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From Acclaim to Blame: Evidence of a Person Sensitivity Decision Bias

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In a series of studies, the authors established empirical support for a general decision-making bias that they termed a *person sensitivity bias*. Specifically, a person sensitivity bias consists of a person positivity bias (D. O. Sears, 1983) under positive performance conditions and a person negativity bias under negative performance conditions. The authors conducted the first empirical studies of a direct comparison between individuals and objects performing the same task under both positive and negative performance conditions. Two additional studies tested the boundaries of the sensitivity bias within negatively framed decision dilemmas. The results are discussed in terms of their relevance toward a more comprehensive theory of person–object evaluation differences.

Shortly after the U.S. military's victory over Iraq in Operation Desert Storm, President George Bush enjoyed some of the highest approval ratings ever given to a sitting president. At that time, it was thought that a second term as president was his for the asking. Within 2 years, an economic recession precipitated a drop in his approval rating, and he subsequently lost his reelection bid. In a similar manner, Troy Aikman (former quarterback for the Dallas franchise of the National Football League) was once thought to be a shoo-in for the Football Hall of Fame and was heralded as possibly being one of the great quarterbacks in the history of the game after he led the Dallas Cowboys to a third Super Bowl victory. However, within a few short years, during an injury-riddled losing season, some fans and media called for Aikman to be benched in favor of another quarterback, and questions emerged as to whether he was ever a great quarterback at all or whether he was just a good quarterback on a great team. In both examples, the evaluation of a focal individual rapidly plummeted from being very positive to very negative.

The aforementioned examples are of an age-old adage suggesting that individuals get too much credit when things go well and too much blame when things go poorly. Too much credit in good times and too much blame in bad times jointly point toward a general evaluation bias that we term a *person sensitivity bias*. A person sensitivity bias requires that a person positivity bias exists when things are going well and a person negativity bias exists when things are going poorly. Although the central tenets of a person sensitivity bias may be anecdotally recognized, it has not yet received empirical examination or support.

In a series of studies, we directly tested for a person sensitivity bias by examining whether decision makers' judgments are influenced solely by whether they are evaluating a person or an object. The unchanging and universal (Foa, 1971; Foa & Foa, 1974) nature of objects relative to people validates objects as a benchmark to examine the extent to which a person sensitivity bias exists. Our first study provided decision makers with information about the performance of both people and objects in both positive and negative performance situations to see if decision makers would rate the performance of people and objects in a different manner given identical performance information. Two additional studies elaborate on the results of Study 1 by examining person–object differences in negative performance contexts.

The only prior research and theory that directly addresses comparisons between people and objects argues that people would be treated more favorably, a pattern referred to as a "person positivity bias" (Sears, 1983). In contrast, we argue that the person positivity bias addresses only neutral or favorable performance contexts and that in contexts involving negative performance, people will be viewed less favorably than objects. This person negativity bias should lead evaluators to respond more harshly to the poor performance of people than to similar performance in objects.

The findings from this series of studies provide two general contributions to the decision-making and evaluation literatures. First, we empirically document a general evaluation bias that has long been recognized in organizations. For example, Chen and Meindl (1991) documented how media accounts of Donald Burr, the CEO of People Express Airlines, evolved from emphasizing positive themes (e.g., innovation and ability) to negative themes (e.g., rigidity and inability) as his company's financial performance declined. Second, the nature of the studies introduces an increasingly relevant area of research that has thus far received little attention. That is, the degree to which decision makers evaluate people in a different manner than they do objects is becoming increasingly important to the extent that machines become a larger part of the general work environment by performing

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increasing numbers of tasks that used to be done exclusively by human beings.

Study 1

Although the study of person–object differences is essentially undeveloped territory, research and theory from several different fields can be used to support the notion that decision makers will treat people better than objects. For example, a number of scholars in political science have noted how survey respondents express favorable attitudes toward their legislators but less favorable attitudes toward government bodies (Lau, Sears, & Centers, 1979; Rook, Sears, Kinder, & Lau, 1978; Taylor & Koivumaki, 1976). Bolstered by these findings, Sears (1983) analyzed evaluations of university instructors and the classes they taught and found that evaluations of teachers tended to be more favorable than evaluations of the class. He proposed that evaluators tend to judge people in more favorable terms than they do objects: This pattern is what he referred to as the person positivity bias.

The theoretical underpinnings of the person positivity bias are supported by the notion that individuals are more attracted to that which is deemed more similar to them (Byrne, 1971). On average, individual decision makers should attribute more similarity to themselves and another person than they should attribute to themselves and an object. For example, in a theoretical description of attribution theory and leader–member interactions, Green and Mitchell (1979) proposed that the more a leader sees the member as similar, the more likely the leader is to form favorable causal attributions for the member's performance (e.g., attributing success to internal causes and failure to external causes). A substantial body of research has supported the general proposition that similarity leads to advantageous outcomes in the form of more favorable attitudinal and behavioral outcomes (Byrne, 1971; Pfeffer, 1983; Williams & O'Reilly, 1998).

Extending the notion of person positivity to negative contexts, however, has not been demonstrated and seems problematic on several counts. Evidence for a person positivity bias may emanate from the particularistic relationship (Foa, 1993) and the closer psychological distance (Greller & Herold, 1975) that exist between people rather than between people and objects. This positivity bias may be especially true in positively framed situations (Sears, 1983). However, because relationships and exchanges with people are more particular than those with objects are, decision makers may be more likely to change their evaluations when an individual's performance level changes and to reduce their evaluations to a greater extent than they would with objects. That is, the same particular status, which benefits people in positive situations, might actually harm people in negative performance situations. Evaluations of objects, which are thought of in more universal or unchanging terms (Foa & Foa, 1974), will not vary as widely, leading to less variation in evaluation.

Another theoretical explanation suggesting that people will be evaluated less favorably than objects in negative contexts is repulsion theory. Rosenbaum (1986a, 1986b) argued that similarity does not necessarily lead to liking but that dissimilarity leads to repulsion. His argument rests on the assumption that similarity breeds comfort and dissimilarity creates discomfort or dissonance (Festinger, 1957). Festinger asserted that it is the uncomfortable state of dissonance that motivates an individual to act. The discomfort that a performance evaluator feels for a person would tend to be low under conditions of good performance but would be high under conditions of poor performance. Rosenbaum (1986a, 1986b) provided a theoretical window through which a person sensitivity bias might occur. He asserted that individuals feel discomfort when other individuals are deemed to be dissimilar to themselves. However, individuals will likely not feel the same level of discomfort with objects as they will with other individuals.

These arguments collectively suggest that people can be expected to be evaluated more positively in favorable performance situations but less positively in negative performance situations, relative to objects. We proposed two interactions consistent with a person sensitivity bias.

> *Hypothesis 1:* Under good performance conditions, raters will more favorably evaluate persons than objects; in contrast, under poor performance conditions, raters will less favorably evaluate persons than objects.
>
> *Hypothesis 2:* Under good performance conditions, raters will exhibit less discomfort with persons than with objects; in contrast, under poor performance conditions, raters will exhibit more discomfort with persons than with objects.

Method

Participants, research design, and decision task. The respondents for Study 1 were 111 undergraduate students at a large midwestern university who participated as part of a class requirement. The experiment used a 2×2 mixed factorial design, with performance (positive or negative) treated as a between-subjects factor and person–object treated as a within-subjects factor. Respondents received one of two scenarios in which the performance manipulation was embedded. Participants were told that they were "a vice president of a very large holding company" and had recently acquired a new manufacturing firm.

Independent variables. The within-subjects manipulation of person–object was embedded in the scenario as respondents were given a description of both people and objects (machines) operating independently in a factory setting. It was written as follows:

> The production facility at this plant consists of two lines which produce the same product. Line A is staffed entirely by machines (industrial robots) that assemble and package the product for shipment. Line B is staffed entirely by people who do exactly the same work as the machines on line A. Each line is operated entirely independent of each other, and have similar production and quality levels. The only difference is that one line is operated entirely by machines and the other line is operated entirely by people.

The between-subjects manipulation of positive versus negative performance was accomplished by telling the respondents the following:

> Performance on both lines has EXCEEDED (NOT MET) your company's standards for productivity and quality. You have spent 3 months observing both lines, and reviewing records of past performance. Your observations are consistent with past performance records.

Both scenarios were worded exactly alike except for the performance information.

Dependent variables. Respondents answered questions regarding performance perceptions and level of discomfort for both the individuals and the machines. The order of the questions was randomized. Performance and discomfort for individuals and objects were rated on a 7-point Likert scale with 1 representing the lowest level of performance and discomfort

and 7 representing the highest level of performance and discomfort. Performance evaluation was measured by responses to the question "The performance of the individuals [machines] exceeded expectations." Discomfort was measured with the question "The performance of the individuals [machines] caused me discomfort." Each dependent variable was measured separately for both the individuals and the machines. Because of high levels of skewness in the dependent measures, they were normalized following the guidelines provided by Tabachnick and Fidell (1996).

Manipulation check. Participants reacted to the performance information as would be predicted for both individuals and machines. For evaluations of individuals, performance affected both subsequent performance evaluations (Ms = 3.8 and 5.8, respectively), $F(1, 111) = 46.63$, $p < .001$, and level of discomfort (Ms = 3.7 and 1.9, respectively), $F(1, 111) = 42.18$, $p < .001$. For evaluations of machines, performance affected both subsequent performance evaluations (Ms = 4.0 and 4.9, respectively), $F(1, 111) = 6.06$, $p < .05$, and level of discomfort (Ms = 3.3 and 2.3, respectively), $F(1, 111) = 8.51$, $p < .01$. The purpose of the study, however, was comparative evaluations between individuals and objects (machines).

Results

We used a multivariate analysis of variance to test for all possible main effects and interactions. The results of this analysis for performance evaluations (Model 1) and discomfort levels (Model 2) are displayed in Table 1.

Hypothesis 1 tested for the person sensitivity effect on performance evaluations: We predicted that persons would be rated higher than objects under favorable performance conditions but lower than objects under poor performance conditions. Model 1 in Table 1 demonstrates that the interaction term was statistically significant, $F(1, 109) = 22.68$, $\omega^2 = .17$, $p < .01$. Figure 1 graphically presents the interaction. As we predicted, under positive performance conditions, individual performance was rated more positively than machine performance, $t(55) = 2.86$, $p < .01$, whereas under negative performance conditions, individual performance was rated less positively than machine performance, $t(54) = 4.20$, $p < .01$. Therefore, Hypothesis 1 was supported.

Hypothesis 2 tested for differences in discomfort between individuals and objects: We predicted that persons would generate less discomfort than objects under favorable performance conditions but more discomfort than objects under poor performance conditions. Model 2 in Table 1 demonstrates support for the proposed interaction term, $F(1, 109) = 8.70$, $\omega^2 = .07$, $p < .01$. Under positive performance conditions, ratings of discomfort tended to be lower for people than objects, $t(55) = -1.99$, $p < .05$, whereas under negative performance conditions, ratings of discomfort were higher for people than objects, $t(54) = 2.18$, $p < .05$. This pattern supports Hypothesis 2; Figure 2 graphically demonstrates this relationship.

Discussion

The results of this study support our proposed person sensitivity bias, demonstrating that identical performance of people and objects was evaluated differently by raters, with people receiving more extreme ratings than objects. These effects occurred in spite of having respondents explicitly informed that the tasks performed, the output, and the performance levels of both the people and the machines were exactly the same. The results also offer some insights as to why people might be evaluated more extremely, because individuals generate more extreme levels of discomfort than objects.

Although a person positivity bias has received a measure of theoretical legitimacy and empirical support in prior research (e.g., Byrne, 1971; Sears, 1983) and in our first study, the notion that individuals will less favorably evaluate other individuals than they will objects when things are not going well has not been established. In Study 1, we found evidence that when performance was substandard, people were evaluated more negatively than objects. In the next two studies, we further investigated the negative side of the sensitivity bias and tested whether the proposed difference in evaluation would affect more distal outcomes such as commitment. Would decision makers be willing to more readily replace poorly performing individuals than they would poorly performing objects? In our next study, we sought to test the boundaries of the person negativity bias and investigated whether the negative perceptions of individuals in poor performance conditions resulted in lower levels of commitment to individuals than objects.

Study 2

We designed Study 2 with several purposes in mind. First, because Study 1 had used a within-subjects experimental design, we sought to replicate our results using a between-subjects design. Second, we focused only on negative contexts, given that there are fewer tests of the person sensitivity bias in such contexts. Third, we changed the specific type of negative situation from a perfor-

Table 1
Multivariate Analysis of Variance for Performance Evaluations and Level of Discomfort for Objects and Individuals

Model and variable	$F(1, 109)$	ω^2
Model 1: Performance evaluation		
Between-subjects variable: Performance	10.85	.09*
Within-subjects variable: Person vs. object	0.02	.00
Performance × Person vs. Object	22.68	.17*
Model 2: Level of discomfort		
Between-subjects variable: Level of discomfort	29.40	.21*
Within-subjects variable: Person vs. object	0.01	.00
Level of Discomfort × Person vs. Object	8.70	.07*

Note. $N = 111$.
* $p < .01$.

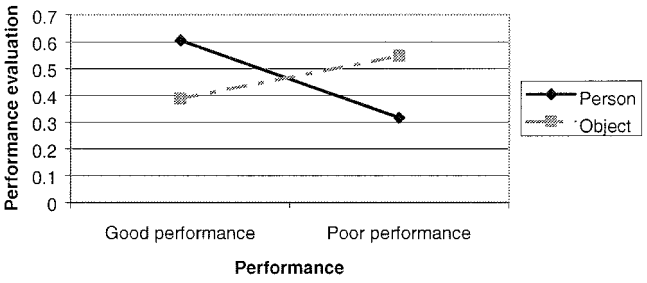

Figure 1. Interaction between person versus object and performance evaluation in Study 1.

mance evaluation context to an investment context. Finding continuing support for the negative half of the person sensitivity bias (the person negativity bias) in light of these changes would increase our confidence in the findings and their generalizability.

The Escalation Context

A large body of research conducted over the past several decades has enhanced our understanding of decisions to continue investing time and energy into financially dubious situations. The literature examining antecedents to and implications of this type of decision dilemma is rooted in Staw's (1976) initial research. He found that receiving negative information in an investment context might cause decision makers to actually increase subsequent levels of investment, a decision error he called the "escalation of commitment." Escalation contexts are inherently negatively framed (Bazerman, 1984; Whyte, 1993). These dilemmas entail situations in which a large amount of time or money was previously invested, but because of negative information, the decision maker must decide whether to continue investing or change the course of action. The criterion of interest in these studies is often level of commitment. Therefore, Study 2 expanded our person sensitivity bias beyond performance evaluations and level of discomfort by examining level of commitment as the dependent variable.

Most escalation-of-commitment research has been concerned with a decision maker's evaluation of an object or a project (see Brockner, 1992, or Staw, 1997, for a review). A few studies have been concerned with evaluations of individuals (Bazerman, Beekun, & Schoorman, 1982; Schoorman, 1988; Staw & Hoang, 1995). As yet, there has been no research that has directly compared reactions to people and reactions to objects in the same study. The findings of Study 1 suggest that in our escalation context, negative performance will lead decision makers to express lower commitment to people than objects. Thus, our Hypothesis 3 reflects one half of the interaction that we proposed in our first hypothesis, namely:

> *Hypothesis 3:* In the face of poor performance, decision makers will exhibit a lower level of commitment to individuals than to objects.

Study 2 also investigated how the level of threat ("problem threat") to the decision maker influenced escalation behavior. In a theoretical essay, Staw, Sandelands, and Dutton (1981) integrated findings from a variety of literatures to argue that decision makers tend to restrict information processing under situations that are deemed threatening (grave) to the self-image or work identity of the decision maker. Such situations may cause decision makers to become more rigid and narrow in their level of both controlled and automatic information processing (Lord & Kernan, 1987). In other words, they would tend to eschew change, a response that Staw et al. referred to as the "threat-rigidity effect."

In escalation dilemmas that pose a high level of problem threat to the decision maker, we expected that the threat would create a strong situation and drive the overall level of commitment in a pattern consistent with the threat rigidity effect, leading to a main effect for problem threat but no differences in commitment levels to people or objects. Under high levels of threat, information such as whether a decision concerns a person or an object would be less salient to the decision maker than would the overriding concern for self-preservation. However, we expected person–object differences to be more pronounced under conditions of less threat to the decision maker. We thought that nuances such as person–object differences would exhibit themselves in less personally threatening situations and would interact with the level of threat.

> *Hypothesis 4:* Decision makers exposed to more threatening problems will have higher levels of commitment.
>
> *Hypothesis 5:* Person–object differences will be related to level of commitment when individuals evaluate less threatening problems but not when individuals evaluate more threatening problems.

Method

Participants, research design, and decision task. Three hundred and eighteen undergraduate students at a large midwestern university participated in this study as an opportunity to gain extra credit toward their final grade in a senior-level business course. None of the respondents in Study 2 were involved in any way with Study 1. A 2 × 2 factorial design varied problem threat and person–object as independent variables. The scenarios were worded as similarly as possible in terms of the descriptive language used and time and money previously invested (sunk costs). In effect, we tried to make the sole difference between the two types of scenarios a simple substitution of a few words to reflect our four different conditions.

Participants were asked to read a short scenario and then honestly answer several questions that followed. All respondents were told that they were the "deputy director of state prisons" and that one of their assignments last year was to decide on a security measure that would reduce the occurrence of two problems: (a) the number of escapees from the prison and (b) the number of intrusions by prisoners into restricted areas of the prison. Respondents were told that the solution they chose incurred start-up costs of $300,000 and yearly costs thereafter of $225,000.

Respondents were then informed that their year-end review of the security measure had been disappointing, because there had been no appreciable drop in the number of escapees or the number of intrusions into

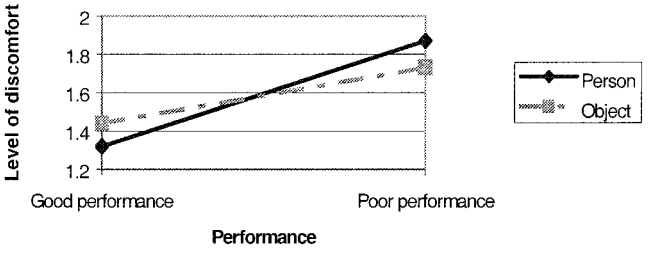

Figure 2. Interaction between level of discomfort and person versus object in Study 1.

restricted areas. They were faced with deciding whether to invest another $225,000 in the current surveillance system or change the system and incur new installation costs in addition to yearly costs.

Independent variables. The person–object manipulation was accomplished by telling respondents that the security measure they had implemented was either security guards or a motion detector system. The problem threat manipulation was accomplished by varying information about the type of prison in which the system was installed as well as the visibility of the problem. Respondents in the low-threat condition were told that the new security measure was for a minimum-security prison that housed nonviolent offenders. They were also told that the escape and intrusion problems had not achieved high-priority status in relation to other concerns and that no one was aware of the problem. In the high-threat condition, respondents were told that the security measure was for a maximum-security prison that housed violent offenders. They were also told that the escape and intrusion problems were a high-priority issue and that there was considerable organizational awareness of the problem.

Dependent measure. We procured two different measures of commitment. The primary dependent measure was similar to that used in previous escalation-of-commitment research (e.g., Conlon & Garland, 1993; Garland & Conlon, 1998). On the basis of the information provided within the scenario, respondents were asked to indicate, on a scale ranging from 0 to 100, their likelihood of allocating the money to maintain the current system. As in Study 1, this variable was normalized to account for skewness. A second measure simply asked respondents if they were going to change security systems this year: The response scale for this question was a dichotomous *yes* or *no*.

Manipulation check. On a subsequent page, respondents answered five questions intended to ensure that our manipulation of problem threat was successful. These questions were measured on 5-point scales with anchors of *strongly disagree* and *strongly agree*. Questions included "The problem was highly visible," "I would feel internal pressure to justify my initial choice of security measures," and "I would feel internal pressure to resolve this situation." The five items were averaged into a perceived threat scale ($\alpha = .82$). A 2 × 2 analysis of variance (ANOVA) on this manipulation check revealed that, as we expected, respondents in the high-problem-threat condition reported that the problem was more threatening than did respondents in the low-problem-threat condition (*M*s = 4.10 and 2.97, respectively), $F(1, 314) = 203.34$, $p < .001$. The person–object manipulation did not affect this manipulation check.

Results

A 2 × 2 ANOVA examined the influence of the type of security system (person–object) and problem threat on the dependent measure of likelihood of maintaining the current system. Results revealed a main effect for the person–object manipulation, $F(1, 314) = 13.21$, $p < .01$, $\omega^2 = .04$, as well as an interaction between person–object and problem threat, $F(1, 314) = 9.56$, $p < .01$, $\omega^2 = .03$. The main effect revealed that decision makers who had installed a motion detector system were less likely to change the system than decision makers who chose security guards (*M*s = .556 and .745, respectively), supporting Hypothesis 3. In addition, the yes–no question "Will you change systems this year?" produced a similar pattern: Specifically, only 85 of 153 respondents (56%) who implemented motion detectors said they would change systems, whereas 123 of 165 respondents (75%) who implemented security guards said they would change systems, a significant difference, $\chi^2(1, N = 318) = 12.65$, $p < .001$. These two findings provide considerable support for our third hypothesis. However, there were no significant effects on either measure due to our manipulation of problem threat (Hypothesis 4 was not supported).

Hypothesis 5 asserted that commitment difference between persons and objects would be greater when the threat level was low. The interaction reported above supported this contention. Cell means and the pattern of the interaction are shown in Figure 3. As one can see in Figure 3, when problem threat was low, respondents were significantly more committed to the motion detector than to the security guards, $t(314) = 3.01$, $p < .01$ (i.e., the likelihood of change was lower). When problem threat was high, there was no difference in commitment levels to people or objects, $t(314) = 0.09$, *ns*. In addition, a contingency analysis of the dichotomous "change systems" question revealed a similar interaction. When problem threat was low, less than half (37 of 81, or 46%) of the respondents who had implemented motion detectors said that they would change systems, whereas 80% (65 of 81) of those who had implemented security guards indicated that they would change systems, a significant difference, $\chi^2(1, N = 162) = 21.37$, $p < .001$. However, when problem threat was high, the threat rigidity effect was quite pronounced, with intentions to change systems being uniformly low for both motion detectors (24 of 72, or 33%) and security guards (26 of 84, or 31%), $\chi^2(1, N = 156) = 0.10$, *ns*. These patterns support our Hypothesis 5.

Discussion

Consistent with the person sensitivity bias discovered in our first study, individuals were again punished relative to objects when events went poorly. Thus, the person negativity bias in negatively framed situations again received support. The results from our second study also shed light on the threat rigidity theory first proposed by Staw et al. (1981). Consistent with their theory, respondents tended to restrict information processing (by ignoring person–object differences) when they were under high threat yet tended to more fully evaluate subtle information when they were under low threat. However, contrary to threat rigidity, there was no main effect for problem threat or subsequent level of commitment. Perhaps given the context (prison escapes), even a problem described as a small threat was still perceived as quite serious by the respondents. Nonetheless, to our knowledge this is the first direct

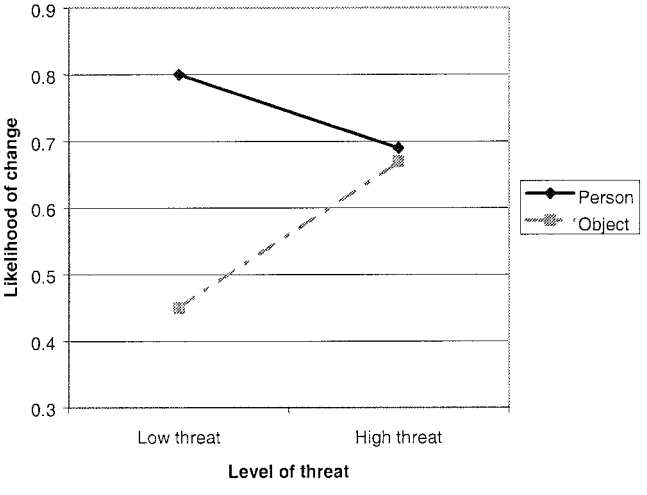

Figure 3. Interaction between problem threat and person versus object in Study 2.

empirical test of threat rigidity theory at the individual level of analysis.

Study 3

One concern regarding Study 2 is that the manipulation was done at the group level. That is, the person manipulation was a group of security guards. Sears (1983) found that groups of individuals, such as government bodies, were treated worse than individuals representing those groups. A second concern regarding Study 2 is a potential confound: Perhaps respondents were more adverse to changing the motion detectors because they would have had to physically remove and replace equipment. That is, it may have seemed easier to replace security guards (even though respondents were told that the cost would have been the same) than it would have been to change motion detectors (which might have required major disassembly and assembly of equipment).

Study 3 was designed in part to address these shortcomings. First, subjects evaluated either a single individual or a specific object (a computer program). Second, the object did not have a tangible physical element to it, as the motion detector system did. In addition to predicting that decision makers would be more committed to objects than people (our Hypothesis 3, already supported on the basis of the results of our first two studies), we outline our additional manipulations and hypotheses below.

Prior Success

When individuals evaluate a person or an object, one cue that is relied on is the prior history of the object or the person in question. Staw and Ross (1978) addressed past success or failure for a situation involving the funding of an ongoing project. Although they did not find a main effect for past success on future allocation decisions, there are potential differences in the way that decision makers might treat the past successes of persons versus objects that warrant a revisiting of this main effect hypothesis. Moreover, Staw and Ross's treatment of prior success was not tied to the object or the project being funded but rather to the decision maker's past success or failure in choosing hypothetical projects. In the present study, we examined the past success or failure of the people or objects themselves (the targets of commitment).

A key difference between objects and people is that objects are likely to be more consistent over time in terms of their performance (good or bad) than are people. This perception is consistent with Foa and Foa's (1974) findings that the value of social exchanges involving particularistic resources is more ephemeral than exchanges involving universal resources. Therefore, the perceived consistency of objects should make the past performance of objects a more powerful cognitive "anchor" on commitment levels, keeping the decision maker committed to the object despite new information indicating poor performance. In effect, decision makers are expected to discount new negative information received about objects because to discount the previous success of an object would be akin to rejecting the consistent or universal nature of goods. For situations involving people, the impact of prior successes is thought to be more fleeting because human behavior is viewed as more unpredictable. Here, a recent failure should more easily counterbalance prior successes, leading to a more critical evaluation of people than of objects.

For situations involving low prior success (or previous failures), the relationships are thought to reverse. That is, an object with low previous success would find it more difficult to shake a negative perception than would a person.

> *Hypothesis 6:* Decision makers will express greater commitment when prior success has been high rather than low.
>
> *Hypothesis 7:* When prior success has been low, decision makers will express more commitment to people than to objects. However, when prior success has been high, decision makers will express more commitment to objects than to people.

Type of Attribution

Variations in continued investment in people or objects might also be rooted in the type of attribution that is associated with the performance of a person or an object. People typically seek to determine whether behavior (in this case, a given level of performance) is determined by internal or external causes. Internal attributions for poor performance could include reasons such as low ability or a lack of effort, whereas external attributions could include reasons such as task difficulty or unforeseeable accidents (bad luck). As one can see from these examples, attributions can also differ in the amount of perceived control that one has over the cause: Explanations such as ability and task difficulty are deemed to be beyond one's control or influence, whereas explanations such as effort are deemed to be volitional.

External or internal attributions for negative performance regarding a previous investment were analyzed by Staw and Ross (1978) using the terms *exogenous* or *endogenous* basis for the current negative information. Reasons such as corruption, work incentives, illiteracy, and rain were analyzed and shown to affect subsequent allocation behaviors. However, much of the research on attribution theory has its theoretical roots in the writings of Kelley (1973) and Weiner (1985) and in most cases involves an individual's attributional behavior regarding other people, not objects.

We expected that information in the form of attributions pertaining to current performance would have a greater impact on evaluations of people than objects, because people are the entity whose performance is perceived to be more variable and volitional from one situation to the next. Again, the consistency or invariability of object performance relative to person performance provides a key explanation for predicted differences in reacting to information about people versus objects. Because of the particular nature of an interpersonal relationship, decision makers will be much more attuned to the attributional explanation of performance. Consistent with Weiner (1985), variations in effort would more easily be attributed to an individual who is particular than to something that is thought of in general terms.

Regarding objects, decision makers may be comparatively uninfluenced by internal versus external attributions. Although both internal and external attributions can explain performance for objects, objects will be less likely to be perceived to have performed poorly because of their own volition (e.g., a lack-of-effort explanation is not likely to be seen as plausible for a machine, at least to most people). Thus, the decision maker will spend less time considering the implications of different attributions, and attribution will have less of an impact on commitment levels to an object than it would an individual.

This line of reasoning is consistent with that of Green and Mitchell (1979), who noted that when a person evaluates another individual, "causal attributions to effort appear to be the primary determinant of how performance is evaluated and the nature of the subsequent rewards or punishments" (p. 435). Therefore, we expected to find a main effect for attribution and an interaction between attribution and person–object on investment intentions such that:

> *Hypothesis 8:* Decision makers will express more commitment when external attributions are given for poor performance than when internal attributions are given for poor performance.
>
> *Hypothesis 9:* Decision makers' commitment to individuals will be greater when external attributions are offered for poor performance rather than internal attributions. Decision makers' commitment to objects will be significantly less affected by attribution than will individuals.

In sum, we expected that past successes or failures would be more stubbornly salient for objects because those successes or failures are thought to stem from less variable sources. This attention to the attributional causes of performance will also lead internal attributions of poor performance to be more damning to people than objects, which would demonstrate clear evidence of a person negativity bias.

Method

Participants, research design, and decision task. Three hundred and ninety-one undergraduate students drawn from the same population as was used in Study 1 and Study 2 (but in a different semester) participated. No participant in Study 3 participated in either of the previous studies. Participants were randomly assigned to one of eight treatment conditions in a $2 \times 2 \times 2$ factorial design in which past success, attribution, and person–object were manipulated as independent variables.

Respondents were asked to carefully read a short scenario and then honestly answer several questions as if this scenario were actually true. A sample of one of the scenarios appears below. The scenario is followed by a discussion of the manipulations.

> As the director of operations, 2 years ago you conducted an extensive search for a new accounting software system for your company. The requirements for this software are highly specific, and the successful integration of the software is very demanding and lengthy. The selection process lasted well over 6 months. Unfortunately, in your estimation, there was a lack of superior alternatives. You decided on a package that you considered a marginal candidate. It did not perform significantly better than any of the other candidates in any phase of the selection process. It had seen both successes and failures in the past. Over the past 2 years, you have invested well over $600,000 into the software's implementation. Recently, you have conducted a year-end review of the software's progress. Things do not look very promising. Its overall performance by the end of the 2nd year of integration is well below what you would have expected (based on comprehensive critical evaluations). The low reviews, you feel, are mostly attributable to reasons internal to the software. Your past experience tells you that there is little chance for its success. You must now decide whether you will allocate an additional $200,000 from your budget to continue the implementation process.

Independent variables. For the person–object manipulation, half of the respondents received a scenario involving the choice and subsequent performance of an object (an accounting "software program"), whereas the other half of the respondents received a scenario involving the choice and subsequent performance of an individual (an accounting "director"). As in Study 2, this manipulation involved the changing of only a few words. For example, when the person or the object had a record of prior success, the person (object in brackets) scenario read,

> You decided on an individual [a package] who [that] showed great promise and potential. He [It] performed better than all of the other candidates in all phases of the selection process. . . . His [Its] overall performance by the end of the 2nd year of training [integration] is well below what you would have expected.

A person or an object with a high level of prior success was manipulated as demonstrated at the end of the previous paragraph; the scenario presented earlier shows an example of low prior success. To describe the candidate as having only low prior success (in other words, all failures) would obviously harm the realism of the study because, in most instances, no one would hire someone for whom past performance was uniformly poor. Thus, the low-prior-success condition contained a picture of mixed success that, relative to the high-success condition, was considerably lower.

For the attribution manipulation, the internal attribution for the low performance was as follows: "The low reviews, you feel, are mostly attributable to reasons internal to the candidate [software]." The external attribution for the low performance was as follows: "The low reviews, you feel, are mostly attributable to reasons external to the candidate [software]."

The use of a nonspecific internal–external attribution explanation was intentional. Volitional explanations such as laziness can easily be offered as an internal reason for the low performance of a person but not an object. In contrast, software "crashes" might be compared with physical breakdowns in people but would be difficult to craft in such a way as to elicit exactly similar meanings. However, this study was not intended to focus on specific forms of internal or external attributional causes (as was the case in Staw & Ross, 1978) but rather the extent to which a decision maker would be attentive to attribution itself as a decision cue and the resultant importance of internal–external attribution in future allocation based solely on whether the decision maker is dealing with a person or an object. To the extent that the scenario would contain an additional description of either an internal or an external attribution, the concomitant divergence in the dynamics of the scenario would weaken the pure person versus object manipulation.

Dependent measure. On the basis of the information provided within the scenario, respondents were asked to indicate, on a scale ranging from 0 to 100, the probability that they would continue investment in either the person or the object.

Results

Manipulation checks. We checked our manipulations of attribution and success by using a separate sample of 147 respondents. The manipulation of prior success was checked by having these respondents answer the question "Prior to selecting the accounting director [software program], how successful was he [it] on prior tasks?" The manipulation of attribution was checked with the question "To what extent is the current performance problem the fault of the accounting director [software program]?" Both items were measured on 7-point scales, with higher scores reflecting higher prior success and a belief that the performance problem was the fault of the accounting director or the software program. A $2 \times 2 \times 2$ ANOVA on the prior success manipulation check revealed a strong main effect for the success manipulation, because those who read scenarios depicting high prior success perceived that the person–object had been more successful in the past than did those

who read scenarios depicting low prior success (*M*s = 3.90 and 5.74 for low and high success, respectively), $F(1, 139) = 112.29$, $p < .001$. It is interesting that this measure was also affected by our person–object manipulation, with people being perceived as having been more successful in the past than objects (*M*s = 5.10 and 4.53, respectively), $F(1, 139) = 10.76$, $p < .001$, even though performance was described in identical terms.

The attribution manipulation was also successful, with those who read a scenario depicting the performance problem as being internal to the person or the object reporting that the performance problem was the fault of the person–object (*M*s = 4.27 and 3.73 for internal and external attributions, respectively), $F(1, 139) = 6.28$, $p < .01$. The person–object manipulation also influenced this manipulation check, with scenarios about people leading to greater attributions of responsibility for failure than scenarios about objects (*M*s = 4.25 and 3.74, respectively), $F(1, 139) = 5.72$, $p < .05$.

Tests of hypotheses. A 2 × 2 × 2 ANOVA examined the effects of person–object, past success, and attribution on decisions to allocate further funds in light of negative information. All main effects were in the predicted directions: For person–object, $F(1, 383) = 2.00$, $p < .10$, $\omega^2 = .01$; for past success, $F(1, 383) = 23.05$, $p < .001$, $\omega^2 = .06$; and for type of attribution, $F(1, 383) = 4.20$, $p < .05$, $\omega^2 = .01$ (all one-tailed tests). Consistent with the previous two studies, individuals ($M = 36.10$) were treated worse than objects ($M = 40.06$) in negatively framed dilemmas. The small effect size may have been due to mitigating positive information embedded in the design, that is, external attribution and previous success. An analysis conducted without these two conditions yielded a stronger main effect, $F(1, 295) = 4.38$, $p < .05$, $\omega^2 = .02$, with decision makers being more committed to objects (38.11) than to people (32.00). Hypotheses 6 and 8 predicted main effects for both past success and attribution type, respectively, and were supported by the data. As we expected, greater past success ($M = 44.84$) and external attributions ($M = 40.96$) for performance led to higher commitment levels than less past success ($M = 31.59$) and internal attributions ($M = 44.84$).

Hypothesis 7 outlined an interaction asserting that decision makers would be more committed to people than objects when prior success was low but would be more committed to objects than people when prior success was high. This interaction was marginally significant, $F(1, 373) = 1.85$, $p < .10$, $\omega^2 = .01$, and the general pattern was consistent with the hypothesis and is demonstrated in Figure 4.

Hypothesis 9 outlined an interaction asserting that attributional cues would be more important when decision makers rate other individuals than when they rate objects. Hypothesis 9 was supported in the ANOVA by the significant two-way interaction between person–object and attribution, $F(1, 373) = 5.80$, $p < .05$, $\omega^2 = .02$. The pattern of results was consistent with our hypothesis and is depicted in Figure 5.

Discussion

Like Study 2, Study 3 found that decision makers treated people and objects differently in certain situations. Decision makers were more attentive to attribution when evaluating individuals and punished individuals more severely (Green & Mitchell, 1979) when the attributions were deemed internal. People were given less

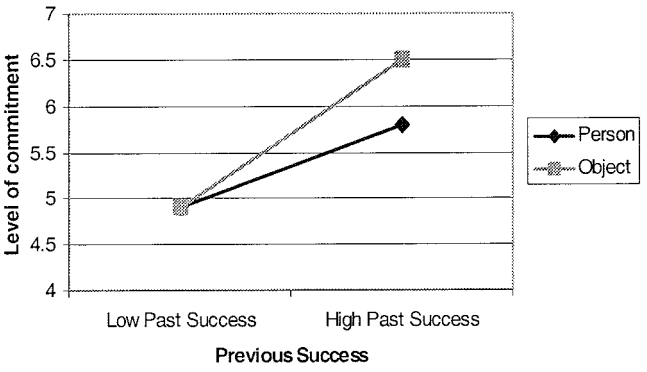

Figure 4. Interaction between person versus object and level of prior success in Study 3.

"credit" (in the form of commitment) when their past performance had been high, relative to the credit bestowed on objects. An interesting finding from our manipulation check of past performance was that the prior performance of people was viewed more favorably than that of objects, although both were described in identical terms. This finding suggests that the person positivity bias may also exist when one is viewing positive past performance: Perhaps people view past events involving people through "rose-colored glasses" while discounting prior histories of objects. However, it takes only a recent negative event to reverse the effects of the person positivity bias. This decision bias may explain why some politicians (e.g., the initial example in the introduction) can so quickly move from positive to negative ratings in opinion polls.

Our results should not be taken as endorsing the idea that attributional information is unimportant when the performance of objects is being evaluated. The intention of this study was to look for differences in the sensitivity that decision makers have for attribution rather than actual attribution effects themselves. As Staw and Ross (1978) amply demonstrated, when specific attributional causes for a project's (i.e., an object's) woes were presented, differences in subsequent levels of decision makers' commitment resulted. Therefore, we would have to assume that as the attributional causes are explicitly elaborated, the impact of attribution would increase to an extent that there would be main effects for objects. However, we would argue the same for attributional effects that were made explicit for situations involving people as well. As a result, we would argue that although the overall magnitude for attribution effects might increase, the interaction found in this study would remain significant.

General Discussion

The major contributions to the literature made by our studies are the introduction and empirical examination of the person sensitivity bias. We provide a more holistic explanation of a general evaluation bias that has been recognized in organizations but never defined and tested. By incorporating both good and bad performance as well as a direct comparison between individuals and objects, we found that raters evaluated the performance of individuals higher than they did objects under favorable performance conditions (the commonly found person positivity bias). However, we also found that raters evaluated the performance of other

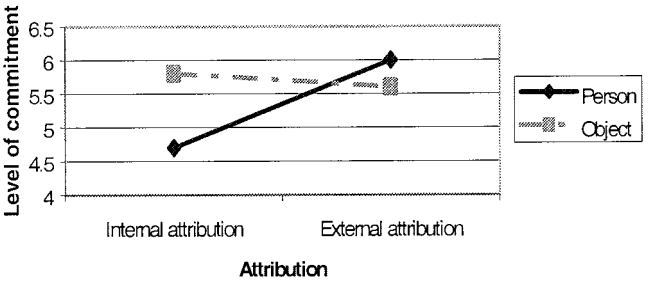

Figure 5. Interaction between person versus object and type of attribution in Study 3.

individuals lower than they did objects under poor performance conditions (what we coined the "person negativity bias"). This bias existed despite the fact that the respondents were explicitly informed that the performance of the two were exactly equal. The person sensitivity bias also extended to the level of dissonance or discomfort that an individual felt given the performance level. Under favorable performance conditions, objects created more discomfort than individuals, whereas under poor performance conditions, persons created more discomfort than objects. In sum, a person sensitivity bias best explains both the person positivity bias found in previous research and the person negativity bias found in our two follow-up studies.

Our studies collectively show that the person sensitivity bias has applicability in at least three important areas. Study 1 demonstrated that performance evaluations of people and objects are affected by whether task performance has been successful or unsuccessful. To the extent that performance evaluations comprise a central component of reward systems, promotions, and career management in organizations, our research highlights that managers may be overrewarding positive performance while overpunishing negative performance. We are not suggesting that managers ought to drastically change their reward patterns. However, perhaps if managers and employees recognized these tendencies, employees whose performance levels are at the "tails" of the performance distribution would not be rewarded or punished as extremely.

Studies 2 and 3 extend and replicate the applicability of the person sensitivity bias from a performance evaluation context to a resource allocation context. In particular, the two studies collectively demonstrate that in situations in which performance has been substandard, decision makers are less willing to allocate additional funding to people than objects. In fact, the person negativity portion of the person sensitivity bias received complete support because there were no conditions in Study 2 or Study 3 in which individuals were more committed to than objects. These results have important implications for how managers make decisions about struggling projects and the people or machines that are deemed responsible for the performance.

Related to the resource allocation findings, the results of Study 2 may also have some interesting implications for the growing literature on managing change in organizations (e.g., Kotter, 1996) and, in particular, the examination of employees' silence and resistance to change (cf. Morrison & Milliken, 2000; Piderit, 2000). Recall that decision makers were significantly more likely to replace people than machines under conditions of poor performance. As organizational change projects frequently affect both people and technology, our research offers the testable proposition that there will be even greater organizational resistance to changes in technology than to changes in people. This resistance may be because the "survivors" of the change project may assume that they can more easily adapt new people to their own behavioral patterns and organizational rhythms, whereas new technology would simply be immutable and force the survivors to do all of the accommodation. Perhaps an interesting study would be to examine employees' reactions to news that people or technology is being replaced, and informing the survivors as to whether the replacement would be people or technology, and to gauge their resistance to the organizational change effort.

Although our discussion here focuses on the impact of such decisions on people, our studies also provide intriguing insights into how machines are evaluated in terms of their performance. There is some evidence that robots and other machines put in the workplace are frequently anthropomorphized to an extent by the people who work with them. Pransky (1997) wrote, "I've met the Seven Dwarfs, Cheech and Chong, Virginia, Billie, and other nicknames for steel employees once they are on the factory floor" (p. 63). It is easier to think of those objects in more human terms than the same object named "XM3000." The question is, does naming objects lead people to see the objects in more "human" terms, thus opening up the potential for viewing their past performance history, and attributional explanations for performance in more human (and harsher) terms?

The relevance of our findings becomes increasingly important to the extent that the new millennium unveils an information-based society in which work relationships between and about people now include information, computers, and robotic-based decisions and relationships. Sales of industrial robots in the United States surpassed 1 billion dollars in 1996 (Pransky, 1997). Organizations can now frequently choose to have either people or machines perform similar tasks, and many managers are increasingly asked to manage or oversee inanimate robots alongside human workers. For example, in July 2000, the U.S. Food and Drug Administration approved the use of the first surgical robot, the da Vinci Surgical System. Meijer, a large midwestern chain of retail stores, has recently begun replacing some of its "human" checkout lines with machines that scan the price codes, total the sale, collect payment, and distribute change to the customers. Military leaders increasingly rely on, or are exposed to, computer models in their decision-making processes. Automakers must constantly make allocation decisions that focus on either technology (robotics) or people (training and development, etc.). How the success or failure of people versus machines performing these vastly different tasks affects the judgments of patients, consumers, or government officials is a mostly unstudied area of increasing importance that we hope our study is the first of many to investigate.

A limitation of our three studies is the generalizability of our findings. This lack of generalizability may be especially true when researchers are conducting a lab-based experiment that uses student respondents who are asked to evaluate short scenarios. However, although research on decision making and decision biases has frequently relied on student samples, some prior research has shown that both expert and amateur decision makers succumb to the same types of decision biases (cf. Northcraft & Neale, 1987). Also, our collective studies examined different criteria (perfor-

mance and commitment) and included more than 800 respondents. Although we extol future research that attempts to generalize these findings using a more sophisticated subject pool in a field setting, we believe that the research questions addressed in this article are much different from those of prior studies, justifying initial treatment in a more controlled setting. We acknowledge that this pattern, although supported by three separate studies, is in its infancy and will require replication using different experimental and field settings.

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