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POSTDECISION DISSONANCE AT POST TIME[1]

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2 experiments were conducted to investigate postdecisional dissonance reduction processes following a commitment to bet on a horse in the natural and uncontrived setting of a race track. In the 1st study, 69 $2 Win bettors rated the chance that the horse they had selected would win the forthcoming race and 72 other bettors provided ratings immediately after making a $2 Win bet. On the 7-point rating scale employed, prebet subjects gave a median rating of 3.48, which corresponded to a "fair chance of winning"; postbet subjects gave a median rating of 4.81, which corresponded to a "good chance of winning." This difference was significant beyond the .01 level. The general findings were replicated in a 2nd study in which harness-race patrons rated how confident they felt about their selected horse either just before or just after betting. Results from both studies provide support for Festinger's theory in a real life setting and indicate that dissonance-reducing processes may occur very rapidly following commitment to a decision.

In the last decade there have been numerous laboratory experiments conducted to test various implications of Festinger's (1957) theory of cognitive dissonance. In spite of sometimes serious methodological faults (cf. Chapanis & Chapanis, 1964), the laboratory evidence as a whole has tended to support Festinger's notions. Confidence in the theory, as Brehm and Cohen (1962) have previously suggested, can now be further strengthened by extending empirical tests from lifelike to real life situations. The present study investigates the effects of postdecision dissonance on bettors in their natural habitat, the race track.

Festinger (1957) had originally contended that due to the lingering cognitions about the favorable characteristics of the rejected alternative(s), dissonance was an inevitable consequence of a decision. Subsequently, however, Festinger (1964) accepted the qualification that in order for dissonance to occur, the decision must also have the effect of committing the person. A favorite technique for reducing postdecisional dissonance, according to the theory, is to change cognitions in such a manner as to increase the attractiveness of the chosen alternative relative to the unchosen alternative(s). At the race track a bettor becomes financially committed to his decision when he purchases a parimutuel ticket on a particular horse. Once this occurs, postdecisional processes should operate to reduce dissonance by increasing the attractiveness of the chosen horse relative to the unchosen horses in the race. These processes would be reflected by the bettor's expression of greater confidence in his having picked a winner after his bet had been made than before.

In order to test this notion, one need only go to a race track, acquire a prebet and postbet sample, and ask members of each how confident they are that they have selected the winning horse in the forthcoming race. The two samples should be independent since the same subjects in a before-after design could contravene the observed effects of dissonance reduction by carrying over consistent responses in the brief interval between pre- and postmeasurements. In essence, this was the approach employed in the two natural experiments reported here. More formally, the experimental hypothesis in both experiments was that bettors would be more confident of their selected horse just after betting $2 than just before betting.

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EXPERIMENT I

Subjects

Subjects were 141 bettors at the Exhibition Park Race Track in Vancouver, British Columbia. Sixty-nine of these subjects, the prebet group, were interviewed less than 30 seconds *before* making a $2 Win bet. Seventy-two subjects, the postbet group, were interviewed a few seconds after making a $2 Win bet. Fifty-one subjects, interviewed before the fourth and fifth races, were obtained in the exclusive Clubhouse section. Data from the remaining 90 bettors were collected prior to the second, third, sixth, and seventh races at various betting locations in the General Admission or grandstand area.

No formal rituals were performed to guarantee random sampling, but instead, every person approaching or leaving a $2 Win window at a time when the experimenters were not already engaged in an interview was contacted. Of those contacted, approximately 15% refused to cooperate further because they could not speak English, refused to talk to "race touts," never discussed their racing information with strangers, or because of some unexpressed other reason. The final sample consisted of white, Negro, and Oriental men and women ranging in estimated age from the early twenties to late sixties and ranging in style from ladies in fur to shabby old men. The final sample was felt to be reasonably representative of the Vancouver racetrack crowd.

Procedure

The two experimenters were stationed in the immediate vicinity of the "Sellers" window during the 25-minute betting interval between races. For any given race, one experimenter intercepted bettors as they approached a $2 Win window and the other experimenter intercepted different bettors as they left these windows. Prebet and postbet interview roles were alternated with each race between the two experimenters.

The introductory appeal to subjects and instructions for their ratings were as follows:

> I beg your pardon. I am a member of a University of British Columbia research team studying risk-taking behavior. Are you about to place a $2 Win bet? [Have you just made a $2 Win bet?] Have we already talked to you today? I wonder if you would mind looking at this card and telling me what chance you think the horse you are going to bet on [have just bet on] has of winning this race. The scale goes from 1, a slight chance, to 7, an excellent chance. Just tell me the number from 1 to 7 that best describes the chance that you think your horse has of winning. Never mind now what the tote board or professional handicappers say; what chance do *you* think your horse has?

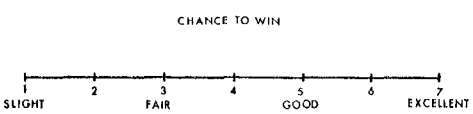

FIG. 1. The rating scale shown to subjects in the study.

It was, of course, sometimes necessary to give some of the subjects further explanation of the task or to elaborate further on the cover story for the study.

The scale, reproduced here in Figure 1, was prepared on $8\frac{1}{2} \times 11$-inch posterboard. The subjects responded verbally with a number or, in some cases, with the corresponding descriptive word from the scale.

After each prebet rating the experimenter visually confirmed that his subject proceeded directly to a $2 Win window. In the few instances that subjects did wander elsewhere, their data were discarded. No effort was made to collect data in the 3 frantic minutes of betting just prior to post time.

Results

Since no stronger than ordinal properties may be safely assumed for the rating scale, nonparametric statistics were employed in the analysis. Several χ^2 approximations of the Kolmogorov-Smirnov test (Siegel, 1956) were first performed to test for distributional differences between the ratings collected by the two experimenters. For prebet ratings ($\chi^2 = .274$, $df = 2$, $p > .80$) and for the combined pre- and postbet ratings ($\chi^2 = 2.16$, $df = 2$, $p > .30$) the differences in the two distributions may be considered negligible according to these tests. Distributional differences on postbet ratings ($\chi^2 = 3.14$, $df = 2$, $p > .20$) were greater but still did not meet even the .20 probability level.[2] On the basis of these tests the two experimenters were assumed to have collected sufficiently comparable ratings to justify pooling of their data for the subsequent test of the major hypothesis of the study.

The median for the 69 subjects in the prebet group was 3.48. In qualitative terms they gave their horse little better than a "fair" chance of winning its race. The median for the 72 subjects in the postbet group, on the other hand, was 4.81. They gave their horse

[2] The χ^2 approximation for Kolmogorov-Smirnov is designed for one-tailed tests, whereas the hypothesis tested here is nondirectional. However, since the differences were insignificant by a one-tailed test, they would necessarily be insignificant by the two-tailed test.

TABLE 1

DIVISION OF SUBJECTS WITH RESPECT TO THE OVERALL MEDIAN FOR THE PREBET AND POSTBET GROUPS: EXPERIMENT I

	Prebet group	Postbet group
Above the *Mdn*	25	45
Below the *Mdn*	44	27

close to a "good" chance in the race. The median test for the data summarized in Table 1 produced a χ^2 of 8.70, ($df = 1$), significant beyond the .01 level.

These results, in accord with our predictions from dissonance theory, might also have arisen, however, had a substantial number of bettors simply made last-minute switches from relative long shots to favorites in these races. Although this possibility was not pursued with the above sample of subjects, two follow-up inquiries on another day at the same race track indicated that the "switch to favorites" explanation was unlikely. The first of these inquiries involved 38 $2 bettors who were contacted prior to the first race and merely asked if they ever changed their mind about which horse to bet on in the last minute or so before actually reaching a Sellers window. Nine of the 38 indicated that they sometimes changed, but among the 9 occasional changers a clear tendency to switch to long shots rather than to favorites was reported. Additional evidence against a "switch to favorites" explanation was obtained from a sample of 46 bettors for whom the prebet procedure of Experiment I was repeated. Each of these bettors was then contacted by a second interviewer just as he was leaving the $2 Win window and asked if he had changed to a different horse since talking to the first interviewer. All 46 responded that they had not changed horses in midinterviews.

In order to investigate the robustness of the findings in Experiment I a second study was undertaken which was like the first study in its essentials but employed different experimenters, a different response scale, and a different population of subjects. It also provided for a test of the "switch to favorites" explanation among subjects in a postbet group.

EXPERIMENT II

Subjects and Procedure

Ninety-four subjects were interviewed at the Patterson Park Harness Raceway in Ladner, British Columbia. Forty-eight of these subjects, the prebet group, were interviewed prior to the first six races as they approached one of the track's four $2 Win windows. This contact was usually completed just a few seconds before the subject actually reached the window to make his bet, but occasionally, when the betting lines were long, up to ¾ minute elapsed between interview and bet. Forty-six subjects, the postbet group, were interviewed a few seconds after leaving one of the $2 Win windows. As in Experiment I, all persons approaching or leaving a $2 Win window at a time when the experimenters were not already engaged were contacted. Of those contacted, fewer than 10% refused to cooperate, thus producing a heterogeneous and, presumably, representative sample of $2 Win bettors.

The overall design was the same as in the first study. Two experimenters, different from those who interviewed bettors in Experiment I, were located in the immediate area of the Sellers windows. One of these experimenters would intercept bettors as they approached a $2 Win window and the other intercepted different bettors as they left a $2 Win window. The prebet and postbet interview roles were alternated between the two experimenters as in the first study.

After a brief introductory preamble, the experimenter established whether a bettor was about to make a $2 Win bet (or had just made such a bet) and whether he had been previously interviewed. The experimenters proceeded only with those $2 bettors who had not already provided data. These subjects were then asked to indicate on a 23-centimeter scale how confident they felt that they had picked the winning horse. The mimeographed response scales were labeled with the words "No confidence" at the extreme left and "Complete confidence" at the extreme right. Although no other labels were printed on the scale, the experimenters made explicit that mild confidence would fall in the middle of the scale and ". . . the more confident that a person felt, the further along he should put his mark on the scale." When subjects indicated understanding, they were handed a pencil and a mimeographed scale and directed to ". . . just draw a line across the point in the scale that best corresponds to your own confidence." All bettors in the postbet sample were also asked if they changed their mind about which horse to bet on while waiting in line or while on the way to the window.

Within the limits permitted by extremely crowded conditions, the prebet experimenter visually confirmed that subjects in his sample proceeded to a $2 Win window. Data collection was suspended during the last minute before post time.

Confidence scores for each subject were determined by laying a ruler along the 23-centimeter

TABLE 2

DIVISION OF SUBJECTS WITH RESPECT TO THE OVERALL MEDIAN FOR THE PREBET AND POSTBET GROUPS: EXPERIMENT II

	Prebet group	Postbet group
Above the *Mdn*	19	28
Below the *Mdn*	29	18

scale and measuring his response to the nearest millimeter.

Results

On the strength of insignificant Kolmogorov-Smirnov tests for distributional differences between ratings collected by the two experimenters, data from the two experimenters were combined to test the major hypothesis of the study. The median rating for the 48 subjects in the prebet group was 14.60, and for the postbet group it was 19.30. The median test for these data, summarized in Table 2, produced a χ^2 of 4.26 ($df = 1$), significant at less than the .05 level.

Since data in Experiment II might reasonably be assumed to satisfy interval scale assumptions, a t test between pre- and postbet means was also performed. The difference between the prebet mean of 14.73 and the postbet mean of 17.47 was also significant ($t = 2.31$, $p < .05$).

No subject in the postbet sample indicated that he had changed horses while waiting in line or, if there were no line, just before reaching the window.

DISCUSSION

These studies have examined the effects of real life postdecisional dissonance in the uncontrived setting of a race track. The data furnished by two relatively heterogeneous samples of bettors strongly support our hypothesis derived from Festinger's theory. The reaction of one bettor in Experiment I well illustrates the overall effect observed in the data. This particular bettor had been a subject in the prebet sample and had then proceeded to the pari-mutuel window to place his bet. Following that transaction, he approached the postbet experimenter and volunteered the following:

> Are you working with that other fellow there? [indicating the prebet experimenter who was by then engaged in another interview] Well, I just told him that my horse had a fair chance of winning. Will you have him change that to a good chance? No, by God, make that an excellent chance.

It might reasonably be conjectured that, at least until the finish of the race, this bettor felt more comfortable about his decision to wager on a horse with an excellent chance than he could have felt about a decision to wager on a horse with only a fair chance. In the human race, dissonance had won again.

The results also bear upon the issue of rapidity of onset of dissonance-reducing processes discussed by Festinger (1964). On the basis of an experiment by Davidson described in that work, Festinger argued that predecisional cognitive familiarity with the characteristics of alternatives facilitated the onset of dissonance reduction. It is reasonable to assume that most bettors in the present studies were informed, to some extent, about the virtues and liabilities of all the horses in a race before making a $2 commitment on one. Since never more than 30 seconds elapsed between the time of commitment at the window and confrontation with the rating task, the present results are consistent with the notion that the effects of dissonance reduction can, indeed, be observed very soon after a commitment is made to one alternative, providing that some information about the unchosen alternatives is already possessed. Furthermore, the exceedingly short time span here suggests that the cognitive reevaluation process could hardly have been very explicit or as deliberate as conscious rationalization.

Finally, these studies, like the earlier Ehrlich, Guttman, Schonbach, and Mills (1957) study which showed that recent new car buyers preferred to read automobile advertisements that were consonant with their purchase, demonstrate that meaningful tests of dissonance theory can be made in the context of real life situations. Insofar as real life studies are unaffected by contrived circumstances, improbable events, and credibility gaps, they may offer stronger and less contentious support for dissonance theory than their laboratory counterparts. It is also

clear that such studies will help to define the range of applicability of the theory in natural settings.

REFERENCES

BREHM, J. W., & COHEN, A. R. *Explorations in cognitive dissonance.* New York: Wiley, 1962.

CHAPANIS, N. P., & CHAPANIS, A. Cognitive dissonance: Five years later. *Psychological Bulletin,* 1964, **61**, 1–22.

EHRLICH, D., GUTTMAN, I., SCHONBACH, P., & MILLS, J. Postdecision exposure to relevant information. *Journal of Abnormal and Social Psychology,* 1957, **54**, 98–102.

FESTINGER, L. *A theory of cognitive dissonance.* Evanston, Ill.: Row, Peterson, 1957.

FESTINGER, L. *Conflict, decision, and dissonance.* Stanford, Calif.: Stanford University Press, 1964.

SIEGEL, S. *Nonparametric statistics for the behavioral sciences.* New York: McGraw-Hill, 1956.

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