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Consumer Acceptance of Online Agent Advice: Extremity and Positivity Effects

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Consumers often search the Internet for agent advice when making decisions about products and services. Existing research on this topic suggests that past opinion agreement between the consumer and an agent is an important cue in consumers' acceptance of current agent advice. In this article, we report the results of two experiments which show that different types of past agreements can have different effects on the acceptance of current agent advice. In Study 1, we show that in addition to the overall agreement rate, consumers pay special attention to extreme opinion agreement when assessing agent diagnosticity (i.e., extremity effect). In Study 2 we show that positive extreme agreement is more influential than negative extreme agreement when advice valence is positive, but the converse does not hold when advice valence is negative (i.e., positivity effect). We conclude by identifying promising avenues for future research and discuss implications of the results for marketers in areas such as design of intelligent online recommendation systems and word-of-mouth management on the Internet.

Prior to making choices among products and services, consumers often go online to consider the advice of agents, who may be either professional critics (e.g., citysearch.com) or laypeople (e.g., all-reviews.com). As an information source, the Internet has vastly expanded the scope of pre-purchase information search by providing easy access to the advice of literally thousands of other individuals. For example, Web sites such as consumerreview.com and epinions.com have an ever-expanding database of ratings provided by actual consumers, in categories ranging from arts and entertainment to beauty care products. Such proliferation of information in the online environment creates an important problem for consumers, namely that different agents often provide contradictory advice (Gershoff, Broniarczyk, & West, 2001; West & Broniarczyk, 1998). An interesting question in this context is, How do consumers evaluate and choose among conflicting agents to make their own product judgments and decisions?

Consumers may deal with the problem of conflicting agent advice by focusing on a subset of agents, who are considered more informative or diagnostic (e.g., Ganzach, 1994). Previous research has explored several ways in which consumers can assess the diagnosticity of an information source. One stream of research has investigated the role of agent characteristics, such as physical appearance and domain expertise (Brown & Reingen, 1987; Feick & Higie, 1992; Price, Feick, & Higie, 1989). Other researchers have examined factors related to agents' prior opinions that may affect agent diagnosticity. For example, it has been shown that agents with greater variance in past opinions are considered more diagnostic than those with a more uniform pattern of opinions (West & Broniarczyk, 1998) and advice that is inconsistent with past opinions is considered more diagnostic

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than consistent advice (d'Astous & Touil, 1999). A third area of research has looked at the joint effect of past opinions of the agent and those of the consumer on acceptance of current agent advice. For example, Yaniv and Kleinberger (2000) examined the process through which individuals combine their own estimates with those of advice providers to arrive at a net evaluation. Across these research streams, a key general finding has been that the overall agreement rate of past opinions of the agent and those of the target consumer is an important determinant of agent diagnosticity and hence the acceptance of current agent advice (Cooke, Sujan, Sujan, & Weitz, 2002; Gershoff et al., 2001; Lydon, Jamieson, & Zanna, 1988).

In the present article, we extend this latter finding by showing that not all past agreements between an agent and a consumer are given equal weight in the consumer's assessment of the agent. In Study 1, we use a theoretical approach based on the determinants of diagnosticity to show that in addition to overall agreement, individuals pay special attention to past agreement on extreme ratings when deciding whether to accept the agent's current advice (i.e., extremity effect). In Study 2, based on theory and three pilot studies indicating that positive and negative areas of the preference structure differ in their relative diagnosticity, we show an asymmetry in the effects of positive and negative extreme opinion agreement on acceptance of agent advice. Specifically, we show that prior positive extreme agreement (compared prior negative extreme agreement) increases the acceptance of positively valenced agent advice, but the converse is not true for negatively valenced agent advice (i.e., positivity effect). We conclude by identifying implications of the results for theory and practice and by providing directions for future research.

STUDY 1: THEORY

Overall Opinion Agreement

Information about prior opinions of agents is readily available to consumers in an online environment (see Appendix A). For example, the Web site citysearch.com provides critics' reports that list ratings of movies from a number of professional sources. Similar lists of movie ratings provided by both professionals and nonprofessionals can be found at numerous sites including reelmoviecritic.com, all-reviews.com, and epinions.com. After accessing agent opinions on the Internet, consumers can compare past opinions of the agent with their own opinions to compute various indices of opinion similarity. One such index is the overall percentage of agreements between the consumer and the agent. For example, a consumer would have a 75% overall agreement rate with the movie critic Roger Ebert if her ratings were identical to Ebert's for 30 out of 40 movies that they have both seen.

Past research indicates that overall agreement on prior opinions is likely to have a positive effect on the acceptance of current agent advice. For example, overall agreement of dichotomous (good vs. bad) ratings has been shown to have a positive effect on agent selection (Gershoff et al., 2001). Similarly, research in the area of interpersonal judgment has shown that overall similarity of past opinions has a positive effect on likeability and credibility judgments (e.g., Lydon, Jamieson, & Zanna, 1988; Lynch, Marmorstein, & Weigold, 1988). Finally, it has been found that individuals automatically abstract out overall frequency counts from raw tabular data (Alba, Mela, Shimp, & Urbany, 1999; Hasher & Zacks, 1984). Thus, individuals may automatically encode the overall frequency of agreement, and the resulting high availability of the overall agreement rate may encourage its use as a cue in making judgments about the agent (see Feldman & Lynch, 1988; West, 1996).

Extreme Opinion Agreement

A key assumption in previous research has been that individuals weigh every past opinion equally when assessing agreement between themselves and the agent. However, we propose that individuals pay special attention to agreement on their extreme past opinions—that is, past opinions that were either highly positive or highly negative. For example, in terms of the earlier illustration, the consumer may have had extreme evaluations (e.g., one or five stars on a five-star evaluation scale) for 4 out of the 30 movies where she and Ebert agreed. A second consumer may have agreed with Ebert an equal number of times (30/40) overall but may not have agreed on any movies that were given extreme evaluations. Although both these consumers have an equal overall past agreement rate, they differ on extreme agreement and hence may differ in their assessment of how useful Roger Ebert is as a source of advice for movies to see in the coming weekend.

Several streams of research indicate that extreme opinion agreement may constitute uniquely informative data for making judgments about agent diagnosticity. The goal-based emotion literature indicates that high intensity (i.e., extreme) affective reactions are generated only when goals that are very important to the individual are implicated (e.g., Folkman & Lazarus, 1984; Lazarus, 1982). Thus, extreme evaluations expressed by a consumer about a product or service are an indicator that important goals and standards in the consumer's preference structure have been implicated. If so, then agreement on extreme alternatives is likely to be considered a particularly important index of similarity of the preference structures of the agent and the consumer. This conclusion is also supported by research on social categorization, which suggests that extreme cues may be perceived as less ambiguous (Reeder & Brewer, 1979; Reeder, Henderson, & Sullivan, 1982) and more diagnostic (Skowronski & Carlston, 1989) than cues of moderate strength. Other research suggests that most judgments (e.g., like/dislike) imply a range of possible values and that the width of this range reflects the level of ambiguity of the judgment (see Birnbaum, 1972; Wyer, 1974). Because extreme scale

values have a constricted range due to the end-point of the scale, extreme judgments are likely to be considered less ambiguous and thus more reliable than moderate judgments. Similarly, the anchoring and adjustment literature suggests that, given a choice, individuals tend to choose extreme values as reference points, as extreme values are often more salient than more moderate values (see Kahneman, 1992). Further, the literature on correspondence judgments suggests that individuals are more confident about using highly salient information; consequently, salient information such as extreme agreement is likely to be confidently used as an input into judgment and choice (Kruglanski, 1989). Indeed, Skowronski and Carlston (1987) demonstrated that extreme behaviors relating to both ability and morality are perceived as being more diagnostic than moderate behaviors. However, there has been no research investigating whether agreement on extreme opinions is perceived as more diagnostic than agreement on opinions that are more moderate, which is the focus of our investigation. Hence, the first study tests the following two hypotheses:

H1: Overall opinion agreement has a positive effect on the likelihood of acceptance of current agent advice.

H2: Extreme opinion agreement has a positive effect on the likelihood of acceptance of current agent advice.

STUDY 1

Design and Procedure

Eighty-five undergraduate students at a large university in North America were paid $3.00 to participate in the study. The hypotheses were tested using a 2 (overall agreement: high vs. low) × 2 (extreme agreement: high vs. low) between-subjects design. All participants were provided with a scenario in which they had come across a movie critic's Web site on the Internet. Participants were given a table described as containing their own ratings, as well as the ratings of the critic, for the last 40 movies that they had both seen (see Appendix B). In all conditions, the table was sorted by the participant's own ratings; the critic was shown to give eight extreme ratings (4 one-star and 4 five-star movies) out of 40; and the rest of the critic's ratings were equally distributed among two, three, and four stars. Participants were asked to use the information in the table to decide to what extent they could rely on the critic's advice for a new, forthcoming movie.

The two independent variables of overall and extreme agreement were manipulated by adjusting the instances where the participant agreed with the prospective agent. High versus low overall agreement was manipulated by having the participant agree with the critic on 30 movies in the high overall condition and 10 movies in the low overall condition. High versus low extreme agreement was manipulated by varying the distribution of agreement across the extremely rated (one and five star) movies. Specifically, participants agreed with the critic on four out of the eight extreme ratings provided by the critic in the high extreme condition, and none out of eight extreme ratings in the low extreme condition. Agreements were otherwise equally distributed among all the relevant rating categories. Among the nonagreements, the difference between the participant's and the critic's ratings was uniformly distributed around an average of 2 rating points. There were no significant differences between the means, standard deviations or correlations of opinions across experimental conditions.

The dependent variable of likelihood of accepting the agent's advice was measured using a three-item (*not at all/very likely, not at all/very probable, not at all/very influential*; $\alpha = 0.91$) 9-point scale. Two single-item 9-point scales were also administered to assess the effectiveness of the overall and extreme prediction rate manipulations. These items were framed as the perceived accuracy of the critic in predicting the participant's past preferences of movies in general and extremely liked and disliked movies in particular.

Results and Discussion

The manipulation of overall agreement was successful because the overall accuracy of the critic was perceived to be significantly higher in the high vs. low conditions ($M = 6.41$ versus 3.82), $t(80) = 6.99$, $p < .0001$. Similarly, the extreme agreement manipulation was successful, with a significant difference in perceived extreme accuracy between the high versus low conditions ($M = 3.92$ vs. 2.25), $t(81) = 4.53$, $p < .001$. Supporting H1 and H2, an analysis of variance (ANOVA) with the likelihood of acceptance of agent advice as the dependent variable revealed significant main effects for both overall agreement, $F(1, 81) = 12.35$, $p < .001$), and extreme agreement, $F(1, 81) = 7.64$, $p < .007$. Participants reported that they would be more likely to accept agent advice in the high overall agreement ($M = 4.63$) than the low overall agreement condition ($M = 3.43$). Similarly, participants were more likely to accept agent advice when the prior agreement included extremely rated alternatives ($M = 4.57$) compared to when it did not ($M = 3.57$). These results provide evidence for the notion that, in addition to overall opinion agreement, individuals also pay attention to extreme opinion agreement when deciding whether to accept current agent advice. As argued earlier, this effect of extreme opinion agreement on agent advice acceptance is likely due to the greater diagnosticity of extreme evaluations.

An interesting question originating from Study 1 is: do different types of extreme opinion agreement have different effects on the acceptance of agent advice? For example, extreme agreement may be classified into negative extreme agreement (i.e., agreement on extremely disliked items) and positive extreme agreement (i.e., agreement on extremely liked items). In Study 1, we combined negative extreme (i.e., agreement on one star movies) and positive extreme agreement (i.e., agreement on five star movies) into a summary

variable of extreme agreement. In the next study, we identify a moderating variable, namely advice valence, which determines whether negative or positive extreme agreement has a stronger effect on the acceptance of agent advice.

STUDY 2: THEORY

Negativity and Positivity Effects

One stream of prior research suggests that judgment and decision making is susceptible to a negativity effect, whereby negative information is considered more diagnostic than positive information (Herr, Kardes, & Kim, 1991; Wright, 1974). For example, it has been shown that negative attributes generally have a stronger influence on interpersonal judgments than either neutral or positive attributes (Skowronski & Carlston, 1989). Fiske (1980) showed that individuals pay more attention to negative than positive personality information (as measured by looking time) and that negative cues are given more weight in impression formation. Herr et al. showed that negative word-of-mouth has a stronger impact than positive word-of-mouth, and a large body of work indicates that losses generally loom larger than gains (e.g., Kahneman & Tversky, 1979). In contrast to these findings however, other research has demonstrated a positivity effect, where positive information is considered more diagnostic than negative information. For example, positive behavioral information (about successes) has been found to be more influential than negative information (about failure) in judgments of ability (Reeder & Fulks, 1980; Reeder, Henderson, & Sullivan, 1982). Similarly, it has been shown that positive information about success is attributed to ability and hence used to make ability judgments, whereas information about failure is attributed to situational factors and hence discounted in ability judgments (Surber, 1984; Tillman & Carver, 1980).

One way to reconcile these apparently conflicting findings in previous research would be to identify moderating variables that determine when negativity or positivity effects are likely to be dominant. Skowronski and Carlston (1987) showed that although negative behaviors are seen as more diagnostic than positive behaviors when it comes to morality inferences, positive behaviors are considered more diagnostic for ability inferences. They argued that, because positive behaviors are representative of the majority of "moral" actions, any negative behavior would likely be considered more diagnostic for a decision task involving moral actions. Similarly, because negative behaviors (i.e., failures) are more common in tasks requiring some ability, a positive behavior (i.e., a success) would likely be considered more diagnostic. Thus, elements of the decision task can highlight the relative diagnosticity of positive or negative information and hence determine the emergence of negativity or positivity effects.

In this context of agent advice acceptance, we argue that one of the variables that determines the perceived diagnosticity of positive versus negative extreme agreement is the valence of current advice being offered by the agent. An agent's advice may range from positive (e.g., five star/must see) to negative (e.g., one star/avoid). When an agent provides a negatively valenced rating to a new alternative, it might seem appropriate for the individual to consider past negative extreme agreement to be more relevant than past positive extreme agreement in determining the extent to which he or she should rely on current agent advice. Conversely, past positive extreme agreement may be perceived as more relevant when an agent provides positively valenced advice (Gershoff et al., 2001). In the present case, we predict an asymmetry in the effects of positive and negative extreme agreements on consumers' acceptance of current agent advice, with positive extreme agreement being more influential for positive advice than negative extreme agreement is for negative advice. This prediction follows from differences in the depth and richness of individuals' preference structures for positive extreme objects (i.e., things we love) and negative extreme objects (i.e., things we hate).

Preference Structures for Extreme Objects

It has been suggested that consumers learn about their preferences over time by observing the relationships between their own reactions to alternatives and the attributes of the alternatives (West, Brown, & Hoch, 1996). With exposure to each new alternative, consumers can update their hypotheses about these relationships, developing well-defined and discriminating preference functions. However, it is important to note that consumers do not randomly expose themselves to alternatives. Instead, they tend to seek out information and expose themselves repeatedly to pleasurable alternatives while avoiding repeated exposure to those that are unpleasant. As a result, consumers learn more about the attributes and attribute evaluation relationships for loved compared to hated alternatives, leading to deeper and richer preference structure for loved compared to hated alternatives (Hoch & Deighton, 1989; Meyer, 1987; West et al., 1996). Three pilot studies were conducted to confirm these anticipated differences in preference structures for loved versus hated objects.

Pilot Study 1: Preference for Information About Loved Versus Hated Alternatives. In this study, 77 undergraduate students were told that they had to determine the usefulness of an Internet movie critic by looking up the critic's ratings for 8 movies from a randomly sorted list of 40 previously viewed movies. The set of 40 movies was described only by the participant's ratings on a 4-point scale from one star (*horrible movie*) to four stars (*excellent movie*). There were 10 movies at each rating level (one to four stars), and participants were free to select as many or as few of their 8 movies from each rating level. The following mean percentages of movies were selected by participants: four-star movies (52%), three-star movies (13%), two-star movies

(10%), and one-star movies (25%). Consistent with the notion that people prefer to seek out information about loved alternatives, participants selected more four star movies than movies at any other rating level, $t(76) = 5.23$, $p < .001$.

Pilot Study 2: Memory for Loved Versus Hated Alternatives. In the second pilot study, 113 undergraduates were asked to provide two lists of movies: one of all of the movies they had actually seen and loved, and one of all the of movies they had seen and hated. The order of the two lists was counterbalanced across participants, and participants were given as much time as needed to complete each list. Consistent with the notion that consumers have deeper preference structures for loved objects, repeated measures ANOVA revealed a main effect for the loved versus hated movies factor, with participants listing a significantly larger number of loved than hated movies ($M_{loved} = 9.73$ vs. $M_{hated} = 3.49$), $F(1, 112) = 87.62$, $p < .001$.

Pilot Study 3: Richness of Preference Structures for Loved Versus Hated Alternatives. In the third pilot study, 43 undergraduates were given the task of writing two sets of instructions for a new online service called YourMovieCritic.com, described as a site designed to predict whether an individual was likely to love or hate a given movie. One set of instructions was to be written so that an employee at YourMovieCritic.com could accurately predict whether they (i.e., the participant) would love any given movie and another so that an employee could accurately predict whether they would hate any given movie. Participants were asked to be as specific as possible, and the order in which they provided instructions was counterbalanced. The number of separate instructions that were provided in each task was coded by two independent coders. A separate instruction was considered to be any individual attribute of a movie provided by the participant. Examples of instructions included "comedy," "lots of dialog," "scenes of war," and "has strong character development." Again consistent with the notion that people have a more detailed preference structure for loved objects, a repeated measures ANOVA indicated that participants provided significantly more instructions for predicting loved than hated movies ($M_{loved} = 5.16$ vs. $M_{hated} = 4.00$), $F(1, 41) = 13.16$, $p < .001$.

If the preference structure for loved objects compared to hated objects is deeper and more detailed, then there is likely to be an asymmetry in the effects of extreme positive versus extreme negative prior agreement on acceptance of current agent advice. First, consider the case where the agent offers positively valenced advice to the individual. Because the positive area of the preference structure is relatively deep and rich, individuals are likely to consider the extent of prior positive extreme opinion agreement to be a reliable cue when deciding whether to accept or reject the current advice. In contrast, when the agent offers negatively valenced advice to the individual, the relatively impoverished negative sector of the preference structure makes it less likely that consumers will rely on prior negative agreement when deciding whether to accept or reject the current advice. Thus, an asymmetry is likely to emerge in individuals' acceptance of agent advice, with a strong positivity effect (i.e., dominance of positive extreme over negative extreme agreement) for positive agent advice and a weak or absent positivity effect in the case of negative agent advice.

Further, the deeper preference structure for loved versus hated objects indicates that agreement on loved alternatives may provide a relatively secure basis for making attribute-level inferences of similarity between the individual and the agent. As a result, an individual with a high level of positive extreme agreement is more likely to infer that she also likes the same product attributes as the agent, compared to an individual who has a high level of negative extreme agreement. In contrast, an individual with a high level of negative extreme agreement with an agent is *not* likely to infer that she dislikes the same product attributes, compared to an individual with a high level of positive extreme agreement. The preceding arguments are summarized in the following hypotheses:

H3a: When agent advice is positively valenced, positive extreme agreement *will* have a greater effect on advice acceptance than negative extreme agreement.

H3b: When agent advice is negatively valenced, negative extreme agreement *will not* have a greater effect on advice acceptance than positive extreme agreement.

H4a: Individuals with a high level of positive extreme agreement with an agent *will* infer greater similarity between themselves and the agent on attributes they like, compared to individuals with a high level of negative extreme agreement.

H4b: Individuals with a high level of negative extreme agreement with an agent *will not* infer greater similarity between themselves and the agent on attributes they dislike, compared to individuals with a high level of positive extreme agreement.

STUDY 2: METHOD

Design and Procedure

Forty-three undergraduate students at a large university in North America were paid $3.00 each to participate in the study. The hypotheses were tested using a 2 × 2 mixed design, with Extreme Opinion Agreement (positive vs. negative) as the between-subjects factor and Advice Valence (positive vs. negative) as the within-subjects factor.

Participants were given a booklet that described a scenario in which, while browsing the Internet, they had come across a Web site where an individual named Leslie had posted his ratings for eight movies that he had seen (on a one-star to five-star scale). Each participant was told that he or she had also seen

these same eight movies, and a table was provided that showed the ratings of Leslie and the participant for the eight movies. Two levels of extreme opinion agreement, positive and negative, were manipulated by varying information about opinion agreement between Leslie and the participant. In the positive extreme agreement condition, Leslie and the participant both gave five-star ratings to all eight movies, whereas in the negative extreme agreement condition, both gave one- star ratings to all eight movies.

The advice valence factor was then manipulated by presenting participants with Leslie's evaluations of two new, upcoming movies that the participant knew nothing about. Leslie rated one of these movies as five star (i.e., positive advice valence) and rated the other as one star (i.e., negative advice valence). Information about each new movie was presented on a separate page, and participants responded to the dependent measures associated with each new movie on its relevant page. The order of presentation was counterbalanced within each condition. The dependent measure of acceptance of agent advice was measured by asking participants to provide their expected ratings on a five-star scale for each of the two new movies (one star and five star) rated by the agent. The difference between the participant's rating and the agent's rating was used as a measure of advice acceptance. Participants were also asked to provide a rating of their confidence that they would give the same rating to the movie (after seeing the movie) as the agent did. Perceived similarity of attribute likes and dislikes was measured using four 7-point scales (*strongly agree/disagree*) about actors and directors in the form, "I think that the actors/directors Leslie likes (dislikes) are the same actors/directors I like (dislike)."

Results

Hypotheses 3a and 3b were tested using a mixed design ANOVA with extreme opinion agreement as a between-subjects factor, advice valence as a within-subjects factor, and the difference between the agent's and participant's rating as the dependent variable (see Figure 1). This analysis showed that neither extreme opinion agreement, $F(1, 40) = .96$, $p < .33$, nor advice valence, $F(1, 40) = .38$, $p < .54$, had significant main effects. However, supportive of H3a and 3b, a significant interaction between the independent variables was obtained, $F(1, 40) = 11.43$, $p < .01$. Compared to the negative extreme agreement condition, participants in the positive extreme agreement condition expected significantly less difference between their rating and the agent's rating for a new movie ($M = .5$ vs. 1.1), $t(41) = 2.23$, $p < .05$, which is consistent with H3a. In contrast, and consistent with H3b, there was no such difference between conditions when the agent provided a one star rating for a new movie ($M = 1.14$ vs. .91), $t(41) = .72$, $p < .48$. Participants' confidence that they would provide the same rating as the agent also supported H3a and 3b. An ANOVA revealed a significant interaction of extreme opinion agreement and advice valence on confidence scores,

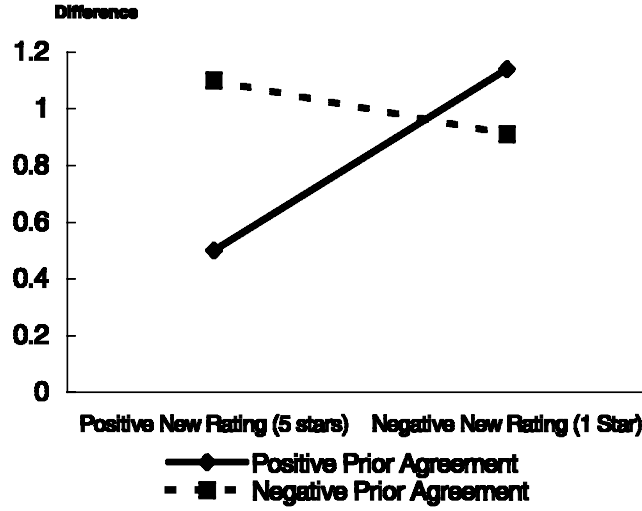

FIGURE 1 Differences between agents' ratings and participants' expected ratings. Difference is the mean of the difference between the rating for the new movie provided by the agent and each participant's expected rating for that movie.

$F(1, 40) = 6.152$, $p < .05$. Supportive of H3a, for a new positively-rated movie, participants were more confident that their rating would match that of the agent in the positive compared to the negative agreement condition ($M_{positive} = 5.36$ vs. $M_{negative} = 4.41$), $t(41) = 1.99$, $p < .05$. Supportive of H3b, participants' confidence did not differ by condition for a new, negatively rated movie ($M_{positive} = 5.05$ vs. $M_{negative} = 4.91$), $t(41) = .271$, $p < .79$.

Hypotheses 4a and 4b were tested using a mixed design ANOVA with extreme opinion agreement as a between-subjects factor, attribute valence (like vs. dislike) as a repeated measures factor, and participants' perception of similarity between themselves and the agent as the dependent measure (see Figure 2). Consistent with the hypotheses, a significant interaction was found between extreme opinion agreement and attribute valence for the movie attribute of directors, $F(1, 40) = 10.67$, $p < .01$. Supportive of H4a, follow-up analysis showed that participants were more likely to infer that they liked the same directors as the agent in the positive extreme than in the negative extreme agreement condition ($M_{positive} = 4.18$ vs. $M_{negative} = 3.09$), $t(42) = 2.09$, $p < .05$. Supportive of H4b, participants were not more likely to infer that they disliked the same directors as the agent in the negative extreme, compared to the positive extreme condition ($M_{positive} = 3.55$ vs. $M_{negative} = 3.73$), $t(42) = .34$, $p < .74$. A similar pattern of results was obtained for the attribute of actors. In this case as well, there was a significant overall interaction between extreme opinion agreement and attribute valence, $F(1, 42) = 7.06$, $p < .01$. Compared to the negative extreme agreement condition, participants in the positive extreme agreement condition perceived greater similarity between themselves and the agent in terms of actors they both liked ($M_{positive} = 4.23$

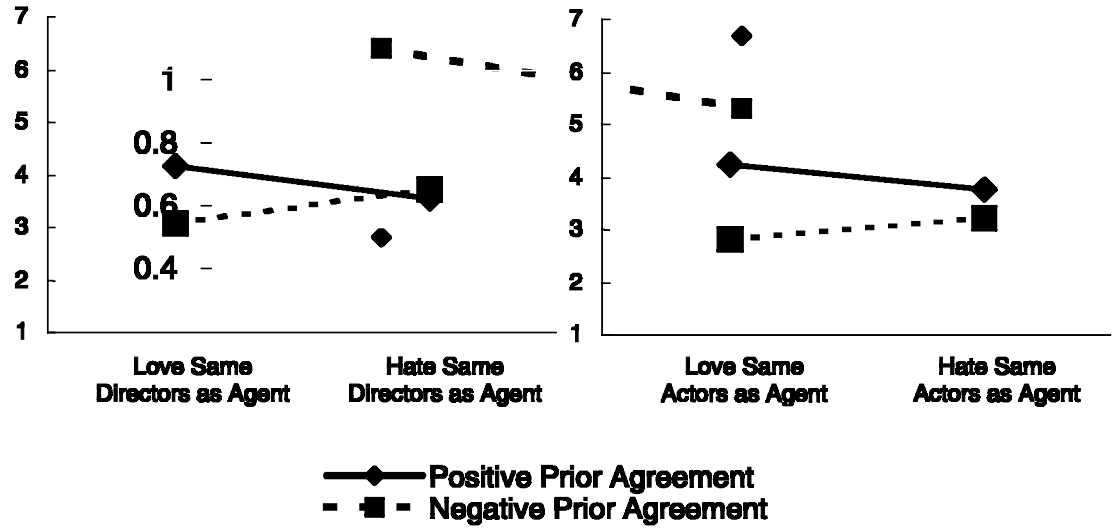

FIGURE 2 Participants' attribute similarity ratings: Directors and actors. The range is 1 (*strongly disagree*) to 7 (*strongly agree*).

vs. $M_{negative}$ = 2.82), $t(42) = 2.98$, $p < .01$, whereas there were no differences in inferred similarity of disliked actors between the negative and positive extreme conditions ($M_{positive}$= 3.77 vs. $M_{negative}$ = 3.23), $t(42) = 1.19$, $p < .24$.

GENERAL DISCUSSION

The studies reported in this article indicate that individuals do not give equal weight to all prior instances of agreement with the agent when considering the value of the agent's current advice. Instead, they weight different types of prior agreement differently, depending on aspects of the decision-making context. It was found that, in addition to the overall level of agreement, people also consider agreement on extreme opinions when assessing the usefulness of agent advice. Further, an asymmetry was noted in the effect of positive and negative extreme agreement on agent advice acceptance, whereby positive extreme agreement was more influential than negative extreme agreement when the agent provided positively valenced advice, but the converse was not true in the case of negatively valenced advice.

These results extend theory in three important ways. First, whereas past research on agent decision making has only examined the effects of overall agreement, we show that agreement on extreme alternatives is also important. This importance of extreme agreement arises from the special nature of extreme affective reactions (i.e., loves and hates). An extensive body of research in motivation and emotion indicates that extreme emotional reactions are aroused only when the most important needs, goals and values of individuals are implicated (e.g., Cohen & Areni, 1991). Thus, agreement on extreme opinions is likely to be considered especially diagnostic information for making judgments about the reliability of agent advice, as extreme opinion agreement indicates whether the individual and the agent are similar on the most important dimensions of the preference structure. In other words, because extreme opinions may be considered to emanate from the soul (or most important part) of the preference structure, agreement on extremes is likely to provide the most useful insight into the extent to which the underlying preference structures of the individual and the agent are similar.

The importance of extreme opinion agreement also has practical implications for the design of intelligent agent prediction systems, which attempt to predict consumer's preferences for future alternatives based on the consumer's past pattern of preferences (see Ansari, Essegaier, & Kohli, 2000; Gershoff & West, 1998). It has been observed that these systems presently do not perform well in predicting a consumer's extreme preference (i.e., products that consumers will absolutely love or hate). Given the importance of extreme opinion agreement as shown in this article, intelligent agents would be much more credible to consumers (and hence useful to marketers) if their predictive ability at the extremes were improved through further research. Thus, for example, if Amazon.com wants to convince a customer to heed its recommendations, it may do better by installing an intelligent prediction agent that can successfully predict a few extreme customer preferences rather than an agent that can successfully predict a larger number of more moderate preferences.

Second, research in the area of interpersonal influence has suggested that acceptance of information from others depends, in part, on whether the other is perceived as similar on task relevant attributes (Burnkrant & Cousineau, 1975; Feick & Higie, 1992). However, previous research is inconclusive on whether similarity on positive or negative extremes would be perceived as more relevant, with both positivity and negativity effects being reported in the literature (Herr et al., 1991; Skowronski & Carlston, 1989). In this article we show that, at least in the domain of hedonic products such as movies, the

positivity effect is stronger due to the greater depth of the positive area of the preference structure for such products. Further, we show that the strength of the positivity effect is moderated by the valence of agent advice, such that the positivity effect is clearly dominant when advice valence is positive, but this dominance is eliminated when the agent provides negatively valenced advice. Future research could investigate additional boundary conditions for the positivity effect by manipulating variables such as emotionality of the task (Luce, 1998) and the consumer's regulatory focus (Higgins, 1997).

Third, as mentioned previously, the asymmetric dominance of positive over negative prior agreement was argued to arise from the deeper preference structure for loved objects than hated objects. Extending the earlier metaphor, this asymmetry finding indicates that the soul of the preference structure (i.e., extreme evaluations) is top-heavy, with people having more information about the positive side (i.e., extreme positive evaluations) than the negative side (i.e., extreme negative evaluations). One important implication of this asymmetry relates to consumer's construction of consideration sets. In general, consideration sets can be constructed either by seeking out alternatives or by eliminating available alternatives from their awareness set (Park, Jun, & MacInnis, 2000). Although the process of inclusion may lead to a focus on what is loved, elimination may require individuals to think about and attend to the less well defined preference structures associated with hated objects. In today's increasingly cluttered and information-rich Internet life, it is likely that consumers will seek to construct consideration sets through a process of elimination, a process that may lead to suboptimal choices due to the lack of depth of the (negative) preference structure that underlies rejection. Future research can investigate this issue further by tracking consideration set formation under different conditions that could prime positive or negative areas of the preference structure, such as prevention and promotion motive (Higgins, 1997) and recommendation versus evaluation tasks (Gershoff et al., 2001).

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APPENDIX A
A Sample Consumer's Ratings on All–Reviews.Com

Title	Rating	MPAA	Year Released
10 Things I Hate About You	3	PG-13	1999
20 Dates	2	NR	1999
200 Cigarettes	3	R	1999
8mm	3	R	1999
Affliction	3½	R	1998
American Beauty	4	R	1999
American Pie	3	R	1999
Analyze This	3	R	1999
Anna and the King	3	PG-13	1999
Apt Pupil	4	R	1998
Arlington Road	4	R	1999
Astronaut's Wife, The	2½	R	1999
At First Sight	3	R	1999
Austin Powers: The Spy Who Shagged Me	4	PG-13	1999
Baby Geniuses	2	PG	1999
Beach, The	3	R	2000
Being John Malkovich	3½	R	1999
Bicentennial Man	2½	PG	1999
Blair Witch Project, The	2½	R	1999
Blast from the Past	2½	PG-13	1999
Bone Collector, The	3½	R	1999
Boys Don't Cry	3½	R	1999
Bringing out the Dead	3½	R	1999
Bulworth	3	R	1998
Celebrity	3	R	1998
Cider House Rules, The	3	PG-13	1999
Civil Action, A	3	PG-13	1999
Cruel Intentions	3	R	1999
Dangerous Beauty	2	R	1998
Dead Man on Campus	3	R	1998
Deep Blue Sea	3½	R	1999
Deuce Bigalow: Male Gigolo	2	R	1999

APPENDIX B
Example of Study 1 Stimuli

Your rating versus critic A's rating of a movie

Rating System

5 star = Extraordinary; a must-see
4 star = Good; well worth your while
3 star = O.K.; a decent time-pass
2 star = Bad; don't bother
1 star = Horrible; avoid at all costs

Movie #	*Your Rating*	*Critic A's Rating*
1	1 star	1 star
2	1 star	1 star
3	1 star	3 star
4	1 star	3 star
5	2 star	3 star
6	2 star	5 star
7	2 star	4 star
8	2 star	2 star
9	2 star	2 star
10	2 star	1 star
11	2 star	5 star
12	2 star	4 star
13	3 star	1 star
14	3 star	5 star
15	3 star	3 star
16	3 star	3 star
17	3 star	1 star
18	3 star	1 star
19	3 star	5 star
20	3 star	5 star
21	3 star	4 star
22	3 star	5 star
23	3 star	1 star
24	3 star	1 star
25	3 star	1 star
26	3 star	5 star
27	3 star	1 star
28	3 star	5 star
29	4 star	2 star
30	4 star	4 star
31	4 star	4 star
32	4 star	1 star
33	4 star	3 star
34	4 star	2 star
35	4 star	2 star
36	4 star	2 star
37	5 star	5 star
38	5 star	5 star
39	5 star	3 star
40	5 star	3 star