

Emotional Policy: Personal Sadness and Anger Shape Judgments about a Welfare Case

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When making decisions about a welfare case, it is reasonable for one's thoughts and feelings about the potential welfare recipient to influence the decision. It is less reasonable for one's "incidental" feelings (e.g., sadness or anger arising from an event in one's personal life) to influence such decisions. In two studies, however, data reveal that incidental anger and sadness do in fact carry over, shaping welfare policy preferences. Study 1 found that incidental anger decreased the amount of welfare assistance participants recommended providing relative to neutral emotion, whereas sadness increased the amount recommended. Study 2 replicated the results and found that limiting participants' cognitive resources eliminated the difference between sadness and anger, thus implying that differences in depth-of-thought drove the effects. In sum, the results reveal ways in which: (a) personal emotions carry over to shape preferences for public policies, (b) emotions of the same valence have opposing effects, and (c) differential depth-of-cognitive-processing contributes to such effects.

KEY WORDS: Emotion, Decision making, Attribution, Sadness, Anger

Attitudes toward poor people and support for welfare-assistance programs vary widely across individuals, societies, and eras of history. On the one hand, poor people may be viewed as lazy, "welfare queens" or "deadbeats" taking advantage of the system (Clawson & Trice, 2000). On the other hand, poor people may be viewed as unfortunate victims of circumstance, thus deserving of public aid. The appropriate levels of welfare and other public assistance have been hotly debated in public policy (see Somers & Block, 2005, for recent perspectives in the debate). In recent years, research has begun to uncover some of the psychological mechanisms underlying varying positions in such debates.

Psychological Determinants of Welfare Policy Preferences

At least three distinct psychological determinants of welfare policy preferences emerge from the literature: stable characteristics of the decision maker, perceived characteristics of the potential welfare recipient, and transient influences on the decision maker. Here we briefly consider each.

Characteristics of Decision Makers

All things being equal, Americans tend to automatically infer internal/dispositional causes for behavior and circumstances rather than external/situational causes (Gilbert, 1998; Gilbert & Krull, 1988; Gilbert, Pelham, & Krull, 1988; but see Krull, Loy, Lin, Wang, Chen, & Zhao, 1999, for cross-cultural differences). However, there are also important individual differences, including belief in a Protestant work ethic, belief in a “just world,” endorsing right-wing authoritarian views, having high income, and prizing individual liberty (see Appelbaum, 2002; Cozzarelli, Wilkinson, & Tagler, 2001).

The individual difference variable that has been most thoroughly examined in this context is political ideology. When explaining poverty, political conservatives typically place relatively greater weight on individual factors such as self-indulgence, low moral standards, and low intelligence. However, political liberals place relatively greater weight on external factors such as unjust social practices and structures (Feather, 1985; Kluegel, 1990; Kluegel & Smith, 1986; Skitka & Tetlock, 1992, 1993; Skitka, Mullen, Griffen, Hutchinson, & Chamberlin, 2002; Sniderman & Tetlock, 1986). Given these opposing patterns of attributions, it is not surprising that political liberals tend to favor public assistance programs while political conservatives tend to oppose them.

An exception to this individual-difference pattern merits note. When circumstances impose constraints on how deeply people process information, liberals and conservatives become equally likely to make internal attributions for others' poverty (Skitka et al., 2002). That is, they place greater weight on characteristics of individual poor persons. According to Skitka et al. (2002), the explanation is that political-ideology differences in attributions stem from differences in the motivation to correct automatic internal attributions. In their work, political liberals show greater motivation to correct the initial attribution.

Perceived Characteristics of Potential Welfare Recipients

Interestingly, even with full cognitive resources, political characteristics of the decision maker do not explain all of the variance in reactions to welfare recipients. Perceived characteristics of the potential recipient matter, too. Decision makers prefer to withhold assistance from targets to the extent that the targets are viewed as responsible for their situation (Appelbaum, 2001, 2002). In addition, people are

perceived to be undeserving when their need appears to arise from internal causes as opposed to external causes. Thus, widows with children are deemed deserving; healthy, unemployed men are not (Schmidt & Weiner, 1988).

Finally, these preferences are not merely cold, cognitive calculations. Anger typically accompanies treatment of “undeserving” poor people, and sympathy accompanies treatment of “deserving” poor people (Schmidt & Weiner, 1988; Weiner, 1980). As a result of these divergent attribution-emotion pathways, perceived deservingness of a target can have a larger main effect on welfare preferences than political ideology (Appelbaum, 2001).

In sum, characteristics of decision makers and of potential welfare recipients can shape policy preferences by activating a set of attributions for poverty and accompanying emotions. Whereas external attributions (i.e., to factors beyond one’s control) predict greater support for welfare aid as well as feelings of sympathy, internal attributions predict greater opposition as well as feelings of anger.

Transient Influences on Policy Preferences

It makes sense that decision makers’ political ideology and their perceptions of deservingness would shape decisions regarding welfare. It also makes sense that decision makers’ feelings of sympathy versus anger toward poor people would accompany willingness to provide welfare assistance (Weiner, 1980). It would make less sense, however, if decision makers’ fleeting feelings from an arbitrary situation in their own personal past drove willingness to provide public assistance. Recent research suggests the possibility, however, that such “incidental feelings” (i.e., feelings elicited in past, normatively unrelated situations) could in fact powerfully shape present policy decisions. Moreover, such incidental feelings may even exert influence when decision makers deny such influence on their present decision (for review, see Loewenstein & Lerner, 2003). In light of the empirical links among anger, sympathy, and willingness to provide assistance, we examine whether incidental anger and sadness from arbitrary events in one’s past will affect welfare policy preferences.

Sadness and Anger. Perhaps the most straightforward prediction for incidental sadness and anger is that the negative valence associated with these emotions will carry over and elicit negative (i.e., mood congruent) feelings toward potential recipients (Bower, 1981; Fiedler, 1990; Forgas, 2003; Johnson & Tversky, 1983). Specifically, the negative valence associated with sadness and anger might trigger negatively biased attention, encoding, and retrieval processes. For example, someone in a sad mood might implicitly perceive a potential welfare recipient in a negative light, perhaps because negative experiences with welfare recipients were activated by the negative mood. If such mood-congruent processing ensues, it might reduce the willingness to provide public assistance. A large body of research has documented these kinds of valence-congruent effects (for review, see Forgas, 2003).

There is, however, a different body of research that would suggest an opposing pattern of results. Research has revealed that negative moods can activate implicit mood-repair motives, which make people more willing to act in generous ways (Baumann, Cialdini, & Kenrick, 1981; Cialdini, Darby, & Vincent, 1973). If that is the case, then both anger and sadness might produce increased, rather than decreased, willingness to provide public assistance. Specifically, giving assistance to another person may help people achieve a better mood state.

In sum, two distinct literatures suggest that incidental sadness and anger might indeed carry over to shape public welfare preferences. One literature predicts that sadness and anger will both increase assistance while the other predicts they will both decrease it. Importantly, both literatures implicitly predict that the effects of sadness will resemble those of anger because the two emotions share a negative valence.

In contrast to these two literatures, each suggesting that sadness and anger will have similar carry-over effects on welfare policy preferences, an emerging literature suggests that sadness and anger will have opposing carry-over effects. The Appraisal-Tendency Framework (Lerner & Keltner, 2000, 2001; Lerner & Tiedens, 2006) asserts that specific emotions will have distinct effects on both the *content* and *process* of judgments as a function of the cognitive appraisals associated with each emotion. According to this framework, sadness and anger are different in a few ways that might lead to divergent effects on welfare policy decisions.

For one, they differ in terms of the cognitive appraisals concerning personal agency (Smith & Ellsworth, 1985). Sadness is associated with appraisals that external circumstances caused a person's misfortune; anger, by contrast, is associated with appraisals that an individual caused the misfortune (Smith & Ellsworth, 1985). According to the Appraisal-Tendency Framework, these underlying cognitive appraisal structures give rise to perceptual lenses or "appraisal tendencies." These appraisal tendencies lead sad people to perceive events caused by situations as more likely and situational forces more responsible for an ambiguous event than do angry people, who instead see human-caused events as more likely and individuals as more responsible for the ambiguous event (Keltner, Ellsworth, & Edwards, 1993; Sadler, Lineberger, Correll, & Park, 2006; Small, Lerner, & Fischhoff, 2006).

Anger and sadness also differ in the cognitive appraisal dimension of certainty (Smith & Ellsworth, 1985). This difference is important because the certainty dimension has been shown to matter more than the valence dimension in determining whether an emotion results in heuristic or systematic processing (Lerner & Tiedens, 2006; Tiedens & Linton, 2001). Emotions like anger, which are associated with a sense of certainty, give people the meta-level sense that they already have enough information to feel confident in their judgment (Tiedens & Linton, 2001). Indeed, the effects of anger on depth of processing are more consistent with happiness and diverge sharply from sadness (Bodenhausen, Sheppard, & Kramer, 1994). In contrast, sadness is associated with relatively less certainty and thus

gives people the meta-level sense that they should carefully examine information before forming a judgment. Therefore, the appraisal-tendency perspective explains one mechanism through which anger elicits relatively more heuristic processing. This is especially important for the present investigation because, as noted earlier, attributing causality to internal/dispositional causes tends to be a default low cognitive-effort response, whereas attributing to external/situational causes tends to be a high cognitive-effort response. Evidence suggests that external/situational attributions occur only when people have both the motivation and ability to correct initial inferences (Gilbert, 1998).

In sum, the Appraisal-Tendency Framework implies that sadness and anger give rise to different cognitive appraisals, which in turn have implications for the depth and content of processing. This dual distinction suggests that the two negative emotions could have opposing influences on welfare policy preferences, sadness increasing and anger decreasing support.

Hypotheses. In the present studies, we seek to extend the initial research on sadness and anger by examining whether and how they will carry over to decisions regarding public welfare policy.

Our hypotheses build on the Appraisal-Tendency Framework by proposing that discrete negative emotions will exert divergent carry-over effects even when the judgment involves nonpersonal outcomes. We expect that incidentally sad people will choose higher levels of welfare assistance than will angry people, for two reasons. First, because anger is associated with greater appraisals of certainty than is sadness, it should trigger less systematic information processing and thus less likelihood of reexamining a first-pass attribution to internal/dispositional causes. As a result, incidentally angry people should be significantly less likely (than neutral or incidentally sad people) to believe that welfare recipients face difficult circumstances beyond their control and therefore deserve public assistance. A related line of evidence concerns appraisals of causal attribution. Because sadness arises from attributions to situational (i.e., external) factors, it should trigger an implicit tendency to focus on external/uncontrollable causes for poverty. As stated above, this focus on external/situational causes for poverty should lead decision makers to believe that welfare recipients deserve assistance.

In sum, the present studies seek to test whether incidental sadness and incidental anger triggered by personal circumstances will carry over to shape decisions regarding public welfare policy. Drawing on accumulating evidence from studies that unpack affect into specific emotions (reviewed above), we propose that incidental sadness should increase willingness to provide assistance while incidental anger should decrease it.

Overview of Studies

In order to create a strong test of the hypothesis, the procedures were designed to reduce the likelihood that incidental emotions would carry over to policy

decisions. Specifically, each study induced the incidental emotions and then—in an ostensibly unrelated study—presented participants with a brief description about a person currently receiving welfare assistance. Participants chose whether and how to adjust the current level of welfare assistance. Study 1 assessed the effects of sadness and anger on an overall level of welfare assistance. Study 2 examined whether differences in depth of cognitive processing could explain the effects of sadness and anger on that same outcome.

Study 1

Overview

This experiment consisted of a three-level, one-factor design, manipulating emotion between subjects (neutrality, anger, sadness). In order to reduce any potential demand for emotional carry-over, participants were told that they would participate in two separate studies within the same one-hour session. The ostensible “first study” induced emotion by asking participants to write about a time when they felt the target emotion. The ostensible “second study” presented participants with a short, fictional case description about a person receiving government welfare. Participants were asked to write freely about what they thought the causes of this person’s welfare needs were and then to make a decision about adjusting her level of assistance.

Method

Participants

A total of 114 individuals (53 males, 61 females) participated in exchange for a \$10 show-up fee. Participants’ ages ranged from 18 to 56. The sample intentionally included participants older than college years, to examine whether incidental emotions would have an influence even when people have had enough life experience to hold preexisting welfare policy preferences. Half of the sample exceeded 21 years of age.

Procedure

Instructions explained that participation included two short studies, which were held in succession since the total time required for both studies was less than one hour. All participants received a packet, including materials for both studies. The first page of the welfare evaluation task was titled “Study 2.” No participants indicated awareness of a connection between the two studies.

Measure of Baseline Affect. Participants completed a modified version of the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988) that has

been used in prior research, rating the extent to which they presently felt each of 24 different emotions. The response scale ranged from 1 (*very slightly or not at all*) to 5 (*extremely*).

Emotion Induction (“*Study 1*”). Given that the hypotheses predicted distinct and opposing effects for sadness and anger, it was critical that the emotion inductions elicited discrete states of each emotion, not just a general negative affectivity. Prior research (e.g., Lerner, Gonzalez, Small, & Fischhoff, 2003; Strack, Schwarz, & Gschneidinger, 1985; Tiedens & Linton, 2001) indicates that self-reflective writing successfully elicits discrete target emotions such as sadness with only minimal levels of related (but nontarget) emotions, such as anger. We used a two-part writing exercise to elicit anger, sadness, and neutral emotion. Participants sat in comfortable cubicles with no visual access to anyone else so that they could reflect in privacy. Lights were dimmed in order to facilitate the emotion inductions. Instructions for the writing exercise in the anger condition were as follows:

Question 1. What are the three to five things that make you most angry? Please write two-three sentences about each thing that makes you angry. (Examples of things you might write about include: being treated unfairly by someone, being insulted or offended, etc.)

Question 2. Now we’d like you to describe in more detail the one situation that makes you (or has made you) most angry. This could be something you are presently experiencing or something from the past. Begin by writing down what you remember of the anger-inducing event(s) and continue by writing as detailed a description of the event(s) as is possible.

If you can, please write your description so that someone reading this might even get angry just from learning about the situation. What is it like to be in this situation? Why does it make you so angry?

To induce sadness, participants wrote about what made them most SAD, instead of ANGRY, and the examples given were “losing a loved one—a parent, a friend, or a pet; breaking up with a person whom you love; witnessing a person suffering; etc.” The examples given in each of the emotion conditions were drawn from responses of participants in prior studies using these inductions.

In the neutral condition, the questions posed were:

Question 1. What are the three to five activities that you did today? Please write two to three sentences about each thing that you select. (Examples of things you might write about include: walking to school, eating lunch, going to the gym.)

Question 2. Now we'd like you to describe in more detail the way you typically spend your evenings. Begin by writing down a description of your activities and then figure out how much time you devoted to each activity. Examples of things you might describe include eating dinner, studying for a particular exam, hanging out with certain friends, watching TV, etc.

If you can, please write your description so that someone reading this might be able to reconstruct the way in which you, specifically, spend your evenings.

Participants wrote about a variety of topics in each emotion condition. In the anger condition, they wrote about harmful acts and insults; in the sadness condition, they wrote about personal losses such as deaths of loved ones; in the neutral condition, they wrote about mundane events of their day such as taking the bus to school and sitting through class lectures.

Immediately following the writing exercise, a new page entitled "Study 2: Social Policy Decision Making" described the welfare-case evaluation task. Participants were informed that in a moment they would read and evaluate a welfare case, and they were given the following instructions:

Legislation requires that once a person has been receiving aid for six months with no change to their employment status, their case must be re-assessed. Sometimes the government is not providing enough support to enable a person to get back on his or her feet. Other times government support is sufficient and recipients are not motivated to find work as a result.

Therefore, one of two things must happen after assessment:

- A) Public assistance is increased overall.
- B) Public assistance is decreased overall.

It is your job to decide the extent to which current levels should be adjusted for the following case. You should evaluate each type of support independently. Please read the following case summary and make your recommendations.

The following case summary was presented to participants:

Patricia Smith is a 25-year-old, white female. She is a divorced mother of three children: ages 3, 5, and 8. She dropped out of high school at the beginning of her senior year when she had her first child and has received no subsequent education. She has had several jobs since high school,

mostly waitressing. She has had no job in the past six months. She has been receiving standard levels of government assistance for the past six months.

Measures of Attribution. Immediately after reading the case, participants were asked “*What are the causes for this person’s neediness?*” and were given a half of a page to respond. Their written responses were coded by two hypothesis-blind coders for both the presence and strength of dispositional and situational attributions. For each response, coders were instructed to label the presence of each dispositional attribution and each situational attribution and also to indicate whether the statement was strong or weak.

Weak attributions were coded separately because many individuals replied that they were unsure and that there were many possible factors. Weak causal statements were those that included phrases such as “maybe,” “perhaps,” “could have,” and “might,” whereas strong attributions described firm and certain causes for neediness. In addition, each coder made a more holistic judgment by rating the entire passage on a scale of 1 (strongly situational) to 5 (strongly dispositional). Coder reliability was high for ratings of strong dispositional and situational attributions ($\alpha = .74$, $\alpha = .69$ respectively), but lower for weak attributions ($\alpha = .23$, $\alpha = .19$ respectively). There was good reliability for the overall attribution rating ($\alpha = .74$). Given low reliability on the weak attribution ratings, we excluded them from the analysis.

Dependent Measure. After reflecting on the possible causes, participants made a decision about changing the level of assistance for the welfare recipient. The instructions presented a precise value of the recipient’s current level of assistance, which was 5% above the poverty line. (The current level was placed just above the poverty line since pilot testing revealed that few participants would decrease assistance below the poverty line.) Then participants were asked to choose among the following options: (a) Increase to 15% above the poverty line, (b) Increase to 10% above the poverty line, (c) Keep present level the same, (d) Decrease to the poverty line, or (e) Decrease to 5% below the poverty line.

Manipulation Checks. Following the welfare case evaluation, participants were asked to self-report how they felt during the written emotion induction. The self-report measure, originally adapted from Gross and Levenson (1995), has been used extensively in research on emotion and decision making (see, for example, Lerner & Keltner, 2001; Lerner, Small, & Loewenstein, 2004). It included seven emotion terms, derived from the emotions of interest, including “anger,” “blue,” “contempt,” “gleeful,” “mad,” and “sad.” Response scales ranged from 0 (*did not experience the emotion at all*) to 8 (*experienced the emotion more strongly than ever before*).

Demographic Measures. At the end of the study, participants answered a series of questions assessing their political orientation, their personal experience with welfare, and general demographic variables, including sex, race, and income.

Debriefing. As part of the debriefing at the end of the study, participants were informed that feelings from “study 1” might have carried over and affected their decisions about the welfare case in “study 2.” Participants reported enjoying the study; none conveyed adverse reactions to the task or to learning of the possibility that the studies might be related if feelings carried over.

Results and Discussion

Preliminary Analyses

Using average scores consisting of the angry items (angry, contempt, mad) and the sad items (blue and sad), individual ANOVAs on self-reported levels of anger, $F(2, 112) = 9.75$, and sadness, $F(2, 111) = 7.35$, revealed the intended effects for both manipulations, ($ps < .01$). Contrast tests revealed that participants felt significantly more angry in the anger condition than in the sad condition, $p < .05$, and than in the neutral condition, $p < .01$; they also felt significantly more sad in the sad condition than in the anger condition, $p < .01$, and than in the neutral condition, $p < .01$. Means appear in Figure 1.¹

Inferential Analyses

We predicted that incidental emotions from the writing task would carry over and significantly influence decisions in the welfare case. We also predicted that such influences would be divergent rather than similar, despite the shared negative valence of sadness and anger. Consistent with these predictions, incidental emotions from the writing task carried over to systematically influence decisions in the welfare case, $F(2, 111) = 8.525$, $p < .01$. Also as predicted, such influences were divergent. Sad individuals gave significantly more assistance than did angry individuals, $t(73) = -4.11$, $p < .01$, and more than did neutral individuals, $t(75) = -2.04$, $p < .05$. In addition, neutral individuals gave more assistance than angry individuals, $t(74) = 2.14$, $p < .05$, (see Figure 2). In sum, not only did sadness and anger differ from each other, but each was also significantly different from a neutral state. These emotion effects did not interact with demographic measures or with measures of political orientation.

Path analyses examined the potential role of attributions in mediating these effects. Results revealed no systematic relationships between emotions and either type of attribution (dispositional and situational), contrary to our expectations. This was true regardless of whether the mediator was all attributions, just strong attributions, or just weak attributions.

¹ Self-reported happiness was significantly lower in both the angry and sad conditions than in the neutral conditions ($ps < .05$). There was no difference in happiness between the angry and sad conditions ($p = n.s.$).

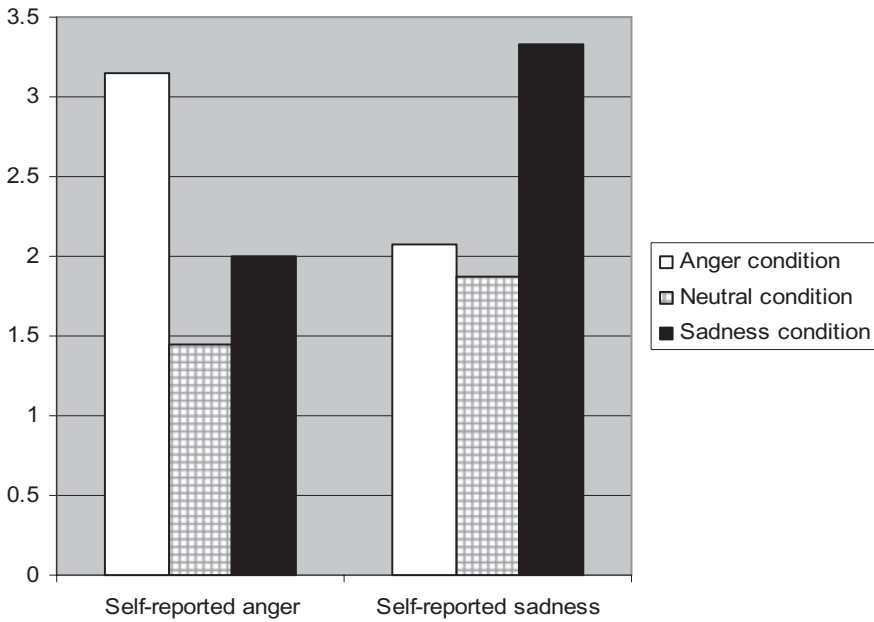


Figure 1. Self-reported emotion in Study 1. Y-axis represents the average emotional intensity on a scale of 0–8.

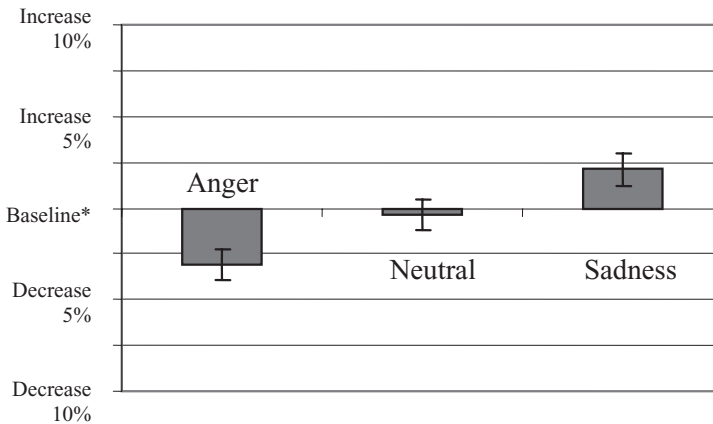


Figure 2. Public assistance choices by emotion condition in Study 1.

In sum, the evidence is consistent with the hypothesis that sadness triggers greater support for a person in need, whereas anger triggers the opposite tendency. Since two negative emotions had opposite effects, the results support an appraisal tendency perspective rather than either of the valence-based emotion theories.

Surprisingly, the coded open-ended responses provide no support for the idea that differences in the propensity to explicitly make dispositional or situational attributions mediate the effects. It could be, however, that emotion effects on attribution are too implicit to be captured in Study 1's response format. This explanation seems possible given the strikingly low average frequency of strong attributions per participant ($M = 1.02$ for dispositional; $M = .82$ for situational). Respondents may have been unwilling to make strong attributions due to the ambiguous information provided in the description of the welfare case. Nonetheless, they were sufficiently affected by the emotion induction for it to influence their policy decisions.

Study 2

Study 1 found that sadness and anger each significantly diverged from a neutral state in driving welfare policy preferences. Study 1 did not, however, elucidate the mechanisms. Study 2 takes up that task and tests whether the same patterns will replicate in a new study.

Sadness, with its appraisal of uncertainty, leads to increased scrutiny of information (Alloy & Abramson, 1979; Ambady & Gray, 2002; Bodenhausen, Gabriel, & Lineberger, 2000; Bodenhausen et al., 1994; Gleicher & Weary, 1991; Wenzlaff, Wegner, & Roper, 1988), whereas anger, with its appraisal of certainty, leads to decreased scrutiny (Lerner, Goldberg, & Tetlock, 1998; Tiedens & Linton, 2001). Therefore, one possibility for why sad people recommended more aid is that they used more effortful processing when considering the case. Based on work by Gilbert et al. (1988), individuals' first-pass (i.e., automatic) judgment may be to see the woman as responsible for her plight. This judgment may then incline participants toward reduced support. Anger's tendency to trigger automatic, low-effort thought would be consistent with this judgment. However, sadness's tendency to trigger careful, high-effort thought could counteract this process. Sad people may continue to evaluate the welfare case and correct for this first-pass dispositional bias. If this is true, then when sad people are prevented from engaging in this correction process due to cognitive load, their judgments should resemble those of angry people.

Consistent with this speculation, Ambady and Gray (2002) demonstrated that limiting cognitive-processing resources by a cognitive load manipulation altered the processing of sad individuals—in their case, making sad subjects less accurate. We borrow this approach in Study 2, investigating the effects of sadness and anger when individuals had constrained and unconstrained cognitive resources available to consider the welfare case. Unlike Study 1 in which the measures were explicit, Study 2 attempts to capture cognitive differences between sadness and anger without requiring participants to report such differences themselves.

A 2-factor design crossed emotion (sadness/anger) X cognitive load (load/no load). For the no-load conditions, we predict the same pattern of results as in

Study 1. That is, incidental emotions from personal memory should influence public welfare decisions, and such influences should be emotion-specific (e.g., sad individuals give more assistance than angry individuals). For the load conditions, however, we predict that the differences between sadness and anger will diminish because sad individuals will not have the cognitive resources available to correct for their automatic tendency to make dispositional attributions.

Participants

A total of 120 individuals (66 males, 54 females) participated in exchange for a \$10 show-up fee. Participants' ages ranged from 18 to 42 with a median of 22 years. As before, half of the sample exceeded college years.

Procedure

In the no-load conditions, Study 2 used essentially the same stimuli, dependent measure, and procedures as in Study 1. The major differences were the omission of explicit attribution measures from Study 1 and the presence of a cognitive load manipulation. To reduce sample size while accommodating the addition of a new factor (i.e., cognitive load), the neutral-emotion condition was omitted.

The load manipulation consisted of a tone-identification task based on prior research (Gilbert & Silvera, 1996; Skitka et al., 2002). In the load condition, participants received the following instructions, which appeared after reading the general instructions about the welfare evaluation task and prior to reading the actual case.

Because people are often busy doing other things while making judgments of others in the real world, we are going to ask you to perform a listening task while you are reviewing the case and making decisions.

You will be listening to a tape with a sequence of tones. Each tone might be the same or of a different pitch (that is, higher or lower) than the pitch that preceded it. While considering the case and making your decision, please keep track of each time the tone moves to a higher or a lower pitch. When the tape stops, write down the number of times that you hear the tone change pitch. You have just 2 minutes to review the case and make your decision. Therefore, it is necessary to both track the tones and review the case simultaneously in order to finish in time.

Following this instruction, each participant put on a headphone set and the experimenter turned on the recording on a computer terminal in each individual's private cubicle. Then the participant began the task of evaluating the welfare case while tracking the tones.

After finishing the welfare case evaluation, participants in the load condition were asked a series of questions designed to assess their reactions to the tone tracking task. On a 5-point scale ranging from 1 (*Completely disagree*) to 5 (*Completely agree*), participants recorded the degrees to which they (a) could concentrate on the welfare evaluation task, (b) had enough mental energy, and found the tone-tracking task to be (c) pleasant, (d) fun, and (e) distracting. Participants in the no-load condition answered just the first two items. Following these self-reports, all participants took a short quiz consisting of five questions that assessed accuracy of remembered facts about the individual whose welfare case they evaluated. Participants were asked to recall the welfare recipient's name, age, number of children, and current level of assistance, as well as the ages of her children. Finally, as in Study 1, participants made one overall case decision.

Results and Discussion

Preliminary Analyses

Two-way ANOVAs on self-reported levels of anger and sadness revealed the intended effects for both emotion manipulations, $F(1, 116) = 16.5$ for the anger manipulation check and, $F(1, 116) = 21.14$ for the sadness manipulation check ($ps < .01$). Furthermore, cognitive load had no main effect on self-reported anger, $F(1, 116) = .04$, $p = .85$, nor on self-reported sadness, $F(1, 116) = .001$, $p = .98$. In neither self-report did emotion condition interact with cognitive load, $F(1, 116) = 1.53$, $p = .22$ for the anger manipulation check and $F(1, 116) = .01$, $p = .91$ for the sadness manipulation check.

Individual ANOVAs on self-reported ability to concentrate on the welfare case evaluation task and on mental energy revealed the intended effects for the cognitive load manipulation. Individuals in the load condition reported reduced ability to concentrate, $F(1, 118) = 39.47$, and reduced mental energy, $F(1, 118) = 5.44$, compared to individuals in the no-load condition, ($ps < .05$). There were no interactions between cognitive load and emotion on either of these items. Furthermore, participants in the load condition reported the tone-tracking task to be neither pleasant nor unpleasant ($M = 2.9$) and neither fun nor not fun ($M = 2.8$). They somewhat agreed ($M = 3.9$) that the task was distracting. Taken together, these results indicate that the task significantly increased cognitive load without altering participants' mood.

A composite score of the memory quiz was created, with equal weights for each response (20% per question). As predicted, mean scores on the memory quiz were significantly higher in the no-load ($M = 79\%$) than in the load condition ($M = 64\%$), $F(1, 118) = 19.97$, $p < .001$. There was no interaction between cognitive load and emotion on the memory quiz. Both the self-reports about the task and the memory quiz scores suggest that people in the load condition processed the information in the case to some degree, but less deeply than in the no-load condition.

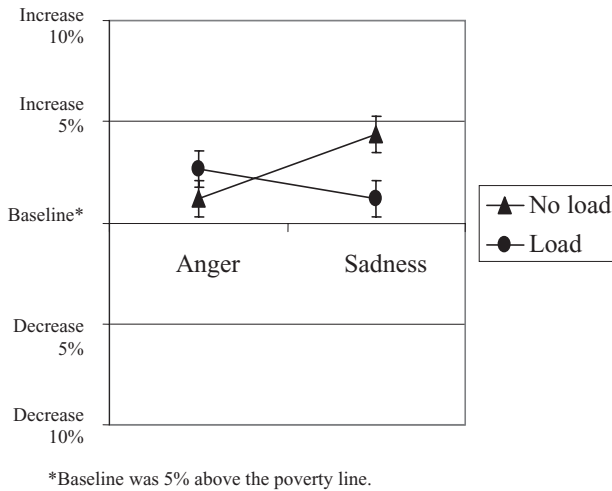


Figure 3. Public assistance choices by emotion and cognitive load in Study 2.

Inferential Analyses

Our first prediction was that emotions would exert opposing influences on the welfare decision as in Study 1. Consistent with the notion that increased welfare assistance following a sadness prime is driven by systematic processing that sadness brings about, our second prediction was that cognitive load would moderate these influences.

Consistent with predictions, a two-way analysis of variance with emotion and cognitive load as the independent variables revealed a significant interaction between the two factors, $F(1, 115) = 7.07, p = .01$ (see Figure 3). Analyses of simple effects revealed that sad individuals recommended more assistance than angry individuals when no load was imposed, $t(57) = 5.79, p < .02$, consistent with Study 1. There was no difference between decisions of sad and angry individuals, however, when load was imposed, $t(58) = 1.67, p = .20$. These results are consistent with the hypothesis that sad individuals would be unable to correct for automatic dispositional inferences while under load. Indeed, allocations were significantly lower for sad participants in the load condition than for sad participants in the no-load condition, $t(58) = 7.15, p = .01$. Angry individuals in the load condition made slightly, but insignificantly higher allocations than angry individuals in the no-load condition, $t(57) = 1.31, p = .26$. This is consistent with prior evidence suggesting that anger is an emotion that induced relatively heuristic thought (Lerner et al., 1998; Tiedens & Linton, 2001). Thus, we would not expect judgments in an angry state to be affected by load because this mode of thinking is no different from that which is already evident.

Taken together, results from Study 2 support the hypothesis that more effortful processing among sad individuals—prompting situational attributions—drives the greater willingness to provide public welfare support among sad individuals than among angry individuals. When effortful processing is limited, willingness to provide support is reduced among sad participants to the extent that their decisions resemble those of angry individuals. Cognitive load had no effect on the decisions of angry participants.

General Discussion

The present studies reveal that incidental emotions—that is, personal emotions that are normatively irrelevant to the decisions at hand—carry over and shape evaluators' preferences in a hypothetical welfare case. Sad people recommend greater public assistance than angry people. Study 2 provides insight into the mechanisms driving these effects. Given that sadness differs from anger only when cognitive processing is unconstrained, we conclude that sadness triggers greater willingness to provide assistance due to increases in systematic thought.

A question remains, however, about why exactly systematic thought leads to increased assistance. One possibility involves patterns of attribution. As discussed above, it is known that systematic processing generally decreases the tendency to attribute causality to individuals rather than to situations (Gilbert et al., 1988). Therefore, more thought should lead to greater consideration of situational factors influencing poverty. It is also known that sad people tend to attribute causality to situational factors more so than angry people (Keltner et al., 1993). Given the strong positive relationship between situational attributions for poverty and welfare policy support (e.g., Skitka & Tetlock, 1993), attributional differences (arising from differences in depth-of-processing) might explain why sad people provide more public assistance than angry people.

A second possible reason involves stereotype use. As discussed above, greater stereotyping occurs when individuals are angry rather than when sad (Bodenhausen et al., 1994), which is consistent with the idea that anger triggers heuristic thought (Tiedens & Linton, 2001; Lerner et al., 1998). Given that stereotypes of welfare recipients tend to be negative (e.g., “welfare queen”), increased thought might lessen reliance on the negative stereotype and thereby result in a relatively more positive evaluation.

A third plausible explanation involves perspective taking. Specifically, the systematic processing associated with sadness may lead to greater perspective taking and more empathic responses as a result. In a meta-analysis, Underwood & Moore (1982) found strong support for a positive relationship between perspective taking and giving. Indeed, defense lawyers strategically instruct juries to think about the defendant's perspective in order to achieve a more lenient sentence. If sadness induces this perspective-taking tendency, then that might explain why sad evaluators provide more generous assistance.

Although the present studies elucidate a possible mechanism for the effects of emotion on policy preferences, future research should probe deeper, teasing apart the extent to which attribution, stereotype use, and perspective-taking tie in differentially to depth of processing. Moreover, although here we present these as three separate ways that systematic thought may link sadness to increased welfare assistance, it is certainly possible that all three combine in influencing these outcomes.

Future research might also consider boundary conditions on the present effects. Although Study 2 demonstrated that the systematic thinking associated with sadness drove the tendency to provide greater assistance, it is possible that systematic thinking could lead to reduced assistance in certain cases. For example, if any negative characteristics of the potential recipient were obscured and only recognizable upon deep scrutiny, then the emotion effect could be the reverse of what we found, with sadness leading to less generous public assistance decisions. However, it is likely that the systematic processing will generally lead to greater provision of assistance. Another possible boundary condition may be accountability, which would have direct policy relevance. Prior research suggests that certain kinds of accountability can reduce, albeit not eliminate, the carry-over effects of incidental emotion by increasing attention to normatively relevant judgment cues (Lerner et al., 1998).

Limitations of the Present Studies and Future Directions

One might wonder about the generalizability of these effects. In the present studies, participants evaluated one case. We chose this method to limit the task time and difficulty. Unlike in the real world, the emotions we are able to study in the lab are relatively weak and short-lived, thus making it important to have short and simple judgment tasks. Despite this apparent limitation, it may be that having multiple cases adds little value. Prior research has shown that emotional carry-over effects are robust to different judgment cases. For example, Lerner et al. (1998) found that induced anger carried over and influenced punitiveness across four fictional tort cases even though each differed from the others in terms of degree of defendant intentionality, harm severity, mitigating circumstances, and target of harm.

Similarly the present samples were limited to college students, who are not representative of the general population in terms of demographics or political orientation (see Sears, 1986). It may be that we did not find effects of demographic variables or political orientation due to homogeneity in the sample. This did not, however, hinder our ability to test the present hypotheses about emotion effects. Moreover, prior research has shown that emotion carry-over effects demonstrated in the lab with college student samples do indeed replicate with more representative samples in naturalistic settings (Lerner et al., 2003). Nevertheless, it would be

interesting to examine in future research if and how demographic variables interact with emotion.

Recap

The present effects demonstrate the significant role of incidental emotions on decisions of policy importance. As a complement to studies demonstrating the effects of emotion on susceptibility to persuasive policy appeals (see DeSteno, Petty, Rucker, Wegener, & Braverman, 2004; Mackie & Worth, 1989), the present studies show that incidental emotions can have effects on policy choices even in situations where decision makers evaluate straightforwardly presented, objective information. Taken together, the findings imply the importance of understanding nonnormative emotional influences on social-policy judgments.

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