

Why Are People Reluctant to Exchange Lottery Tickets?

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Students were given lottery tickets and then were asked to exchange their ticket for another one, plus a small monetary incentive. Less than 50% agreed. In contrast, when given pens, and the same exchange offer, over 90% agreed. Experimental control rules out that the reluctance to exchange lottery tickets results (a) from overestimation of the winning probability of one's own ticket; (b) from a concern that the ticket, once exchanged, might win in the hands of another; (c) from an overly low transaction cost; (d) from "paranoia" due to the bizarreness of the social situation we created; (e) from "bonding" to the ticket. Rather, the possibility for *ex post* regret that exists when exchanging lottery tickets, but not pens, underlies this reluctance. The notion of regret is broader than previously supposed.

In a well-known experiment, Langer (1975) sold \$1 lottery tickets to 53 office workers. Each ticket came in a matched pair. One part was kept by the purchaser, and the matched part was deposited in a box, from which the winning ticket was later drawn. The prize was the collected amount of \$53. Almost all the office workers approached bought the tickets. Half the workers were handed a ticket by the experimenter, and half were allowed to choose their ticket themselves. A few days later, shortly before the lottery, the workers were approached again and on some pretext were asked how much they would require to give up their ticket. The average amount of money requested was over \$8 if they had chosen their tickets and \$2 if they had not. In addition, 10 of the choosers and 5 of the non-choosers initially said they wouldn't sell at all.

Langer (1975) focused on the large difference between the choosers and the non-choosers, attributing it to an "illusion of control . . . defined as an expectancy of a personal success probability inappropriately higher than the objective probability would warrant" (p. 313). When one chooses tomatoes in the market, one can choose them to be better than those the vendor might randomly pick. Likewise, hypothesized Langer, participants react to choosing lottery tickets as if they can choose them to beat the odds. The higher asking price for chosen tickets reflects a higher subjective probability of winning with a chosen ticket than with a random ticket. Little was made of the fact that non-choosers required, on average, double the buying price. Indeed, though it is irrational to value chosen tickets over random tickets if one believes that the lottery is governed by chance alone, there is nothing irrational in asking more to part with a

good (e.g., a lottery ticket) than one had paid for it, especially if the good is not readily replaceable, as was the case in Langer's study. Nonetheless, it seems that both groups were exhibiting some reluctance—albeit not the same amount of reluctance—to give up their lottery tickets.

Knetsch and Sinden (1984) reported another example of reluctance to trade lottery tickets. They gave some of their participants lottery tickets and others a few dollars in cash. Participants were then allowed to trade their lottery tickets for the cash, or vice versa: to use their cash to purchase a lottery ticket. A minority of the participants bought a lottery ticket when given the cash, whereas most held onto their lottery ticket when given such a ticket, thus exhibiting a relative reluctance to trade it for cash. It is reluctance to part with lottery tickets that is the focus of the present study.

Experiment 1

Reluctance to trade has previously been studied under the label of the *endowment effect* (Kahneman, Knetsch, & Thaler, 1990; Thaler, 1980), the *status quo bias* (Ritov & Baron, 1992; Samuelson & Zeckhauser, 1988), and *loss aversion* (Kahneman & Tversky, 1984). In those studies, however, trade was between a good and money, rather than between identical tokens of the same good. So too, in previous studies involving lottery tickets, trades of these tickets have been offered for money. The purpose of our first experiment was to see whether participants are reluctant to trade their own lottery ticket even in exchange for a replacement ticket rather than for money. We also were interested in how they would explain such reluctance and, in particular, whether it would involve a belief that their own lottery ticket is probabilistically superior, as suggested by Langer (1975).

Method

Participants. Participants were freshmen at the Israeli Technion in Haifa. The experimenter entered an engineering class at the end of a lesson and asked the 66 students present to voluntarily stay on for a few minutes to participate in a brief experiment. Sixty-one obliged.

Procedure. Participants were given numbered pieces of paper, la-

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beled *lottery ticket number #*. On each ticket there was a place for participants to write their name, as well as their answers to three questions. Following Langer's (1975) procedure, we had another set of tickets in a bag, numbered in correspondence to the distributed set. After the participants wrote down their names, one of these tickets was drawn blindly by a volunteer student and handed over to the experimenter, who alone looked at the number on it and temporarily put it in the care of the volunteer student. The experimenter then asked three questions out loud. The first question was: "Would you be willing to exchange your ticket with someone else in this class? Anyone who exchanges their ticket will be given this sweet." (The sweet was a rather attractive and expensive truffle.) Participants wrote *willing* or *unwilling* in the first line. The second question was: "Are the chances for your ticket to win the lottery higher, lower, or equal to the chances of any other lottery ticket?" Participants wrote *higher*, *lower*, or *the same* on the second line. The final question was: "Why are you, or aren't you, willing to exchange your ticket?" Participants wrote a freestyle answer on the third line (there was room to write more than one line). After writing down their answers, participants who indicated a willingness to exchange their tickets handed them in, and the returned tickets were redistributed, along with the promised sweets. The winning number was then read out, and the holder of the corresponding number (irrespective of whose name was on the ticket) received the prize. The prize was a voucher worth 50 shekels (about \$17) for the Technion bookstore.

Results and Discussion

Table 1 shows the joint distribution of participants according to their answers to the first two questions. Although 36 participants were not willing to trade their ticket, only 5 of them attributed to their ticket a larger probability of winning than that of any other ticket—compared with 4 who thought the probability of their ticket's winning was actually smaller than any other ticket. To be sure, the normative answer to the question regarding the ticket's chances of winning was given relatively more frequently by participants who were willing to trade (88%) than by those reluctant to trade (75%), but the overall proportion of the normative answer to this question (80%) far outstripped the proportion willing to trade (41%). It seems that the reluctance to trade cannot be fully explained by an erroneous belief regarding one's winning chances.

To what did participants attribute their decision? Interestingly, sometimes the same reason was used by some participants to explain willingness to exchange and by others to explain reluctance to exchange. For example, the most commonly given reason ("All tickets are the same, so what difference does it make?") was given by 9 non-exchangers and 9 exchangers. Belief in fate was given by 3 people as reason for not changing ("I

must stick with what I got") and by 2 as reason for changing ("If I'm meant to win, I will"). Having a lucky number was given by 2 people as a reason for not changing ("7—lucky number!") and by 2 as a reason for changing ("I have lucky numbers, and the one I received is not one of them").

Experiment 2

The results of Experiment 1 extend previous findings. They show that people may require more than a replacement ticket and a small extra incentive to give up "their" lottery ticket, even though tickets in this experiment had not been chosen. In contrast to Langer's (1975) supposition, very few participants inflated their ticket's winning probability. Most of those reluctant to exchange their ticket acknowledged that the replacement ticket was not inferior to their own. In the circumstances of Experiment 1, this reluctance is irrational from the perspective of normative choice theory, because it amounts to the rejection of a dominant option (exchange one lottery ticket for an equivalent lottery ticket plus a small bonus).

What could bias one in favor of holding onto one's own ticket, if it isn't the notion that one's ticket has a higher probability of winning? One possibility is the anticipation of regret. Imagine if the ticket one gave up were to win in someone else's hands. Failing to win the lottery that way might feel so much worse than losing it with one's original ticket—even though both possibilities may be judged equiprobable—that one could "kick oneself" (Miller & Taylor, 1995). Indeed, some of the participants in Experiment 1 explained their reluctance to exchange by mentioning possible regret explicitly ("If I exchange and not win, I would be pissed. If I don't exchange and don't win, I'd know that I wouldn't necessarily have won had I exchanged").

Kahneman and Tversky (1982) described to participants two investors who had a choice between investing in Stock A or Stock B and ended up losing \$1,200. One investor incurred the loss as a consequence of owning A and switching, after deliberation, to B, and the other incurred the loss as a consequence of owning B and failing, after deliberation, to switch to A. Almost all participants believed that the first investor would experience more regret than the second one. When facing the decision whether or not to exchange their lottery ticket, our participants may ask themselves a similar question and respond similarly: "Chances are that I will not win this lottery. I could switch and not win, or I could not switch and not win. I think I would regret the first possibility more."

Losing a lottery with an exchanged ticket might be more painful than losing it with an original ticket, because of the possibility, attendant only on an exchange, of finding out that one's original ticket had won in another's hands. In a pertinent study, Ritov (1993) found that choice between pairs of binary gambles was affected by whether it was known to be followed by resolution of uncertainty for the rejected gamble (i.e., playing it out) in addition to the chosen one (e.g., participants in her complete-resolution condition chose a high-risk high-gain option significantly more often than participants in the other conditions). Would regret—and reluctance to exchange—still affect choice if this possibility were removed? In contrast, would its effect be intensified if knowledge of how one "blew it" were made public?

Table 1
Number of Participants Who Reported That Their Ticket Was More, Less, or as Likely to Win as any Other

Participant's report	Willing to exchange	Unwilling to exchange	Total
Think all tickets equiprobable	22 (45%)	27 (55%)	49
Think own ticket more likely	1	5	6
Think own ticket less likely	2	4	6
Total	25 (41%)	36 (59%)	61

