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## CONTEXT-INDUCED CONTRAST AND ASSIMILATION IN JUDGING SUPPORTIVENESS

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Social support research increasingly draws from research on social cognition. Most of this research has studied assimilation and chronically accessible (i.e., frequently activated) social support constructs. This article presents three studies, in both laboratory and treatment settings, on context-induced contrast and assimilation in support judgments. In each study, participants exposed to positive social contexts subsequently rated supportive stimuli more negatively than participants exposed to negative social contexts. These effects were observed in ratings of participants' own social networks, the social climate of a residential treatment environment, and a videotaped supportive interaction. In two studies, negative contexts also were associated with increased negative affect and affect-related assimilation. That is, participants with more negative affect rated social environments more negatively than participants with less negative emotion. In some circumstances, context-induced contrast and assimilation counteracted each other. These effects have implications for social support interventions.

The link between high levels of perceived support and positive mental health has been well documented (Barrera, 1986; Cohen & Wills, 1985). Although a causal role for perceived support has not yet been established, it does not appear to reflect merely social competence or low levels of pre-existing distress (e.g., Cohen, Sherrod, & Clark, 1986; Phifer & Murrell, 1986). If social support for at-risk persons could be improved, future disorder might be prevented. Consequently, an important goal of

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We thank the staff and clients at Counterpoint of Royal Oak, MI for their participation in Study 2.

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social support research has been to stimulate new interventions (Heller, 1979). However, interventions that have provided social support to at-risk groups typically have not produced enduring changes in the participants' perceived social support (Lakey & Lutz, 1996). Basic research in social cognition suggests one factor that may make it difficult to improve perceived support by providing additional, high-quality supportive behaviors: context-induced contrast. Positive social contexts (e.g., a kind other) can provide a standard of reference that leads to more *negative* social judgments and negative social contexts (e.g., an unkind other) can lead to more *positive* social judgments (Abele & Gendolla, 1999; Herr, 1986; Herr, Sherman, & Fazio, 1983; Wänke, Bless, & Igou, 2001). The current article describes research in both laboratory and treatment settings that demonstrates contrast effects in social support judgments.

The influence of context on social judgments has been well documented (Abele & Gendolla, 1999; Herr, 1986; Herr et al., 1983; Wänke et al., 2001). For example, Herr (1986) found that participants judged ambiguous behavior as less hostile when judgments occurred in a context that included representations of extremely hostile people than when the context included representations of moderately hostile people. In general, extremity of the context relative to the stimulus to be evaluated appears to be one factor that produces contrast effects (Abele & Gendolla, 1999; Herr, 1986; Herr et al. 1983; Wänke et al., 2001). Such processes should occur in social support judgments as well, although to our knowledge, no published research has explored the potential influence of context-induced contrast in social support judgments.

The possibility of contrast effects in perceived support judgments is directly relevant to social support intervention. Scholars have assumed that increasing the availability of high-quality support to at-risk individuals would increase both perceived support and positive health outcomes (Cohen, Underwood, & Gottlieb, 2000; Lakey & Lutz, 1996). For example, Heller, Thompson, Trueba, Hogg, and Vlachos-Weber (1991) attempted to increase the perceived social support of elderly women through weekly telephone calls from a supportive individual. However, increasing the availability of support did not lead to enduring changes in participants' perceived social support. In fact, most social support interventions have been unable to produce changes in recipients' perceptions of the supportiveness of their own networks (Lakey & Lutz, 1996). Research on contrast effects may help explain why such interventions have not been as effective as expected. Specifically, providing extremely supportive interactions may activate a standard of comparison that contrasts with the actual support provided by the client's own social network. Thus, when asked to rate the supportiveness of one's environment following the implementation of a social support intervention,

recipients may actually perceive their family and friends as less supportive than they did before the intervention.

The potential contrast-producing effects of skilled and inept support may be complicated by the effects of affect. For example, skilled support may provide a context that makes one's own network look worse, but skilled support may also induce low negative and high positive affect. Such favorable affect may lead to more positive judgments of the supportiveness of one's social network (Cohen, Flocco, & Towbes, 1987), counteracting the effects of a standard of comparison. Abele and Gendolla (1999) reported results consistent with this reasoning. In their work, a social context produced a contrast effect whereby participants judged their own relationships more negatively. Yet, this same context also produced positive affect, which led to more favorable judgments on other dimensions. Following from this, we suggest that it may be possible for a context to produce contrast effects for a given judgment by setting a standard of comparison, as well as eliciting affect that can override the effects of contrast *for the same judgment*. In such cases, the two forces of assimilation and contrast may counteract each other, yielding no net change in perceived support as a result of an intervention.

The studies presented here demonstrated contrast effects in judgments of social support. Study 1 demonstrated experimentally that context can produce contrast effects on judgments of the supportiveness of participants' own families and friends. Study 2 provided evidence of contrast and affect-related assimilation within the context of a residential treatment facility for adolescents. Study 3 replicated the competing effects of context-induced contrast and affect-related assimilation in an experimental study.

## STUDY 1

Contrast effects have not yet been documented for social support judgments. Study 1 provides a first, simple demonstration of context-induced contrast effects on judgments of the supportiveness of family and friends. Participants read examples of either skilled or unskilled social support and then rated the supportiveness of their own social networks.

## METHOD

### PARTICIPANTS

Eighty-one (17 men and 64 women) psychology students from Wayne State University participated in exchange for course credit. The average

age was 25 years, and 61% were Caucasian, 19% were African American, and the remainder were Middle Eastern, Far Eastern, or Hispanic.

#### PROCEDURE

Participants read a story in which they were asked to imagine that they were experiencing a romantic difficulty and that they discussed this difficulty with a same-sex friend. In the story, the friend (the support provider) responded in either a supportive or unsupportive manner. Participants were randomly assigned to supportive or unsupportive conditions.<sup>1</sup> The pronouns referring to the support provider were tailored to each participant in such a way that the support provider was the same gender as the participant. The story described a situation in which the participant has been dating a romantic partner for several years. However, the participant is much more serious about the relationship than is the partner. Every time the participant brings up the topic of commitment, the partner becomes uncomfortable. The participant discusses this problem with the support provider and in the unsupportive condition the provider replies (male participant version)

Why would you want to go and get married anyway? You're too young for your life to be over yet. Why don't you just not worry about it and have a good time. There are plenty of other girls out there anyway. Listen, I'm supposed to go over to Sarah's house, so how about if I talk to you later.

In the supportive condition the support provider replies (male participant version)

Well, why don't you give her some space? Since you two have started dating you haven't spent much time with your friends. Maybe if you start spending time without her, and having fun, she'll realize she does love you, and she won't take you for granted anymore. I'll tell you what, I have some tickets to a concert for this Friday night. Dave and I were going to go, but I'll give you my ticket and you can go with him. If nothing else, it will at least get your mind off your problem.

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1. Participants were also assigned to be exposed to a similar or dissimilar target, and to information about situational demands behind the supportive behaviors. These manipulations were uninformative and will not be discussed further.

The story continues whereby the participant brings up the topic of marriage and the partner says that she is not ready for that kind of commitment and that perhaps they should not see each other for a while. The respondent again talks to the support provider and in the unsupportive condition, the support provider replies: "If she isn't the commitment type of person, it's better that you find out now instead of after you're married. Listen, I have to leave right now."

In the supportive condition, the support provider replies: "If she isn't the commitment type of person, it's better that you find out now instead of after you're married. Listen, my sister has a really nice friend. How about if I set up a double date for this Saturday?"

Respondents then rated the support provider's supportiveness and then rated the supportiveness of their own social network.

## MEASURES

*Target Supportiveness.* Using ten items constructed for this study, respondents rated the supportiveness of the behaviors enacted by the provider on a five-point Likert scale. Items were preceded by the stem "what my friend said..." Sample items included "...would help me cope with the problem," and "...would make me feel less upset." Anchors ranged from "strongly agree" to "strongly disagree." The internal consistency of this scale was  $\alpha = .96$ .

*Participants' Perceived Support.* Participants completed the 12-item short form of the Social Provisions Scale (Cutrona & Russell, 1987) to measure their perceptions of the supportiveness of their own social networks. This scale has been used extensively in social support research and correlates in the expected way with measures of mental health, significant others' reports of respondents' support, and respondents' diary measures of support received.<sup>2</sup> The internal consistency of this scale in this sample was  $\alpha = .81$ .

## RESULTS AND DISCUSSION

As expected, participants in the supportive provider condition rated the provider as more supportive ( $M = 3.39, SD = .50$ ) than participants in the unsupportive condition ( $M = 2.51, SD = .53; t(79) = 7.67, p < .01$ ). In addi-

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2. Participants also completed measures of the target's perceived similarity and supportiveness immediately after the presentation of the similarity information. Participants also made attributions for the target's behavior after reading the supportive behaviors. However, these measures produced uninformative results and will not be described further.

tion, participants who read examples of supportive behaviors rated their own social support networks as significantly *less* supportive ( $M = 4.06$ ,  $SD = .58$ ) than those in the unsupportive condition ( $M = 4.32$ ,  $SD = .47$ ;  $t(79) = -2.25, p < .05$ ).<sup>3</sup> Thus, contrast effects operated for judgments of social support in this study as they have in other studies of other social judgments. To our knowledge, this is the first demonstration of contrast effects for social support judgments. Although laboratory studies are useful for their potentially high levels of experimental control, they may be limited by the artificiality of the stimuli. Thus, it is important to demonstrate context effects for social support in naturalistic settings as well.

## STUDY 2

Study 2 was a naturalistic study of context-induced contrast effects in a residential treatment facility for adolescents. We were interested in the extent to which perceived family environment was related to judgments of the social climate of the treatment program. Research on context-induced contrast suggested that adolescents from comparatively low-cohesion and high-conflict families would perceive the social climate of the treatment program more positively than would adolescents from comparatively high-cohesion and low-conflict families. The effect may be partly counteracted, however, by negative emotion. Although adolescents from more conflicted and divisive families may benefit from contrast and perceive the treatment facility as more supportive, these adolescents may experience more negative emotion than adolescents from more supportive families. This negative emotion may lead to less positive perceptions of the treatment environment (Lakey, 1989; Lakey & Dickinson, 1994), counteracting the effects of contrast.

## METHOD

### PARTICIPANTS

Participants included 35 boys and 41 girls who were recruited from a two-week residential counseling program for adolescents in Royal Oak, MI. The facility was a shelter and counseling program for runaway and

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3. Because this study included many more women than men, we examined whether gender could have accounted for our findings. However, the number of men and women in each condition was nearly identical (31 women and 8 men in the bad support condition and 33 women and 9 men in the good support condition). Furthermore, men ( $M = 4.19$ ,  $SD = .59$ ) and women ( $M = 4.22$ ,  $SD = .49$ ) did not differ in their ratings of their own support ( $t(79) = -0.27, ns$ ).



other youth experiencing serious family conflict. Individuals eligible for the program were between ten and 17 years old and were not drug- or alcohol-dependent. Participant ages in the current sample ranged from 12 to 17 years, with just over half of the sample between the ages of 14 and 15. Seventy-five percent of the youth were Caucasian and 25% were African American. Sixty-seven percent of the participants were currently enrolled in school. Student grade levels ranged from sixth to 12 grade with the majority falling in the range of seventh to 10th grade.

#### PROCEDURE

Participants were recruited within 24 hours of entering the treatment facility. Written consent for the present study was obtained from a parent, and assent was obtained in writing from the child. Participants completed measures of affect, depression, and family environment within 24 hours of admittance to the facility. Two weeks later, participants rated the community environment on involvement and emotional support.

#### MEASURES

*Affect.* Positive and negative affect were measured with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is composed of a ten-item positive affect scale and a ten-item negative affect scale. Participants responded to the items in terms of how they felt "in general." The PANAS is a widely used measure of affect with excellent reliability and validity (Watson et al., 1988). Further, the PANAS has been used successfully in previous research with children of the age range assessed in the current study (McCaskill & Lakey, 2000). The internal consistencies in this sample were .74 for negative affect and .82 for positive affect.

*Depression.* Depression was measured with the Children's Depression Inventory (CDI; Kovacs, 1981). The CDI is a 27-item measure of childhood depression. The CDI was developed with language appropriate for children between the ages of 11 and 15. The internal consistency of the scale in the current sample was .82

*Perceived Family Environment.* Family environment was assessed with the nine-item cohesion and the nine-item conflict subscales of the Family Environment Scale (Moos & Moos, 1986). The scores for the two subscales were combined because they were highly correlated ( $r = .63$ ) and displayed nearly identical patterns of findings. All of the findings in this sample reported for the combined scales were observed for both subscales as well. Responses were coded such that high scores indicated

positive perceptions of family environment. The internal consistency for the scale in this sample was .85.

*Treatment Program Support.* Perceived supportiveness of the treatment program was measured with the ten-item Involvement subscale and the ten-item Emotional Support subscale of the Community-Oriented Programs Environment Scale (COPEs; Moos, 1987). High scores indicated more positive perceptions. The internal consistencies for the full 20-item scale, the Emotional Support subscale, and the Involvement subscale were .79, .74 and .51 respectively.

## RESULTS AND DISCUSSION

Consistent with predictions from research on context-induced contrast, adolescents with more negative perceived family environments rated the treatment program's supportiveness *more favorably* ( $r = -.32; p < .05$ ) than did adolescents with more positive perceived family environments. This was true for both the involvement ( $r = -.26, p < .05$ ) and emotional-support dimensions ( $r = -.25, p < .05$ ) of the Community Environment Scales. There were no significant relations between depression and treatment program supportiveness ( $r = -.19; ns$ ) or program emotional supportiveness ( $r = -.09; n.s.$ ) Similarly, there were no significant relations between negative affect and treatment program supportiveness ( $r = -.20; ns$ ), nor its emotional supportiveness ( $r = -.13; ns$ ) There were trends for adolescents who reported more negative affect ( $r = -.22; p < .10$ ) and more depression ( $r = -.24; p < .10$ ) to rate the treatment program's level of involvement less favorably than did less distressed adolescents. Positive affect was not related to any of the psychological climate scales.

One of the goals of this research was to test the hypothesis that context-induced contrast effects and affect-induced assimilation might counteract each other. In this study, contrast appeared to be more powerful than assimilation, and thus contrast may have counteracted assimilation. To test this hypothesis, we entered perceived family environment and depression as well as family environment and negative affect in multiple regression equations simultaneously. If contrast effects resulting from family environment counteracted assimilation resulting from depression and negative affect, then controlling for family environment should allow affect-related assimilation to emerge. As displayed in Table 1, when controlling for family environment, there emerged a significant assimilation effect for depression and for negative affect such that adolescents who reported more depression and negative affect rated the overall treatment program as less supportive

TABLE 1. Multiple Regression Analyses Predicting Treatment Community Environment in Study 2

	Multiple R	Beta	<i>t</i>	<i>df</i>
<b>Predicting Perceived Treatment Community Environment</b>	.39**		2.36	2,61
Family Environment		-.35**	-2.94	1,61
Depression		-.24*	-2.00	1,61
<b>Predicting Perceived Treatment Community Environment</b>	.40**		2.43	2,61
Family Environment		-.36**	-3.02	1,61
Negative Affect		-.26*	-2.16	1,61
<b>Predicting Treatment Community Involvement</b>	.40**		2.41	2,61
Family Environment		-.32**	-2.71	1,61
Depression		-.29*	-2.45	1,61
<b>Predicting Treatment Community Involvement</b>	.39**		2.34	2,61
Family Environment		-.33**	-2.73	1,61
Negative Affect		-.28*	-2.32	1,61
<b>Predicting Treatment Community Emotional Support</b>	.32*		1.89	2,61
Family Environment		-.31**	-2.56	1,61
Depression		-.14	-1.15	1,61
<b>Predicting Treatment Community Emotional Support</b>	.35*		2.03	2,61
Family Environment		-.33**	-2.67	1,61
Negative Affect		-.19	-1.54	1,61

Note. \* $p < .05$ ; \*\* $p < .01$

than adolescents who expressed less depression and negative affect. These effects were observed for the involvement subscale, but not the emotional support subscale. Thus, the contrast effect associated with family environment appeared to override affect-related assimilation effects.

The results of Study 2 extend the results of Study 1, and of contrast research more generally, by documenting that contrast effects can occur in applied settings such as the residential treatment facility studied here. The primary advantage of Study 2 was its naturalistic design. However, this was also its primary liability. Because of its correlational design, it is not possible to know that perceptions of family environment caused perceptions of the treatment environment. Other interpretations of the findings are possible. For example, staff may have given special attention to adolescents from more negative family environments. Similarly, adoles-

cents from more positive family environments may not have fit in well in this particular treatment environment, perhaps because the majority of residents were from very high-conflict families. This lack of fit may have led to more negative judgments of the treatment setting.

Study 2 also provided evidence for the hypothesis that context-induced contrast and affect-induced assimilation can partly counteract each other. There were no significant relations between perceived treatment environment and depression and between perceived treatment environment and negative affect at the bivariate level of analysis. However, when family environment was controlled statistically, affect-related assimilation effects emerged for four of the six psychological climate measures. One explanation for this pattern of findings is that negative family environments created a standard of comparison in judging the treatment environment that lead to more positive evaluations. Negative family environments also induced negative affect and depression, leading to more negative judgments of the treatment environment. These effects partly counteracted each other, but emerged more clearly when examining the links between depression, negative affect, and perceptions of the treatment environment while controlling for the effects of family environment.

Finally, we should note that the results of Study 2 conflict with those reported by Lakey and Dickinson (1994). Whereas in Study 2, participants with more positive perceptions of family had more negative views of support in a new setting, Lakey and Dickinson (1994) found that participants with more positive perceptions of their families had more positive views of support in a new setting. This discrepancy may result from methodological differences between the two studies. Lakey and Dickinson (1994) studied college students developing support during the transition to college, whereas Study 2 investigated adolescents in a residential treatment facility. Apparently, whether perceptions of family support lead to assimilation or contrast effects depends on context. Herr (1986) found that social judgments were assimilated to moderate exemplars, but that judgments were contrasted away from extreme exemplars. The sample in Study 2 may have represented a much more extreme exemplar of family environments because the treatment center focused on children from very high-conflict families. The unselected college student sample perhaps reflected a more moderate exemplar of family environment. Nonetheless, the results of Study 2 provide an important reminder that chronically accessible beliefs about supportiveness (i.e., beliefs that are more likely to be used by a given individual in the interpretation of social behavior; Bargh, Lombardi, & Higgins, 1988) will not always produce assimilation in judging novel others.

### STUDY 3

Study 3 continued our investigations, using an experimental design, of contexts that can both provide a standard of comparison, as well as induce affect. Such contexts may produce two competing consequences that counteract each other (Abele & Gendolla, 1999; Wänke, et al., 2001). Consider the case of learning of the life of an abused and neglected child and then thinking about the supportiveness of one's own parents. Studies 1 and 2 would suggest that learning of cases of abuse and neglect would lead to more favorable judgments of the supportiveness of one's parents. However, hearing of a case of parental abuse and neglect also may induce negative affect, and this negative affect may lead to more negative judgments (Bower, 1981; Isen, Shalke, Clark, & Karp, 1978; Schwarz & Clore, 1983). Wänke et al. (2001) recently documented that a given context can produce both contrast and assimilation effects and that these effects can cancel each other out, producing no net change in judgment.

However, if a context produces negative affect, that does not guarantee that such negative affect will produce more negative support judgments. According to Schwarz and Clore's (1983, 1988) original feelings-as-information hypothesis, affect should lead to affect-congruent judgments only when participants are unaware of the source of their affect. Under these circumstances, participants should use affect as a source of information in judging targets. As applied to social support, people experiencing negative affect, who are also unaware of the source of their negative affect, should judge support providers as less supportive than similarly unaware respondents experiencing less negative affect. When respondents are aware of the sources of their affect, they should not use their affect as a source of information about the support provider. In this circumstance, affect should have no impact on support judgments. Although a number of studies have produced results consistent with the feelings-as-information hypothesis (Schwarz & Clore, 1983, 1988), more recent research indicates that affect sometimes has a greater impact on social judgments when participants are aware of the source of their affect. For example, Gasper and Clore (2000) found that, for participants who were low in their dispositional attention to their own affect, affect had a greater impact on judgments than when participants' attention was drawn to the source of their affect.

In Study 3, we presented participants with contexts of suffering and amusement and observed the effects of context on subsequent support judgments. Consistent with Studies 1 and 2, we expected that participants exposed to contexts depicting suffering would rate a support provider more positively than participants exposed to an amusing context.

These contexts also induced affect that had the potential of counteracting contrast effects by affect-consistent assimilation. Half of the participants had their attention drawn to the experimental stimuli's potential affect-inducing effects because of research indicating that participants' awareness of the source of this affect may influence the extent to which affect influences judgment.

## METHOD

### PARTICIPANTS

Sixty introductory psychology students (32 women and 28 men) at Wayne State University participated in this experiment in exchange for course credit. The average age was 28 years. Forty-four percent were Caucasian, 42% were African American, and the remainder were Middle Eastern, Far Eastern, or Hispanic.

### PROCEDURE

Participants were randomly assigned to a fully crossed  $2 \times 2$  design with context (suffering vs. amusing) and affect salience (high vs. low) as factors. Participants completed the experimental procedures in the following order. First, participants received the affect-salience manipulation and completed a measure of state affect. In the high-affect-salience condition, participants were presented with a statement that emphasized the emotional nature of the film they were about to view. In the low-affect-salience condition, participants were presented with a neutral introduction to the study. The order of presentation of the affect assessment and the salience manipulation was counterbalanced. Second, participants viewed the videotaped social support interaction. Ratings of the supportiveness of the provider in the video served as the primary dependent variable. Third, participants viewed either the suffering- or amusing-context-creating video. The context-creating videos followed the social support video because we wanted to ensure that affect endured until participants were assessed on the primary dependent variable. Moreover, Philippot, Schwarz, Carrera, De Vries and Van Yperen (1991) found that contexts were more likely to produce contrast effects when presented after the target had been encoded. After viewing both the social support and the context-creating videos, participants completed a packet of questionnaires. Participants in the high-affect-salience conditions completed a packet containing a questionnaire that again emphasized the affect-inducing properties of the video, a questionnaire about the perceived supportiveness of the support provider in the video,

and the second affect measure. Participants in the low-affect-salience groups completed a questionnaire that made no reference to the emotional impact of the context-creating video, the questionnaire about the support provider's supportiveness, and the second affect measure. Finally, participants in the human-suffering context condition viewed the amusing video in order to restore their affect to baseline levels.

*Support Video.* Participants viewed a five-minute video in which one woman described a problem with her landlord to another woman. The camera angle was such that the support provider occupied the screen. This video clip has been used successfully in prior research (Lakey, Drew, & Sirl, 1999; Lakey, McCabe, Fisicaro, & Drew, 1996). The support provider was instructed to behave in neither a particularly supportive nor nonsupportive fashion.

*Context-creating Videos.* Participants viewed films that depicted either suffering or amusing social interaction. Specifically, participants viewed a 20-minute film clip of original footage of the aftermath of the bombings of Hiroshima and Nagasaki or a 20-minute episode of the television situational comedy, *Seinfeld*. The Hiroshima video was chosen because we wanted an extreme social context that would (1) depict human suffering, (2) be engaging to participants, and (3) induce negative affect. The results of a pilot study not reported here indicated that although reading about unsupportive behaviors produced contrast, such stimuli had no effects on affect. Although depictions of human suffering may not activate concepts of supportiveness per se, activating more generic, evaluative social concepts can influence support judgments (Lakey & Drew, 1997).

*Salience Manipulation.* The potential biasing effect of affect on judgment was made salient in two ways. First, depending upon the context, an introductory page was attached to the affect questionnaire emphasizing either the disturbing or entertaining nature of the video that participants were about to view (e.g., "it is likely that you will find this film to be entertaining"). Participants for whom the affective qualities of the video were not made salient received a page that briefly introduced the experiment, but contained no information about the emotional impact of the film they were about to view. The second part of the salience manipulation was a five-item questionnaire administered to participants after they had viewed the video. This questionnaire was included in a packet containing measures of affect and the supportiveness of the provider in the video. In the suffering-context condition, this questionnaire asked participants to rate the video in terms of how emotionally disturbing and depressing it was. The salience questionnaire in the amusing context condition asked participants to rate how effective the film was in elevating their affect. Participants in the low-salience conditions received



a questionnaire asking them to rate the technical aspects of a film they had seen within the last month.

## MEASURES

*Affect.* Participants completed the Positive and Negative Affect Scale with state instructions (Watson et al., 1988). This scale was described in more detail in the measures section of Study 2. The internal consistencies for the positive affect scale were .90 for the first administration and .64 for the second administration. The internal consistency for negative affect at the first administration was .90. However, for the second administration, the internal consistency was only .48. Dropping two items with negative correlations with the full scale score permitted us to construct a negative affect measure with an internal consistency of .67. This eight-item scale was used in all subsequent analyses.

*Judgments of Provider Supportiveness.* After viewing a five-minute videotape of a social support interaction, and then the 20-minute context-creating video, participants were asked to rate the supportiveness of the provider in the support video using three items from the Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983). The internal consistency of this scale in our sample was .65.

## RESULTS AND DISCUSSION

The main goal of Study 3 was to examine how contexts influence supportiveness judgments when the affect-inducing qualities of the context were made salient. We calculated a  $2 \times 2$  factorial ANOVA using context (suffering vs. amusing) and salience (high vs. low) as the independent variables and judgments of the support provider as the dependent variable. There was a significant two-way interaction ( $F(1, 59) = 4.40, p < .05$ ). Neither of the main effects was significant. As displayed in Table 2, participants in the low-salience conditions demonstrated contrast, such that participants saw the support provider as more supportive after viewing the suffering-context video than did participants who viewed the amusing-context video ( $t = 3.0, p < .01$ ). However, no contrast effects were observed in the high-salience conditions ( $t = .69, ns$ ).

Our next series of analyses focused on the potential role of affect in judging supportiveness. First, we examined to what extent the context-creating videos influenced affect. To examine change in affect from before to after viewing the video, we created unstandardized, residualized change scores using multiple regression for both positive and negative affect. Next, we analyzed these change scores in the same



TABLE 2. Judgments of the Support Provider in Study 3

	Salience of Affect Associated with Context			
	Observed		Controlling for Change in NA	
	Low-Salience	High-Salience	Low-Salience	High-Salience
Suffering Context	3.38 (.53)	3.07 (.87)	3.35 (.16)	3.29 (.17)
Amusing Context	2.76 (.61)	3.19 (.73)	2.70 (.16)	3.05 (.17)

Context (2)  $\times$  Salience (2) ANOVA used to analyze target supportiveness. For negative affect, there was a significant effect for context [ $F(1,59) = 7.15; p < .05$ ] and a significant Context  $\times$  Salience interaction [ $F(1,59) = 5.19; p < .05$ ]. Participants reported an increase in negative affect in the suffering context ( $M = 1.80; SD = 6.05$ ) and a decrease in the amusing context ( $M = -1.80; SD = 4.88$ ). The Context  $\times$  Salience interaction reflected an increase in negative affect in the suffering context/high salience condition ( $M = 4.14; SD = 5.84$ ), whereas the other conditions displayed small decreases in negative affect, ranging from  $-0.53$  to  $-2.64$ . A Context (2)  $\times$  Salience (2) ANOVA on change in positive affect revealed only a main effect for salience [ $F(1, 59) = 5.49; p < .05$ ], such that participants in the high-salience conditions reported an increase in positive affect ( $M = 3.08; SD = 7.99$ ), whereas participants in the low salience conditions reported an decrease in positive affect ( $M = -2.89; SD = 11.03$ ).

Given that the experimental manipulations influenced affect, we next determined whether change in affect was related to judgments of target supportiveness. There was a significant assimilation effect associated with change in negative affect, such that participants who reported greater increases in negative affect rated the target as less supportive than those who reported smaller increases in negative affect ( $r = -.36; p < .01$ ). There was no significant relation between change in positive affect and target supportiveness ( $r = .14$ ).

Next, we tested whether the assimilation associated with negative affect may have counteracted context-induced contrast. If so, then controlling for change in negative affect should increase the magnitude of contrast effects, especially in the high-salience condition, in which no contrast was observed. To test this, we repeated the same Context  $\times$  Salience ANOVA on target supportiveness, except that change in negative affect was included as a covariate. In the original analyses on target supportiveness reported earlier, there was a significant Context  $\times$  Salience interaction such that contrast emerged in the low-salience conditions, but not in the high-salience condition. This pattern was altered when

change in negative affect was controlled. In this case, there was a main effect for context [ $F(1, 59) = 8.35, p < .01$ ], with no Context  $\times$  Salience interaction or main effect for salience. Participants in the suffering-context conditions rated the target as more supportive ( $adjM = 3.33; SE = .12$ ) than participants in the amusing-context conditions ( $adjM = 2.87; SE = .12$ ).

To determine whether controlling for change in negative affect significantly shifted the means in the direction of contrast in the high-salience conditions, we conducted a 2 (suffering vs. amusing)  $\times$  2 (observed support rating versus adjusted support rating) mixed ANOVA for the participants in the high-salience condition. In this analysis, the Suffering vs. Amusing condition was a between-subjects factor, and the Observed versus Adjusted condition was a repeated-measures factor. If negative affect-induced assimilation counteracted context-induced contrast in the high-salience condition, then controlling for change in negative affect should move the means in the direction of contrast (i.e., the target should be rated as more supportive in the suffering context than in the amusing context). Consistent with this hypothesis, we found a significant Context  $\times$  Observed/Adjusted interaction on support ratings [ $F(1, 27) = 13.13, p < .001$ ]. As displayed in Table 2 and Figure 1, the means in the high-salience conditions changed from the direction of assimilation toward the direction of contrast when change in negative affect was controlled. Nonetheless, although the means were in the direction of contrast in the high-salience condition, when change in negative affect was controlled, this trend was not statistically significant [ $F(1, 26) = 1.79, ns$ ].

## GENERAL DISCUSSION

These three studies indicate that prior exposure to contexts involving positive or negative social behavior can result in contrast effects on subsequent social support judgments for targets not belonging to the original context. In each of our studies, people exposed to positive social contexts made more negative support judgments of a subsequent target than did people exposed to negative contexts. This occurred both when the contexts specifically involved social support (Studies 1 and 2) as well as positive and negative behavior more generally (Study 3). The effect occurred both when participants rated their own network members (Study 1), a residential treatment environment (Study 2), as well as a novel, videotaped target (Study 3). In addition, Studies 2 and 3 also revealed affect-related assimilation such that participants who expressed more negative affect rated targets as less supportive. Moreover, in both Studies 2 and 3 contrast effects associated with context and assimilation effects associated with affect appeared to counteract each other. In Study

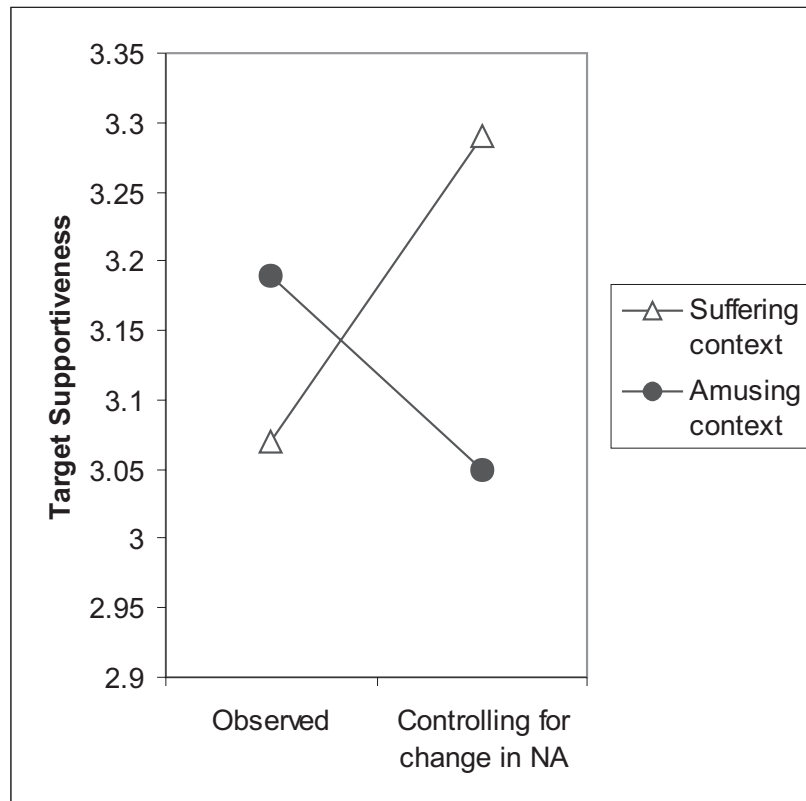


FIGURE 1. Effect of context on support judgments, within the high-salience conditions, with and without controlling for change in negative affect.

2, contrast associated with context appeared to counteract the effects of assimilation associated with affect. In Study 3, assimilation associated with affect appeared to counteract the effects of context-induced contrast in the high-salience condition. These findings expand research in both perceived social support and contextual influences on social judgment.

A recent development in social support research has been that more investigators have begun to draw from research on social cognition as a source of new hypotheses and research methods (Lakey & Drew, 1997; Mankowski & Wyer, 1997; Pierce, Baldwin, & Lydon, 1997). Most of this research has conceptualized perceived support as a chronically accessible social construct that produces assimilation effects on support judgments (Anan & Barnett, 1999; Lakey & Cassady, 1990). However, an-

other major thrust of social-cognitive research has been the study of context-induced contrast effects on social judgments. The current studies extend previous findings of contextual influences on social judgments to social support. To our knowledge, the current studies are the first demonstrations of such contrast effects in social support judgments and demonstrate that basic research on contextual influences on social judgments are relevant to applied phenomena such as social support.

The results of both Studies 2 and 3 are consistent with recent work suggesting that context can produce both assimilation and contrast effects (Abele & Gendolla, 1999; Biernat, Manis, & Kobrynowicz, 1997; Manis & Paskowitz, 1984a, 1984b). Moreover, Wänke, et al. (2001) found that a given context can produce both assimilation and contrast effects. Our Studies 2 and 3 discouraged a similar pattern of findings. In Study 2, negative family environments were associated with high depression and negative affect as well as more positive ratings of the treatment environment (contrast). Negative affect and depression were not related to more negative ratings of the treatment environment until family environment was controlled statistically. Then, an assimilation effect for depression and negative affect emerged, suggesting that the more powerful contrast effects associated with family environment counteracted the assimilation effects associated with depression and negative affect. In Study 3, participants exposed to human suffering rated a target as more supportive than participants exposed to an amusing film clip (contrast). However, the suffering context also induced negative affect and negative affect was associated with more negative social support judgments (assimilation). In the high-salience condition, negative affect appeared to counteract the effects of contrast. When the effects of negative affect were controlled statistically, ratings of target supportiveness changed significantly from the direction of assimilation to the direction of contrast.

The results of Studies 2 and 3 are consistent with other findings suggesting that transient affect can influence social support judgments. Consistent with the large body of research on mood congruency (e.g., Bower, 1981; Isen et al., 1978; Schwarz & Clore, 1983, 1988), Cohen et al. (1987) found that participants led to experience negative affect rated their own social support more negatively than did controls. However, Study 3 indicated that negative-affect-inducing contexts can lead to more favorable ratings of support than positive-affect-inducing contexts. Furthermore, the contrast effects associated with context and the assimilation effects associated with negative affect can cancel each other out. In Study 3, the best evidence for affect-associated assimilation counteracting context-induced contrast occurred when affect was made salient to participants and the affect-inducing context was related to social

behavior. In Cohen et al. (1987) the effects of the affect induction were made very salient by having participants read negative, self-referent statements and attempt to feel the emotions suggested by the statements. Yet, in contrast to our Study 3, reading the statements may not have activated social categories because the statements may not have included descriptions of other people or of behaviors. Thus, affect-inducing contexts may not have straightforward effects on support judgments. If the affect-inducing context also activates social categories, the effects of affect on support judgments may be disrupted.

The results of Study 3 are consistent with recent research indicating that drawing attention toward the source of affect may increase the extent to which affect is used as a heuristic in making social judgments. Gasper and Clore (2000) found that among participants who characteristically did not focus on their affective states, drawing participants' attention to the source of their affect stimulated their use of affect in judging a target. Unfortunately, Study 3 did not identify the characteristics of participants who demonstrated assimilation effects when participants were aware of the source of their affect. Perhaps the majority of the participants in Study 3 had characteristically low awareness of their own affective states. Future research will need to document the situational and personal determinants of affect-related assimilation when participants are aware of the source of their affect.

The existence of context effects on social support judgments has important implications for prevention and treatment programs aimed at increasing perceived support. Most programs attempt to improve the mental health of vulnerable individuals by providing greater access to supportive others. Unfortunately, these programs have had limited success in increasing the perceived support of participants (Lahey & Lutz, 1996). Providing vulnerable individuals with access to more supportive others may produce contrast effects in which the supportiveness of their own social networks is diminished. Yet, Study 3 suggests that such contrast effects might be offset by drawing recipient's attention to the relevance of their own affect in judging the supportiveness of others. We believe that social support scholars should continue to conduct the necessary basic research on the mechanisms by which people judge supportiveness in order to design more effective social support interventions.

Finally, we should note some important limitations of the studies described here. These were simple studies and future investigations could include a wider range of controls. For example, the experimental studies did not have no-context control groups and so it was impossible to know whether both the positive and negative contexts produced effects that differed from no-context conditions. Second, the experimental manipu-

lations were necessarily artificial and may not generalize to naturally occurring social support or social support interventions. Study 2 offsets this concern somewhat because Study 2 was conducted in a clinical setting, yet Study 2 did not experimentally manipulate context and so we could not draw causal conclusions about the effects of context. In addition, we could not rule out a demand-characteristics explanation for the role of negative affect in Study 3. In the high-salience condition, the video's potential impact on participants' affect was emphasized. Emphasizing the affective component of the contexts may have led participants to believe that they were supposed to report information that was hedonically similar to the video they had viewed. That is, participants who viewed the Hiroshima video may have believed that the high-salience instructions were telling them to report high levels of negative affect, low levels of positive affect, and to rate the provider as unsupportive. However, the failure of positive affect to be associated with ratings of target supportiveness is inconsistent with this demand-characteristics hypothesis.

In conclusion, the findings that positive and negative social contexts resulted in both contrast and assimilation effects on support judgments add to the growing literature linking research on social support and social cognition. Whereas the existing social support literature has focused primarily on assimilation resulting from chronic accessibility, the studies described here demonstrated context-induced contrast and assimilation. Developers of social support interventions may want to consider the effects of context-induced contrast that occur with the provision of increased support, as well as how these effects might be mitigated by stimulating the use of affect as a heuristic in making support judgments.

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