with previous winners as a positive or negative cue of their likelihood to win the next draw. Our results show that the direction of the similarity effect actually depends on whether people attribute winning to a personal cause or randomness. Consistent with the literature on biased perceptions of random sequences (Gilovich, Vallone, and Tversky 1985; Oskarsson et al. 2009; Tversky and Kahneman 1971), the kind of attribution people make about the outcome of a sweepstakes determines if they expect repetitions of similar winners or alternations between more and less similar winners. When the advertisement highlights the previous winners and encourages a personal attribution, potential participants expect a repetition of similar winners such that they perceive that they are more likely to win if they are more (vs. less) similar to the showcased winner. For people who attribute winning to the person, observing similar winners leads them to believe that similar others will be imbued with the same lucky outcomes and thus expect a streak of similar winners. This extends the literature on the similarity law of sympathetic magic (Nemeroff and Rozin 2000; Rozin and Nemeroff 1990), which describes how people often regard luck as transferrable between similar objects. In contrast, when the advertisement makes the randomness of sweepstakes more salient, this similarity effect

reverses. Because of a common subjective view of randomness, potential sweepstakes participants expect more alternations in the sequence of more and less similar winners (i.e., a more similar winner will be followed by a less similar one). Consequently, a potential participant will feel he or she is less likely to win the next draw if he or she is more (vs. less) similar to the featured winner. In sum, our results show that similarity can pay off and mitigate pessimism about the perceived likelihood of winning lotteries (Lin, Lin, and Raghubir 2004; Quinton 2008), but that it also can backfire in certain conditions. Most prior research emphasizes the positive effects of similarity in social settings, without noting its possible negative impact. This article focuses on consumer sweepstakes, but the findings are also relevant to other contexts in which outcomes might be attributed to either a personal cause or randomness, such as gambling at a slot machine or participating in a radio or TV call-in contest.

In the next section, we review the literature on the effects of interpersonal similarity, with a particular focus on research that hints at a link between similarity and perceived risk or likelihood estimates. We then introduce the expectations of repetitions or alternations of random series of winning outcomes in a conceptual framework that leads to the formulation of the hypotheses. The hypotheses are tested with six studies that feature different similarity operationalizations. The first four studies focus on showing the process explaining the positive effect of similarity on perceived likelihood of winning and its downstream consequence for sweepstakes attractiveness in the default context (personal attribution, randomness not salient). The final two studies show how priming randomness reverses the similarity effect and decreases perceived likelihood of winning and sweepstakes' attractiveness. Finally, we propose some potential boundary conditions and directions for future research.

CONCEPTUAL BACKGROUND

Perceived Likelihood of Winning in Sweepstakes and Lotteries

The perceived likelihood of winning is a strong antecedent of participation in sweepstakes and lotteries (Kalra and Shi 2010; Ward and Hill 1991; Yan and Muthukrishnan 2014). The belief that the chances of winning are very low is a major hurdle to sweepstakes participation. In a survey of 74 students in Canada, 84% declared that they participated in promotional lotteries less than five times a year. When we asked for their three main reasons for not participating, 78.69% mentioned the low perceived probability of winning (unwillingness to communicate personal information and lack of time were the two other main reasons). Examples of answers included, "I don't think I can win," "I never win," "I am not lucky," or "I don't know anybody

who's won anything in this kind of drawing." Previous research similarly shows that people usually think that they are less likely than others to win the lottery (Lin et al. 2004). When we asked all respondents, irrespective of their participation frequency, to select three main criteria (from a list of eight) they would consider before deciding to enter a sweepstakes, 60% of respondents indicated the probability of winning.

Indeed, advertisements for sweepstakes generally do not put forward participants' probability of winning explicitly,¹ and little is known about the cues that potential participants use to judge their likelihood of winning, beyond the number of prizes available (Kalra and Shi 2010; Laporte and Laurent 2015; Yan and Muthukrishnan 2014) or their loyalty status (Reczek, Haws, and Summers 2014). The common practice of featuring previous winners suggests that sweepstakes organizers believe that this tactic can counteract consumer cynicism about their likelihood of winning (Quinton 2008). In the context of comparative pessimism about winning a raffle, Menon, Kyung, and Agrawal (2009) suggest a link between similarity and likelihood estimates; they show that when students are primed with similarities to an average student at school, their comparative pessimism is less than if they are primed with differences or not primed at all (see also Raghubir and Menon 1998). Prior studies have thus focused on the effect of similarity with a comparison target on comparative optimism or pessimism; we take this question one step further by investigating the effect of observing more or less similar previous winners on potential participants' expectations about sweepstakes outcomes.

Personal Attribution and the Expectation of Streaks

Contrary to contests, the law requires that winners of sweepstakes be determined by a purely random drawing mechanism and that no specific skill is required to win. Sweepstakes thus offer a unique setting in which prospective participants can consider past more or less similar winners as a succession of random outcomes. Behavioral research shows that people's judgments and underlying beliefs about such sequences depart systematically from the actual patterns observed. The first bias is the hot hand fallacy, which initially referred to a biased belief about the repetition of hits and misses in basketball (Gilovich et al. 1985). Basketball fans believe that a player has higher chances of scoring after a basket than after a miss—despite objective statistical evidence showing that each attempt is actually independent from the outcome of the previous

attempt. In addition to sports domains (Alter and Oppenheimer 2006), this bias also emerges in laboratory and field studies (Ayton and Fischer 2004). For instance, people have been shown to increase their bets in the casino if their previous gamble has been successful (Sundali and Croson 2006). In other words, this bias describes how people tend to expect a repetition of the last observed outcome.

The hot hand fallacy has been observed only in the intrapersonal context, where the very same person is expected to win several times in a row. The question emerges if this bias can also apply to an interpersonal domain. Then, people would expect a streak of similar winners such that participants more (vs. less) similar to the featured winners are more likely to win next. This idea that similar people could be imbued with the same lucky outcome is consistent with the similarity law of sympathetic magic, which describes how people sometimes regard luck as transferrable between similar objects (Wohl and Enzle 2002). Sympathetic magic (Frazer 1890/1935; Nemeroff and Rozin 2000; Rozin and Nemeroff 1990) refers to mystical or supernatural forces that people sometimes invoke to make sense of, predict, or gain control over their environment. The similarity law refers to the belief that objects that appear similar on the surface possess the same underlying properties; that is, superficial similarity can reflect deeper similarities (Nemeroff and Rozin 2000; Rozin and Nemeroff 1990). The literature on sympathetic magic describes how this belief underlies the practice of the voodoo doll, where the actual person is believed to suffer the same pain that is inflicted on the look-alike doll. This belief has also been documented in a gambling context: bettors tend to look at an item featuring the same number they have bet on, in an apparent attempt to transfer their personal luck through number similarity (Wohl and Enzle 2002). This previous research also documents the boundary condition that luck must be perceived as a possession of the person, not a situational characteristic, for people to believe that it can be deployed through the laws of sympathetic magic (Teed et al. 2012; Wohl and Enzle 2002). Also in the context of the hot hand fallacy, personal attribution has been shown to be a necessary condition to spur people's beliefs in lucky streaks. The expectation of repetitions arises only when people attribute the sequence to a personal cause (Ayton and Fischer 2004), because the underlying mechanism generating the sequence appears intentional and controllable rather than random and uncontrollable (for a review, see Oskarsson et al. 2009).

Promotional material that showcases lucky winners and their personal information likely facilitates and encourages such personal attributions by relegating the random nature of the draw to the background. That is, according to research on attention and causal attribution, when attention is drawn to any social identity—self, other, or a group—that entity also tends to receive attributions of causation and

¹ The law in many countries requires that the sweepstakes organizers disclose the (actual or estimated) odds of winning each prize. However, this information is often available only within the sweepstakes' fine-print official rules, which prospective participants are unlikely to read when making a quick participation decision.

responsibility (Lassiter et al. 2002; McArthur and Post 1977; Taylor and Fiske 1978). Accordingly, research has shown that a mere shift of the attention focus could affect people's expectation about random sequences: people observing someone else tossing a coin expect the most recent outcome to repeat when they focus their attention on the person, but they expect alternating outcomes when they focus on the coin (Roney and Trick 2009). In a similar vein, we expect that showcasing previous winners in a sweepstakes advertisement will encourage a personal attribution. Subsequently, and in line with the hot hand fallacy and sympathetic magic, we put forward that

H1: Under personal attribution, potential participants will expect a streak of similar winners such that they perceive that they are more likely to win the next draw if they are more, compared to less, similar to the featured winners.

Subjective Randomness and the Expectation of Alternations

If the typical advertisement featuring previous winners leads potential participants to expect a repetition of similar winners because of personal attribution, we want to investigate what happens if this default attribution is counteracted when the random aspects of the draw are made salient. People's subjective conception of randomness is biased; they expect more alternations than exist in truly random series (Bar-Hillel and Wagenaar 1991; Falk and Konold 1997). In a sequence of coin tosses, each of which comes up heads (H) or tails (T), people tend to expect more alternations between heads and tails, and they judge a sequence with few alternations (e.g., HHHTTT) as less likely than a sequence with more of them (e.g., HTHTTH). The more people perceive the cause of a binary sequence as random, the more likely they are to expect that one binary outcome will be followed by its opposite, rather than a repeated outcome (Tversky and Kahneman 1971), which is consistent with the gambler's fallacy (Boynton 2003; Burns and Corpus 2004; Oskarsson et al. 2009; Tyszka et al. 2008). This bias influences actual betting behaviors in lotteries. For example, in an analysis of a Maryland daily numbers game, Clotfelter and Cook (1993) found that the amount of money bet on a given number fell sharply immediately after that number was drawn, then recovered gradually to its former level over the course of several months (for a review of the gambler's fallacy, see Oskarsson et al. 2009).

In the context of interpersonal similarity in sweepstakes, the more a potential participant perceives the drawing procedure to be random, the more likely he or she is to expect alternations whereby a more similar winner will be followed by a less similar winner rather than another similar winner. Concretely, if a woman won last, prospective participants might expect a man to win next. Thus, for the next draw, men should feel they are more likely to win

than women. As opposed to the situations in which randomness is not salient, more (vs. less) similar previous winners would then represent negative cues for potential participants when judging their own likelihood of winning. Specifically, we hypothesize that

H2: When randomness is highlighted, similarity with the featured winner decreases perceived likelihood of winning and sweepstakes attractiveness.

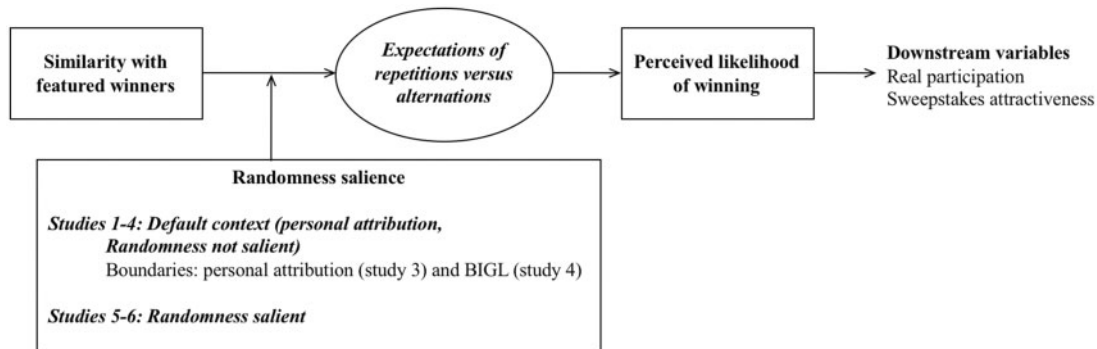
OVERVIEW OF STUDIES

To provide evidence for the predicted bidirectional effects of similar previous winners on perceived likelihood of winning, we conducted six studies. As summarized in figure 1, the first four studies focus on showing the process behind the positive effect of similarity on perceived likelihood of winning and its downstream consequence for sweepstakes attractiveness in the default context (randomness not salient). By sweepstakes attractiveness, we refer to a general measure of consumers' attitude and behavioral intention. Study 1 details the effect of featuring a similar winner on actual participation rates with a large-scale field study. Study 2 shows the mediation through the expectation of repetitions, while studies 3 and 4 adopt a moderation approach and show that this positive similarity effect is conditional on personal attribution, whether it is experimentally manipulated (study 3) or stems from an individual belief in luck as a personal characteristic (study 4). The final two studies investigate the reversal of the effect when randomness is made salient. Salient randomness perceptions drive people to expect the next winner to be less similar to the previous one (study 5). Accordingly, they perceive that they are more likely to win and judge the sweepstakes as more attractive when a less (vs. more) similar winner is showcased (study 6).

To frame these studies, we consider the information that sweepstakes advertisements typically make available about previous winners so that prospective participants may come to realize that they share some incidental attribute (e.g., same first name) or social identity (e.g., gender, age, ethnic origin, occupation) with the showcased winner. According to social perception theories, in low-information contexts, people rely on such salient attributes to allocate others to social categories (Brewer and Harasty-Feinstein 1999; Fiske, Lin, and Neuberg 1999), and this category membership (e.g., gender, ethnicity) then influences holistic similarity judgments (Liviatan, Trope, and Liberman 2008; Mussweiler 2003; Tajfel and Turner 1986). The proposed mechanism should not be restricted to any certain type of similarity (as long as it is easily observable by participants processing the advertisement), so our studies feature different manipulations of similarity with the previous winner, including gender to test the robustness of the effect. With a gender manipulation, we avoid

FIGURE 1

STUDIES OVERVIEW



conceptual concerns about the distinctiveness of similarity because gender does not entail being part of a minority or majority group (Aaker, Brumbaugh, and Grier 2000). Accordingly, it has been used in the literature on social influence and personal selling (Dwyer, Orlando, and Shepherd 1998; Evans 1963; Lichtenhal and Tellefsen 2001; Moore and McFerran 2017; Shang, Reed, and Croson 2008). Please note that people's actual similarity perceptions, but also the outcomes of our experimental manipulations, are based on *relative* judgments on a continuous scale; that is, people feel more or less similar to other people. We thus start from the premise that a woman will feel more similar to a female winner (higher similarity condition) than to a male winner (lower similarity condition); however, this perception of similarity could be further enhanced if the subjects shared even more attributes (e.g., eye color, hair style).

Furthermore, each of these studies considers alternative explanations. The literature on social influence reveals that similarity, even if incidental, can encourage people to respond positively to a request (Burger et al. 2004; Finch and Cialdini 1989; Jiang et al. 2010; Miller, Downs, and Prentice 1998; Pandelaere et al. 2010). Different mechanisms seek to explain why incidental similarity with a requester increases compliance, including liking (Byrne 1971; Cialdini and Goldstein 2004; Sundie et al. 2012), self-esteem (Brendl et al. 2005), or the need for social connectedness (Jiang et al. 2010). For example, incidental similarity might exert an effect by enhancing self-esteem because of the positive associations people hold about themselves and objects related to the self (Brendl et al. 2005). The need for social connectedness explanation also has been documented in an interpersonal sales context, where incidental similarity with a salesperson improves customer attitudes by increasing feelings of social connectedness (Jiang et al. 2010). We control for these alternative

mechanisms in our studies; we will refer to it only briefly in the methodology and results parts of the particular studies, but all details will be provided in the web appendix.

STUDIES 1–4: THE POSITIVE EFFECT OF SIMILARITY ON PERCEIVED LIKELIHOOD OF WINNING

In four studies, we investigate the main effect of similarity on perceived likelihood of winning and the attractiveness of sweepstakes when the advertisement prominently features the previous winners. Study 1 tests the effect of first name similarity (i.e., incidental similarity) on actual participation rates in a large field study; study 2 manipulates similarity based on gender in a lab setting to show the effect on perceived likelihood. It tests the mediation through the expectation of a streak of similar winners. Studies 3 and 4 delineate the mechanism further by showing that the attribution to a personal cause is necessary to observe the positive effect of similarity on perceived likelihood of winning.

Study 1

With study 1, we test for an effect of similarity on participation in sweepstakes in a real-life setting with a diverse population. In cooperation with a European firm that designs online sweepstakes for direct marketing purposes, we set up an experiment in which we could observe actual participation rates, depending on similarity with the show-cased winner. We manipulated similarity by using the prior winner's first name, a previously used tactic to manipulate incidental similarity (Burger et al. 2004; Jiang et al. 2010) that does not provide any logically relevant information about the previous winner that could inform potential participants' decisions.

Procedure. Emails sent to 734,099 people in France invited them to take part in a survey about mobile Internet services for a chance to win an iPad. We manipulated similarity with the previous winner by mentioning or not mentioning the first name of the actual previous winner, Philippe (for legal reasons, the company would not use other, fictitious first names). Two versions of the email differed in their objects and introductions. The “Philippe” condition encouraged recipients to “Do as Philippe did!” and then specified within the email text: “Congratulations to Philippe who won an iPhone during our last survey. Will you be the next winner?” The control condition gave no specific information about the last winner; it only invited recipients to “Be our next winner!” and added, “Congratulations to the winner of an iPhone during our last survey. Will you be the next winner?”

The study was a 2×2 between-subjects design. The two versions of the email were sent randomly to two different populations: people whose first name was Philippe ($n = 21,077$) and people with other first names ($n = 713,022$). We then compared participation rates in the survey (see figure 2), depending on the email version and population.

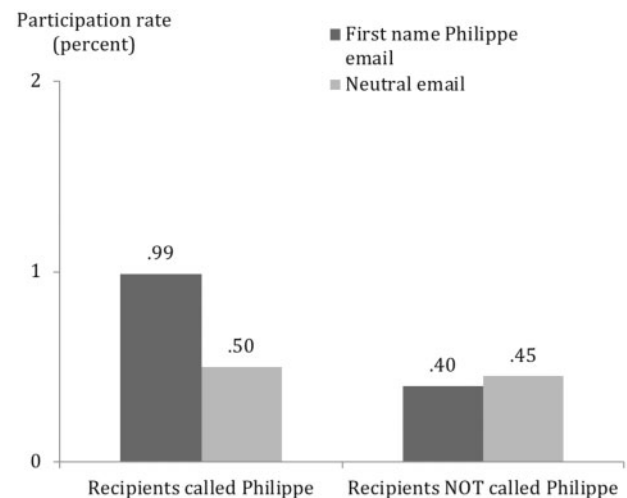
Results. As represented in figure 2, people named Philippe participated almost twice as frequently when they received the “Philippe” email (participation rate = .99%) than when they received the neutral email with no indication of the previous winner’s first name (participation rate = .50%; $\chi^2(1) = 16.74$, $p = 4.3 \times 10^{-5}$, Cramer’s $V = .028$). In contrast, people whose name was not Philippe participated slightly less when they received the “Philippe” email (participation rate = .40%) rather than the email that did not mention the previous winner’s name (participation rate = .45%; $\chi^2(1) = 12.89$, $p = 3.3 \times 10^{-4}$, Cramer’s $V = .004$).

Discussion. Showcasing an (incidentally) similar previous winner doubles the participation rate compared to an anonymous condition; showcasing a less similar previous winner slightly decreases this rate. Furthermore, when the two populations that received the “Philippe” email are compared, people with the same name as the showcased winner participated twice as much as people with a different name. The modesty of the resulting participation rate should be noted, though, since it is just below 1%.

This study also suffers several limitations. First, it cannot specify the mechanism underlying the similarity effect. For example, instead of an explanation based on perceived likelihood of winning, the observed effect could arise because people named Philippe are more likely to pay attention to an email that features their first name, which then translates into higher participation rates. Second, we could not manipulate the name of the single featured winner, because we had to use the name of the actual winner. There

FIGURE 2

SWEEPSTAKES PARTICIPATION RATES AS A FUNCTION OF FIRST NAME AND EMAIL VERSION



might be something specific about people named Philippe, such as their average age (Berger et al. 2012), that would exert a confounding effect on participation. Third, we could test only similar versus no name (for persons named Philippe) or nonsimilar versus no name (for persons not named Philippe) conditions; we could not test a similar name versus a nonsimilar name. In the lab setting for study 2, we therefore test for the impact of similarity on perceived likelihood of winning when participants are randomly assigned to a more or less similar winner condition.

Study 2

Beyond replicating study 1’s results in a controlled experiment, study 2 also sets out to provide the first evidence of the mechanism that explains how similarity with previous winners increases sweepstakes attractiveness. Specifically, the study procedure measures people’s perceived likelihood of winning after they are exposed to a sweepstakes advertisement that showcases a more or less similar winner. Moreover, we test whether this effect is mediated by people’s expectations of repetitions of similar winners. This study also controls for alternative explanations related to liking (Byrne 1971; Cialdini and Goldstein 2004) and self-esteem (Brendl et al. 2005).

Procedure. We recruited 93 participants (18 to 35 years, Caucasian) from the Qualtrics Panel. Participation was restricted to Caucasian people between 18 and 35 so that the participants randomly assigned to the gender similarity condition had the same ethnicity and there was not a large age difference with the featured

winner. The instructions informed participants that they would be asked a series of questions about their perception of a monthly sweepstakes organized by a restaurant where they sometimes ate. The advertisement (see the web appendix) featured either two women or two men, with their pictures and names (“David and Matt” or “Anna and Judy”), as the two previous winners. Participants in the study were randomly assigned to a more similar or less similar condition, depending on their gender.

In order to elicit their expectations regarding the sweepstakes’ next outcome, they were presented sequentially with a series of five men’s portraits and five women’s portraits in a random order. For each individual, they had to indicate very quickly (in less than 3 seconds) on a dichotomous scale whether the person would be either more or less likely to win the next draw. This measure is in line with research on sympathetic magic and superstition, which explains how these beliefs can be better elicited by questions that encourage emotional and experiential processing rather than cognitive and deliberate processing, such as decisions under time pressure (Kramer and Block 2008, 2011; Nemeroff 1995; Nemeroff, Brinkman, and Woodward 1994; Risen 2016; Svedholm and Lindeman 2013).

Then the instructions asked the participants to imagine that they had entered the draw. To measure their perceived likelihood of winning, they responded to two questions: “How likely are you to win this sweepstakes?” and “How lucky do you feel regarding winning this sweepstakes?” (nine-point scales, 1 = “Not at all lucky/likely to win” to 9 = “Very lucky/likely to win”).

Three items served as similarity manipulation checks, such as “To what extent do you think David and Matt [Anna and Judy] are like you?” or “How similar to you are David and Matt [Anna and Judy]?” We also measured how much the respondents liked the featured winners (1 = “To a very small extent” to 7 = “To a very large extent”). Finally, participants indicated their self-esteem on three items adopted from Heatherton and Polivy (1991) (see the web appendix).

Results. In all computerized studies reported in this article, we consistently removed participants for whom study duration deviates exceptionally (more than 2.5 SD) from the mean study duration in the sample (Meyvis and van Osselaer 2018). We removed data from three respondents in study 2. We first checked that the similarity manipulation affected participants’ perceived similarity with the featured winners as expected. The average of the three similarity items formed a composite measure of perceived similarity (Cronbach’s $\alpha = .94$). As intended, participants in the similar gender condition perceived the previous winners as more similar than did participants in the nonsimilar gender condition ($M_{\text{similar gender}} = 4.94$, $SD = 2.63$; $M_{\text{nonsimilar gender}} = 3.42$, $SD = 2.43$; $t(88) = 2.84$, $p < .01$).

To grasp people’s expectations about the sweepstakes’ next outcome, we respectively summed the number of women and men picked as more likely to win by each respondent. This resulted in two continuous measures from 0 (the participant checked “less likely to win” for all five men/women) to 5 (the participant checked “more likely to win” for all five men/women). Depending on the gender of the showcased winners in the experimental treatment, these two measures were recoded into measures of expected repetition versus alternation. For example, if a respondent was exposed to female winners, the sum of women/men would be coded as a measure of expected repetition/alternation. A paired t -test indicated that, overall, respondents expected a repetition rather than an alternation, meaning they picked more people who had the same gender as the featured winners ($M_{\text{repetition}} = 3.03$, $SD = 1.39$) than people who had the opposite gender ($M_{\text{alternation}} = 2.58$, $SD = 1.57$; $t(89) = 2.11$, $p = .04$).

The mean of the two items measuring perceived likelihood of winning the sweepstakes (Pearson’s $r = .73$, $p < .001$) was used as a composite measure. Consistent with our hypothesis, participants exposed to winners with a similar gender felt marginally more likely to win than did participants exposed to winners with a nonsimilar gender ($M_{\text{similar gender}} = 5.34$, $SD = 2.70$; $M_{\text{nonsimilar gender}} = 4.43$, $SD = 2.54$; $t(88) = 1.64$, $p = .10$). Using model 4 of Hayes (2013), we tested if the effect of similarity with the featured winners on perceived likelihood of winning was mediated by participants’ expectations that similar-gender individuals are more likely to win next. The sum of similar-gender individuals picked as more likely to win (from 0 to 5) served as a mediator. Similarity with the featured winners had a significant positive effect on the expectation that similar-gender individuals are more likely to win next (a path, β (standardized coefficient) = .35, $SE = .15$, $t = 2.28$, $p < .05$, 95% CI [.05; .66]). When we controlled for similarity (c’ path, $\beta = .56$, $SE = .18$, $t = .94$, NS, 95% CI [−.29; .80]), these expectations positively impacted the perceived likelihood of winning (b path, $\beta = .56$, $SE = .18$, $t = 3.08$, $p < .01$, 95% CI [.20; .93]). The bootstrap analysis (5,000 samples) showed a significant mediation (a \times b indirect effect = .20, bootstrap $SE = .10$, bias-corrected bootstrap CI [.04; .45]).

Regarding the alternative explanations, similarity had no significant effect on liking of the winners, and people experiencing lower self-esteem were not more sensitive to similarity with the winners than were people with a higher self-esteem (see the web appendix for the detailed analysis).

Discussion. Study 2 confirms hypothesis 1 and provides evidence that featuring similar lucky winners in a sweepstakes advertisement makes potential participants believe they are more likely to win the upcoming draw. This effect is mediated by people’s expectations regarding the outcome of the next draw. When the advertisement draws

attention only to the previous winners, prospective participants tend to expect a repetition of similar winners. This expectation mediates the positive effect of similarity on their perceived likelihood of winning: they feel they are more likely to win if they are more (vs. less) similar to the featured previous winners.

The next two studies document the mechanism that leads to positive similarity effects on expectations of winning. We have argued that the characteristics of the common advertisement encourage a personal attribution by showcasing the previous winners with personal details without highlighting the randomness aspects of the promotion. Studies 3 and 4 demonstrate that personal attribution is indeed necessary for observers to believe that similarity can be a vehicle for higher likelihood of winning.

Study 3

In study 3, we manipulate attribution tendencies directly to determine whether personal attribution is necessary for people to expect a streak of similar winners. Consistent with studies that show attribution tendencies can be primed (Higgins 1996; Neumann 2000; Williams 1993), we prime personal or situational attributions in an unrelated task before the study participants are exposed to the sweepstakes. In addition, this study sets out to capture people's expectation of a repetition of similar winners with a different measure than in study 2. To capture people's perception that luck can benefit similar others and thus can lead to expectations of lucky streaks when personal attribution is activated, in line with the law of similarity and the hot hand fallacy, we measure participants' expectations about their degree of similarity with future winners.

This study also pursues several other goals. Compared with the two rather realistic manipulations of similarity in studies 1 and 2 (first name and gender), here we use a more controlled manipulation. We use the same winners in both the higher- and lower-similarity conditions but ask the participants to focus on either their similarities or their dissimilarities with the featured previous winners (Menon et al. 2009). With this manipulation, we can better control for variations in liking between the higher- and lower-similarity conditions compared to the manipulation in which different winners are featured. This also reduces the possibility that the respondents make different inferences about the average identity of the sweepstakes entrants. That is, featuring different winners in the higher- and lower-similarity conditions creates the possibility that potential participants make different deductions about the "average" participant or typical target of the organizer, which could lead them to infer that they are more likely to win in the higher-similarity condition than in the lower-similarity condition.

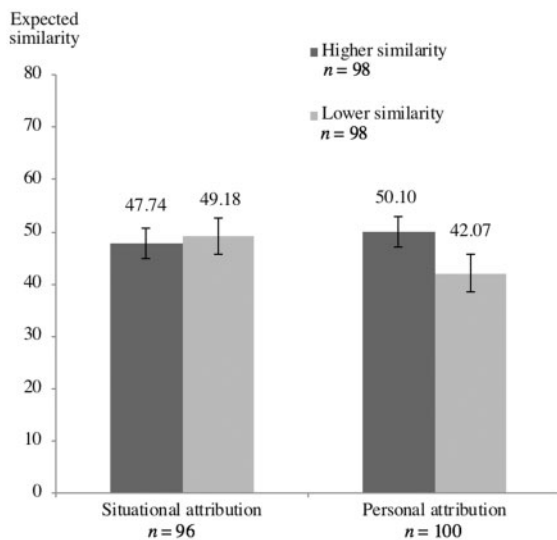
Procedure. Two hundred three (203) students at Tilburg University participated in the study for course

credit. The study took place in a behavioral lab and used a 2 (similarity: focusing on similarity vs. dissimilarity with previous winners) \times 2 (attribution: personal vs. situational) between-subjects design. To introduce the attribution manipulation, the cover story explained that the researchers were interested in how students reflect on their goals or the things they would like to accomplish. They were then instructed to think about three goals (getting a job interview, earning a university degree, obtaining a fit, muscular body). Participants in the personal attribution condition had to indicate for each of these goals the most important personal determinant (something the person could do) to reach the goal. In the situational attribution condition, they had to indicate the most important external cause (something they could not do) (for a comparable procedure, see Kong and Shen 2011). After finishing this task, participants read that the lab was organizing its yearly sweepstakes to reward participation, and every participant was automatically entered in a random draw for a €50 Amazon.com gift card. The introduction explained that to optimize the sweepstakes, the researchers were interested in students' opinions. Next, the advertisement for the sweepstakes showcased two previous winners, a boy named Thomas and a girl named Laura, along with their pictures. Respondents assigned to the higher-similarity condition were asked to describe two things they had in common with these two previous winners; respondents in the lower-similarity condition were asked to describe two things that were not common between themselves and the winners. Finally, to determine whether respondents believed that similar others were more likely to win next, we asked them to answer two questions about their expectation of winners: "To what extent do you think that the next winner of this sweepstakes will be (dis)similar to you?" and "To what extent do you think that the average winner of this yearly sweepstakes will be (dis)similar to you?" using 100-point sliders (0 = "Rather not similar" to 100 = "Rather similar").

Results. We removed the data from seven participants that represented outliers on the study duration. We took the mean of the two items measuring the expected similarity of winners (Pearson's $r = .84$, $p < .01$) and conducted an ANOVA with similarity and attribution as fixed factors, as well as their interaction. The two main effects were not significant (both $F_s < 2$), but the interaction of similarity and attribution was marginally significant ($F(1, 192) = 2.83$, $p < .10$). The planned contrasts revealed a pattern consistent with our expectations, as illustrated in figure 3. When personal attribution was primed, similarity had a positive, significant effect on respondents' expectations that the next winners would be similar to them ($M_{\text{higher-similarity}} = 50.10$, $SD = 19.65$; $M_{\text{lower-similarity}} = 42.07$, $SD = 20.03$; $F(1, 192) = 4.15$, $p < .05$). This effect disappeared when a situational attribution was primed ($M_{\text{higher-similarity}} = 47.74$,

FIGURE 3

EXPECTED SIMILARITY OF NEXT WINNERS AS A FUNCTION OF SIMILARITY AND ATTRIBUTION



SD = 18.74; $M_{\text{lower-similarity}} = 49.18$, SD = 20.39; $F(1, 192) = .13$, NS).

Discussion. Study 3 thus provides evidence that personal attribution is needed for the effect of similarity with previous winners on people's expectations about the next winners. Participants expected the next winners to resemble them and the featured winners, but only when they were primed to attribute winning to a personal cause.

The similarity manipulation also sheds light on the relativity of the similarity judgment mentioned earlier in the overview of studies. The interaction seems to be driven by a change in the lower-similarity condition rather than in the higher-similarity condition. According to previous research, when people engage in social comparison, similarity testing—rather than dissimilarity testing—is the default prediction. That is, people tend to focus on similarities when they compare themselves to another person (Mussweiler 2003). The task in the lower-similarity condition contradicted this natural tendency to look for similarities, because it asked participants to identify *differences* between the winners and themselves. In this sense, the lower-similarity manipulation may have been relatively stronger than its higher-similarity (i.e., more natural) counterpart.

The expectation that any similar person will be luckier is consistent with the hypothesized mechanism that luck is transferrable to similar people when winning is attributed to a personal cause. The similarity manipulation, applied to identical winners in both the higher- and lower-similarity conditions, also provides better evidence that pure

similarity is driving the effect. Finally, this similarity manipulation limits the explanation suggesting that people rely on their inferences about “typical” sweepstakes participants.

Study 4

Study 3 manipulated the attribution locus in order to show that personal attribution is necessary for people to expect a repetition of similar winners. In study 4, we build on individual differences to provide further evidence for this boundary role. Some people think of luck as a personal and internal source of control over events; others regard it as situational and external to the person (Darke and Freedman 1997b; Teed et al. 2012; Wagenaar and Keren 1988; Wohl and Enzle 2002). According to our conceptual framework, these conflicting views should create a boundary condition for the effect of similarity on the expectation of streaks such that only people who view luck as a personal characteristic should perceive that they are more likely to win after a similar winner.

Study 4 also tests the effect of similarity with featured winners on potential participants' responses to a realistic situation. That is, the respondents receive invitations to participate in a real sweepstakes, featuring more or less similar previous winners, and know that they have to answer a time-consuming survey to enter a draw for a chance to win a gift card. Finally, this study uses ethnicity to manipulate similarity and tests the generalizability of the results. This managerially relevant manipulation acknowledges that in many cases, potential participants can readily observe the ethnic background of a winner showcased by a picture in an advertisement for a sweepstakes. The Caucasian study participants (Amazon Mechanical Turk workers located in the United States, a nondistinctive ethnic group) therefore were exposed to either Caucasian winners (higher-similarity condition) or Asian winners (lower-similarity condition). The reactions of minority consumers to targeted ads with a spokesperson representing their ethnic group is not homogeneous and varies with their level of integration into the host society (Antioco et al. 2012; Deshpandé and Stayman 1994) or their generation (Lenoir et al. 2013). In contrast, nondistinctive ethnic groups usually respond equally favorably to an ad portraying a distinctive or a nondistinctive model (Aaker et al. 2000; Appiah 2004; Brumbaugh 2002).

Study 4 also deals with several alternative explanations for the effect of similarity on sweepstakes participation. First, presenting less similar previous winners might lead people to infer that more people of various profiles are likely to participate, so that these prospective participants might expect a greater number of entrants in the lower-similarity condition than in the higher-similarity condition, which may lead to higher sweepstakes attractiveness in the higher-similarity condition. We measured the estimations

of the number of entrants in order to test for this explanation. Second, we measured the individual need for connectedness (Jiang et al. 2010) to determine its potential moderation of the effect of similarity on participation. Third, we again checked that the similarity manipulation did not affect liking or self-esteem.

Procedure. One hundred sixty-four (164) Caucasian respondents were recruited on Amazon Mechanical Turk (MTurk) via the qualification approach² (Chandler, Mueller and Paolacci 2014; Wessling, Huber, and Netzer 2017) to prescreen the participants on their Caucasian ethnicity. They received US\$.5 for their participation. The main study started with a series of questions assessing personality traits. Respondents first answered eight Likert-type items on the need for connectedness scale (Lee and Robbins 1995; see the web appendix). All respondents also answered the general belief-in-luck subscale (four items) of the Belief In Good Luck (BIGL) scale (Darke and Freedman 1997b), which was developed to measure respondents' belief that luck is a personal or internal quality. The four items are: "I believe in luck," "Luck plays an important role in everyone's life," "Some people are consistently lucky, and others are unlucky," and "There is such a thing as luck that favors some people but not others."

Next, a screen message informed respondents that to thank them for their participation in the study (in addition to the payment they would receive), they could enter a sweepstakes organized by a student association every month for a chance to win a \$5 Amazon.com gift card. To enter the draw, respondents had to answer a 10 minute survey about their movie tastes and habits. They were told that one winner would be drawn randomly from all the participants who completed the movie survey. We randomly assigned the respondents to the similarity manipulation conditions, with (1) two Caucasian winners or (2) two Asian winners. The provided advertisement then featured the pictures of the winners (one man and one woman, either Caucasian or Asian) and the following message: "The two last winners were Judy and Nick [Kim and Dai]; Answer the survey about your movie tastes and maybe win a \$5 Amazon.com Gift Card like Judy and Nick [Kim and Dai]!" (see the web appendix).

Respondents had to indicate explicitly if they wanted to enter the sweepstakes for a chance to win the \$5 gift card. We made clear that their participation and responses to the movie survey were not compulsory for them to receive payment as respondents in the study. Irrespective of their

decision to participate, the instructions then informed them that they would answer some questions about their perception of the sweepstakes. They first answered a similarity check ("To what extent do you think the showcased winners are like you?"), followed by questions pertaining to the possible alternative explanations: liking ("Overall, how much do you like the showcased winners?"), self-esteem (three items, Heatherton and Polivy 1991), and inferences about the number of participants in the sweepstakes (open-ended question: "Please estimate how many participants will sign up for this lottery"). To confirm the assumption that individual differences in belief in luck correlated with the causal attribution of winning the sweepstakes, we also asked the respondents about the extent to which they perceived winning the sweepstakes as random (nine-point scale, 1 = "Not random at all" to 9 = "Completely random"). We hypothesized that people with higher general beliefs in luck would perceive winning the sweepstakes as less random.

We observed real participation as a dependent variable, so we also measured participants' individual propensity to participate in promotional lotteries in general with a six-item sweepstakes proneness scale (e.g., "I feel compelled to respond to sweepstakes offers"; Lichtenstein, Netemeyer, and Burton 1995). Finally, respondents were redirected to the movie survey or the next study, depending on their decision about whether or not to participate in the sweepstakes. The movie survey addressed their favorite movie genre, personal ranking of the three best movies they saw during the past year, and favorite actors and actresses. Three weeks later, one participant was randomly drawn as the winner and received an Amazon.com gift card by email.

Results. We removed the data from three extreme values for study duration. The similarity manipulation based on ethnicity worked as expected. Participants perceived the featured winners as more similar when the winners were Caucasian as opposed to Asian ($M_{\text{similar ethnicity}} = 3.38$, $SD = 1.65$; $M_{\text{nonsimilar ethnicity}} = 2.82$, $SD = 1.39$, $t(157) = 2.28$, $p < .05$).

The factorial scores of the single component extracted from the principal component analysis served as an individual measure of general belief in luck (83.29% of variance explained, $\alpha = .93$). As expected, this measure correlated negatively with the perceived randomness of winning (Pearson's $r = -.25$, $p < .01$). The more a person believes in luck, the less she or he perceives the winning outcome as random. We also conducted a principal component analysis of the six items of sweepstakes proneness, and the single factor extracted explained 78.19% of the variance ($\alpha = .94$).

Real Participation. A total of 43.5% of the participants decided to enter the sweepstakes ($M_{\text{similar ethnicity}} = 46.3\%$, $M_{\text{nonsimilar ethnicity}} = 40.7\%$). We conducted a binary logistic regression for the decision to participate, with similarity and the belief-in-luck factorial scores as the independent

2 In this approach, participants had to participate in a first study asking them several questions about their demographics, including one about their ethnicity. Only those who described their ethnicity as Caucasian were granted a qualification allowing them to participate in the main study. This qualification criterion was not communicated, so the participants did not know that they were screened according to their ethnicity.

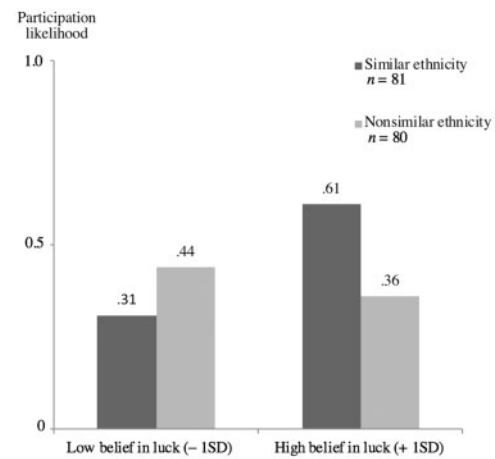
variables, together with their two-way interaction. Sweepstakes proneness was also included as a covariate. People with a higher sweepstakes proneness were more likely to participate in the sweepstakes ($\beta = .50$, Wald $\chi^2(1) = 7.77$, $p < .01$). Similarity had no main effect on participation ($\beta = .20$, Wald $\chi^2(1) = .353$, NS), nor did belief in luck ($\beta = -.17$, Wald $\chi^2(1) = .54$, NS). However, consistent with the theorizing about the boundary role of belief in luck as a personal quality, the interaction between similarity and belief in luck was significant (Wald $\chi^2(1) = 4.95$, $p < .05$). Belief in luck had a significant, positive effect on participation in the higher-similarity condition ($\beta = 1.10$, Wald $\chi^2(1) = 4.52$, $p < .05$) but not in the lower-similarity condition ($p > .9$).³ A spotlight analysis (Fitzsimons 2008; Hayes and Matthes 2009) at one standard deviation above the mean of belief in luck showed a significant difference: respondents believing in luck were more likely to participate in the higher-similarity condition than in the lower-similarity condition ($\beta = .49$, Wald $\chi^2(1) = 4.16$, $p < .05$; $\text{prob}_{\text{similar ethnicity}} = .61$, $\text{prob}_{\text{nonsimilar ethnicity}} = .36$). The reported probabilities, represented in figure 4, are the conditional probabilities that a person will enter the sweepstakes, using the standard formula ($\text{prob} = e^{\text{yhat}} / [1 + e^{\text{yhat}}]$, where yhat is the estimated log odds obtained in the logistic regression). A similar spotlight analysis at one standard deviation below the mean of belief in luck showed no difference between the two similarity conditions ($\beta = -.29$, Wald $\chi^2(1) = 1.43$, NS; $\text{prob}_{\text{similar ethnicity}} = .31$, $\text{prob}_{\text{nonsimilar ethnicity}} = .44$). We used the Johnson–Neyman technique to identify the range of belief in luck for which the simple effect of the similarity manipulation was significant (Spiller et al. 2013) and found that participation likelihood was significantly greater in the higher-similarity condition than in the lower-similarity condition for any value of belief in luck higher than .87 ($\beta = .44$, Wald $\chi^2(1) = 3.84$, $p = .05$).

Alternative Explanations. The similarity manipulation or the interaction between similarity and belief in luck did not have any significant effect on liking of the featured winners, self-esteem, or estimates of the number of entrants. We found no evidence that the similarity effect on participation was moderated by study participants' self-esteem or need for connectedness (see the detailed analyses in the web appendix).

Discussion. Using a different manipulation of similarity with previous winners (ethnicity), study 4 shows that similar previous winners increase actual participation in a sweepstakes only for people who see luck as something personal. This result supports the role of personal attribution in order for people to perceive a sweepstakes featuring

FIGURE 4

PARTICIPATION LIKELIHOOD AS A FUNCTION OF BELIEF IN LUCK AND ETHNIC SIMILARITY



a similar winner as more attractive. We did not find support for alternative explanations in terms of liking, inferences about the number of entrants, self-esteem, or need for social connectedness.

Although only directional, the results also show a reversal of the similarity effect for people with lower beliefs in luck, which might explain why the main effect of similarity is not significant in this study and relatively small in general: people with lower beliefs in luck tend to participate less in the higher-similarity condition in comparison to the lower-similarity condition. Lacking a belief in luck as a personal characteristic might imply, as suggested by Darke and Freedman (1997b), the belief that “luck is just random chance” (498), which is supported by the negative correlation between general belief in luck and the perceived randomness of the sweepstakes in our study. Accordingly, previous research has shown that people scoring lower on the BIGL scale tend to exhibit something similar to the gambler’s fallacy: after a previous lucky event, they express negative expectations for future luck, are less confident, and take less risk in subsequent tasks (Darke and Freedman 1997a). The final two studies investigate more directly how making randomness salient may reverse the similarity effect.

STUDIES 5 AND 6: THE NEGATIVE EFFECT OF SIMILARITY ON PERCEIVED LIKELIHOOD OF WINNING WHEN RANDOMNESS IS SALIENT

As the previous studies highlight, people expect that the next winner will be similar to the one featured in the advertisement in such a way that we observe a positive similarity

³ These results remain unchanged if sweepstakes proneness is not included as a covariate in the analyses (significant interaction between similarity and belief in luck, Wald $\chi^2(1) = 4.48$, $p < .05$).

effect on their perceived likelihood of winning and participation. The attribution of winning to a personal cause encouraged by the advertisement is a necessary condition to observe this effect. In the next studies, we seek to contrast this default personal attribution with settings in which the inherent randomness of sweepstakes is more salient than the personal aspects. People have biased conceptions of randomness, which can lead them to overestimate the number of alternations in a random sequence, as reflected in the gambler's fallacy; so we expect that focusing attention on the random nature of the draw will reverse the previous identified effects. That is, more (vs. less) similar winners should decrease perceived likelihood of winning (hypothesis 2). The results of study 4 already hinted at this, since people who did not believe that luck was a personal characteristic participated more when they were exposed to less similar winners. To examine this effect more closely, we manipulate randomness salience in the next two studies.

Study 5

In studies 2 and 3, we showed with two different measures that people expect a streak of similar winners when personal attribution is encouraged. In study 5, we want to replicate and extend this result by investigating further the role of people's naïve understanding of the likelihood of winning streaks versus alternations, depending on their prevailing locus of attributions. Potential participants should expect more alternations between more and less similar winners when randomness is highlighted. As in study 2, we use a time-constrained task to encourage a more experiential processing when we elicit people's expectations about the next sweepstakes outcome.

Procedure. In exchange for course credit, 141 students at Tilburg University participated in this study. The 2 (gender similarity: similar vs. not similar) \times 2 (randomness: salient vs. not salient) between-subjects design relied on a scenario approach. It explained that a local mobile provider organized a sweepstakes (i.e., promotional lottery) every month for university students in which they could win a €100 voucher redeemable at the provider's online store. To participate in the draw, students from any university merely had to register on a website. The previous winners' genders and the randomness prime were manipulated in the advertisement. It randomly showcased either two female or two male winners, with pictures and first names. To make randomness salient, the advertisement also featured a roulette wheel in the upper-right corner and dice and numbers in the background; these elements did not appear in the control condition. Following the advertisement, we presented six pictures (three women and three men) and encouraged the participants, in line with study 2, to indicate quickly who would be most likely to win the next draw.

The advertisements and the dependent variable are presented in the web appendix.

Results. We coded the respondents' picks of the most likely winner according to two categories. Their answers were coded as either "expecting the next winner to be the same gender as previous winners" (i.e., repetition) or "expecting the next winner to be the opposite gender to previous winners" (i.e., alternation). We then conducted a logistic regression with the binary variable as the dependent variable and gender similarity between the respondent and the featured winner, the randomness prime, and their interaction as independent variables. We included similarity with the winner to be consistent with our analyses in previous studies, but our dependent variable measured people's predictions of subsequent outcomes, not their own likelihood of winning if they were to enter the sweepstakes. Therefore, we did not expect any effect of similarity on their prediction, nor should similarity moderate the effect of randomness. The results indeed show that expectations about the sequence of winners are not affected by the respondents' own similarity (Wald $\chi^2(1) = .98$, NS) or the interaction between randomness and similarity (Wald $\chi^2(1) = 1.12$, NS). Consistent with our hypothesis, the randomness manipulation had a significant main effect on people's expectations of repetitions or alternations (Wald $\chi^2 = 7.00$, $p < .01$). Priming randomness (in comparison with the control condition) increases the expectation of alternations between more and less similar winners and decreases the expectation of repetitions of similar winners ($\chi^2(1) = 7.78$, $p < .01$; Cramer's $V = .235$). When the advertisement did not prime randomness (default condition), most respondents predicted a repetition of same-gender winners, replicating study 2's results: 67.6% of respondents picked a winner of the same gender as previous winners, while 32.4% picked a winner of the opposite gender. When the advertisement primed randomness with the roulette wheel and dice, however, more respondents predicted an alternation between the gender of the successive winners: 44.3% of respondents picked a winner of the same gender as previous winners and 55.7% of respondents picked a winner of the opposite gender.

Discussion. Making randomness salient significantly decreases the expectation that the next winner should be more similar to the featured one (gender repetition) compared to when randomness is not salient; In contrast, drawing attention to randomness leads observers to expect more alternations so that the next winner should be less similar. Although never documented in an interpersonal domain, this finding suggests the prevalence of the gambler's fallacy, which evolves from a biased conception of randomness (Bar-Hillel and Wagenaar 1991; Falk and Konold 1997).

Study 6

With study 6 we focus on the context in which randomness is salient and examine how the expectation of more alternations as revealed by study 5 may have downstream consequences on sweepstakes' general attractiveness. If people expect alternations between more and less similar winners when they attribute winning to randomness, then similarity with the previous winner should decrease perceived likelihood of winning and, in turn, the sweepstakes' attractiveness (hypothesis 2). We used the same advertisement background as in study 5 to make randomness salient. To make people even more sensitive to the randomness cues of the background, we primed them beforehand with randomness-related words (Kay, Moscovitch, and Laurin 2010). We expected that they would judge a sweepstakes featuring more (vs. less) similar winners as less attractive because their perceived likelihood of winning is weaker, consistent with their expectations that the next winner will be less similar to them.

Procedure. One hundred seventy-four (174) students (Caucasians, between 18 and 35) were recruited through the Qualtrics panel to take part in the study.

The first part consisted of the randomness priming task. Respondents were asked to form 16 grammatically correct, four-word sentences from scrambled word sets. Eight sets included a word related to randomness (e.g., "chance," "random"; Kay et al. 2010) (see the web appendix for the complete list). After finishing the scrambled sentence task, respondents moved on to a seemingly unrelated questionnaire about sweepstakes. The scenario was the same as in study 2: a restaurant, Appetite, offers to reward its regular customers by inviting them to enter a sweepstakes in exchange for their participation in a satisfaction survey. To make randomness salient, the advertisement background included some numbers and dice. For half the respondents, the advertisement featured two male previous winners with photographs; for the other half, the two previous winners were women. After this sweepstakes scenario, we measured sweepstakes general attractiveness with three items: "How likely would you be to enter the upcoming lottery organized by Appetite?" (nine-point scale, "Very unlikely" to "Very likely"), "How attractive is this sweepstakes to you?" (nine-point scale, "Not attractive at all" to "Very attractive"). Consistent with study 2 and 5, we wanted to again elicit a more experiential response by using a time-restrained binary question for the intention to participate: "Please answer this question in less than 5 seconds: How likely would you be to enter the next drawing of the sweepstakes organized by the Appetite restaurant?" ("Very unlikely" vs. "Very likely"). Finally, we assessed respondents' perceived likelihood of winning using the same two items as in study 2.

Results. We removed data from three outliers for study duration. We first standardized all three items measuring the sweepstakes' attractiveness and took the factorial scores resulting from the principal component analysis as a composite measure (one single component with an Eigen value superior to 1 explaining 74.9% of the variance was extracted, Cronbach's $\alpha = .83$). Consistent with our hypothesis, the respondents judged the sweepstakes offer more attractive when the advertisement featured winners less similar to them (opposite gender) ($M_{\text{similar gender}} = -.17$, $SD = 1.12$, $M_{\text{non-similar gender}} = .16$, $SD = .84$, $t(169) = 2.19$, $p < .05$).

A similar approach revealed the same negative impact on perceived likelihood of winning. After we computed the mean of the two items, the analysis showed that people exposed to winners with the opposite gender perceived that they were more likely to win the next drawing than did people exposed to same-gender winners ($M_{\text{similar gender}} = 4.71$, $SD = 2.38$, $M_{\text{non-similar gender}} = 5.44$, $SD = 2.28$, $t(169) = 2.03$, $p < .05$).

Using model 4 of Hayes (2013), we tested whether the perceived likelihood of winning mediated the effect of similarity on sweepstakes' attractiveness. Similarity with the featured winners had a significant negative effect on the perceived likelihood of winning (a path, β (standardized coefficient) $= -.36$, $SE = .18$, $t = -2.03$, $p < .05$, 95% CI $[-.713; -.010]$); controlling for similarity (c' path, $\beta = -.082$, $SE = .065$, $t = -1.28$, NS, 95% CI $[-.210; .045]$), perceived likelihood impacted positively the sweepstakes attractiveness (b path, $\beta = .23$, $SE = .028$, $t = 8.33$, $p < .001$, 95% CI $[.175; .284]$). The bootstrap analysis (5,000 samples) showed a significant mediation (a \times b indirect effect $= -.083$, bootstrap $SE = .04$, bias-corrected bootstrap CI $[-.176; -.003]$). These results support hypothesis 2: when randomness becomes salient, the effect of similarity with the featured winners reverses and decreases perceived likelihood of winning, which in turn decreases the sweepstakes' attractiveness.

GENERAL DISCUSSION

This research has investigated how showcasing similar previous winners, a common practice in sweepstakes advertisements, influences the perceived likelihood of winning by potential participants. In default conditions, when the advertisements only highlighted previous winners, without emphasizing the random characteristics of the draw, consumers expected a repetition of similar winners. As a consequence, they felt more likely to win and participated more if they were more similar to featured previous winners than if they were less similar. This effect was observed only when potential participants could attribute winning to a personal cause, in line with the belief in the transmission of luck among similar people derived from

the similarity law of sympathetic magic (Nemeroff and Rozin 2000). This positive similarity effect spanned different similarity attributes, such as first name, gender, and ethnicity.

Research on magical thinking and consumer behavior has mostly focused on manifestations of the second law of sympathetic magic, the law of contagion, which describes the belief that physical contact with a source can transfer an “essence” or quality of this source to another object or person (Rozin and Nemeroff 2002). Numerous studies in consumer contexts (see Huang, Ackerman, and Newman 2017 for a recent review) have demonstrated that a belief in magical contagion can impact consumers’ evaluations of goods (Argo, Dahl, and Morales 2006, 2008; Morales and Fitzsimons 2007; Newman and Bloom 2014; Newman and Dhar 2014; Newman, Diesendruck, and Bloom 2011) as well as confidence, ability, and performance (Kramer and Block 2014; Lee et al. 2011). The magical law of similarity, which does not involve any physical contact or proximity, has been less investigated in consumer contexts. Our work shows that this law plays a role in explaining how the observation of more or less similar winners can affect prospective participants’ perceived likelihood of winning in sweepstakes.

This article also showed that highlighting the randomness of the draw directed people’s attribution away from personal causes so that potential participants expected more alternations between more and less similar winners, reflecting their biased conception of randomness. Similarity thus backfired and decreased perceived likelihood of winning, and prospective participants deemed a sweepstakes featuring a less similar winner as a more attractive offer than a sweepstakes featuring a more similar winner. Existing consumer research cites very few instances of similarity backfiring and decreasing consumers’ attitudes toward an offer (Kachersky et al. 2014). We document how the naïve understanding of a random sequence of more and less similar winners can lead potential participants to perceive that they are less likely to win after a similar winner and thus to judge a sweepstakes featuring a similar winner as less attractive when the inherent randomness of the drawing is put at the forefront.

Our findings contribute to the literature on perceptions of random sequences in two ways. First, they extend the hot hand and gambler’s fallacies to the interpersonal domain, where the winning outcomes apply to more or less similar individuals. This extension is especially noteworthy for the belief in lucky streaks characterizing the hot hand fallacy, which is usually observable for a specific person repeating a task several times in a row (such as in ball sports). The intervention of the similarity law of sympathetic magic when personal attribution prevails helps explain how people come to expect a streak of more similar winners in this context. Second, our findings show how the hot hand fallacy can be observed in domains other than

those in which it has typically been documented, namely skilled performance and nonrandomly produced sequences (e.g., basketball shooting, sales rates, and weather patterns); the expectation of streaks in these domains is facilitated because people tend to have a mental model of the sequence-generating mechanism as intentional, controllable, and nonrandom (Oskarsson et al. 2009). In contrast, the gambler’s fallacy has been shown to prevail for truly random mechanisms. Our research shows how both biases can occur for the same context following a subtle change in attention focus to the personal cause or randomness. Interestingly, the default setting where the previous winners are highlighted leads people to expect a repetition of more similar winners consistent with the hot hand fallacy, even if it is clear that no skills, intentionality, or control are involved in winning a sweepstakes.

Alternative Explanations

Several alternative explanations were considered to explain the positive effect of similarity on perceived likelihood of winning and sweepstakes’ attractiveness. Although the advertisement for a sweepstakes featuring previous winners does not represent a typical compliance situation (the featured winners do not explicitly ask people to participate), the studies controlled for several mechanisms previously documented by research on similarity and social influence. The results did not support potential explanations related to liking (Byrne 1971; Cialdini and Goldstein 2004; Sundie et al. 2012), self-esteem (Brendl et al. 2005), or need for connectedness (Jiang et al. 2010). Another alternative mechanism involves potential participants’ inferences about the number of entrants in the lottery; because less similar previous winners may lead people to infer that more people with various socioeconomic profiles participate, they estimate that they are less likely to win when a less similar winner is showcased. We did not find supporting evidence for this explanation; estimations of the number of entrants did not differ significantly across similarity conditions, and in study 3 we found evidence of a positive similarity effect (for personal attribution), even when the same winners appeared in both the higher- and lower-similarity conditions.

Other consumer research streams are also relevant in this discussion. First, extensive research has documented how consumers may be affected by the behavior of other consumers and spokespersons when they share some salient basis for social identification (Aaker et al. 2000; Forehand and Deshpandé 2001; Forehand, Deshpandé, and Reed 2002; Moore and McFerran 2017; Reed 2004). For example, consumers donate more if they discover that a previous donor of the same gender made a large contribution (Shang et al. 2008). Imitating similar others thus can be conceptualized as a way to establish, maintain, or communicate social identity to others (Reed 2004). According

to the identity relevance principle (Reed et al. 2012), this shared identity with the other consumer needs to be diagnostic and relevant for the decision at hand (Feldman and Lynch 1988; Reed 2004), which is unlikely to be the case in sweepstakes participation. More generally, research considers why consumers imitate or diverge from others' choices. Conformity with an aspirational group can be a way to construct and express a desired identity (Berger and Heath 2007, 2008; Escalas and Bettman 2003, 2005; Moore and McFerran 2017); differentiation satisfies needs for uniqueness (Lynn and Snyder 2002; Snyder and Fromkin 1980) or avoids communicating undesired identities (Berger and Heath 2007, 2008; Berger and Rand 2008; Chan, Berger, and Van Boven, 2012; White and Dahl 2006, 2007). Still, it is difficult to imagine that mimicking or diverging from previous winners by entering a sweepstakes would represent a powerful way to signal (avoid) (un)desired identities. Unless the participant wins and is showcased, participation is not a publicly observable choice that can convey information to others.

Thus, though we acknowledge the possibility of different accounts that can help explain the influence of similarity, in a sweepstakes context, the mechanism we propose appears more immediate. The emphasis on lucky winners encourages potential participants to attribute winning to personal characteristics, and this personal attribution leads them to expect streaks in the succession of winners. Consistent with the similarity law of sympathetic magic, observers predict that the next winner should share some similarity with the previous ones. Accordingly, chronic, individual beliefs in luck as a personal characteristic and personal versus situational attributions induced by the context act as boundary conditions for this effect.

Further Avenues for Research

Additional research should investigate the boundaries of similarity effects in sweepstakes and lottery contexts. The number of previous winners featured in promotional materials could serve as a moderator. In our studies, the advertisements included only one or two previous winners. Would increasing this number affect the impact of similarity? Studies of perceptions of random sequences suggest a moderating role of the number of past outcomes on observations of the hot hand or gambler's fallacies (Johnson, Tellis, and MacInnis 2005). Featuring more than one or two similar previous winners thus might accentuate the belief in a lucky streak and increase the expected likelihood of winning even further; or it might trigger the expectation that after a series of similar winners, the "stock of luck" available to that social group has been exhausted (Ayton and Fischer 2004), so the next winner will be less similar to previous ones, consistent with the gambler's fallacy. On a related note, this research project did not investigate the case in which multiple winners belonging to different

social groups are featured. Seeing one highly similar person might be enough to trigger the similarity effect, which would suggest a way to increase similarity among multiple social groups at once. However, having different social groups represented among the winners could also drive people to think about the game as one of chance, not luck, leading to the reversal of the effect. Further research is necessary to explore if and how the number of featured winners represents a boundary condition for the effect of similarity in sweepstakes.

Research could also investigate whether positive and negative similarity effects emerge in contexts other than sweepstakes advertisements featuring previous winners. Any situation that can be perceived as a sequence of binary outcomes affecting a more or less similar other could lead to such effects. For example, state lotteries often showcase the previous grand prize winner (McMullan and Miller 2009), which could affect ticket sales in the same way that similarity affects sweepstakes. Lottery ticket retailers often communicate that they have sold winning tickets, too, with window signs touting, "Winning ticket sold here." The "lucky store effect" (Guryan and Kearney 2008) seems to justify this practice: ticket sales by a retailer increase in the weeks after it has sold a winning ticket, and the increase persists for up to 40 weeks. The positive similarity effect might explain this pattern. Gamblers believe they are more likely to win if they buy their tickets in the same store where the previous winner bought the winning ticket. In casinos, gamblers' subjective perceptions of their likelihood of winning also could be influenced by their similarity to the last person they observed winning. Depending on how salient the random cause for winning is at a slot machine, for example, they might either choose or avoid a machine that has previously rewarded a similar person. Thus, our findings could help enlighten public policy about the need to inform consumers about lottery mechanisms.

In other domains, the negative similarity effect induced by highlighting randomness could inform behavioral prevention measures to reduce the risk of negative outcomes. For example, college students believe they are less likely to contract AIDS than others are (self-positivity bias), but perceived similarity with others can reduce this bias (Raghubir and Menon 1998). Communication in social marketing often relies on similarity-based appeals to reduce the self-positivity bias and persuade people to make behavioral changes. It would be interesting to investigate whether the effects might reverse if the randomness (or uncontrollability) of the negative event were highlighted. Such a finding would generalize our results. Comparable effects of similarity and randomness might influence people's expectations of being the next person to suffer from an accident or a disease after witnessing a more or less similar person's suffering. If randomness cues reverse similarity-based appeals, they could also have substantial

implications for insurance companies and for many public policies.

This research thus contributes to the extant literature that describes how interpersonal similarity can affect consumers. It does so by documenting a new phenomenon in a sweepstakes context where similarity with previous winners influences people's predictions of future outcomes. Continued research should determine the extent to which these results can be extended to predictions in other contexts where attribution to personal causes or randomness is malleable.

DATA COLLECTION INFORMATION

Study 1 data were collected and analyzed by a firm specialized in designing direct marketing campaigns in spring 2010. The first author managed the collection of data for studies 2 and 6 in fall 2016 using Qualtrics panels and study 4 in summer 2015 using Amazon Mechanical Turk. The first author also supervised the collection of data by research assistants at the HEC Montreal "Tech3Lab" in summer and fall 2015 for the survey reported in the conceptual background. The data of this survey and studies 2, 4, 5, and 6 were analyzed by the first author. The second author supervised the collection of data by a research assistant at Tilburg University in fall 2014 for study 3 and summer 2015 for study 5. Both authors analyzed the data of study 3 jointly.

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