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Symbolic Providers Help People Regulate Affect Relationally: Implications for Perceived Support

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Symbolic providers help people regulate affect relationally: Implications for perceived support

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Abstract
Relational regulation theory (Lakey & Orehek, 2011) predicts that the correlation between perceived support and mental health emerges through ordinary conversation and shared activities rather than through conversations about stress and how to cope with it. Observing the conversations and activities of others also helps regulate mental health. Symbolic providers (known only through media) mimic how real providers regulate affect in that recipients observe the conversations and shared activities of symbolic providers. Thus, many perceived support findings obtained for real providers should also be found for symbolic providers. We found the same links between perceived support and affect when recipients rated symbolic providers as when recipients rated real providers. When participants' affect was worsened, viewing symbolic providers helped restore affect.

People who believe their friends and family are supportive (i.e., perceived support) have better emotional well-being than those who doubt their friends and family (Barrera, 1986; Cohen & Wills, 1985; Lakey & Orehek, 2011). Most social support research is guided by stress and coping theory (Lazarus & Folkman, 1984). As applied to social support (Cutrona & Russell, 1990), this theory hypothesizes that perceived support reflects the receipt of specific supportive actions. These actions protect recipients from the harmful effects of stress (i.e., stress buffering) by promoting adaptive coping and appraisal. Although intuitively appealing, there are empirical problems with this explanation. An alternative theory states that people regulate their emotions through ordinary conversation and shared activities, which produce both mental health and perceived support (Lakey & Orehek, 2011). The theory also predicts that common perceived support effects will be observed when participants rate people known only through media (i.e., symbolic providers).

There are several important empirical problems with stress and coping theory's explanation for the links between perceived support and mental health (see Lakey & Orehek, 2011, for a review). First, the most common links between perceived support and mental health occur regardless of the presence of stress (i.e., main effects) rather than from stress buffering (Lakey & Cronin, 2008). Second, perceived support is not primarily based on the receipt of specific supportive actions (i.e., enacted support; Goldsmith, 2004; Haber, Cohen, Lucas, & Baltes, 2007; Uchino, 2009; Thoits, 2011). Third, enacted support cannot explain perceived support's links to mental health as enacted support itself typically is not linked to better mental health (Barrera, 1986; Finch, Okun, Pool, & Ruehlman, 1999; Thoits, 2011; Uchino, 2009). Thus, perceived support's link to mental health does not appear to primarily reflect enacted support or stress and coping processes. On what then, is perceived support based?

Relational regulation theory (RRT; Lakey & Orehek, 2011) is intended to explain the main

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effects between perceived support and emotional well-being. According to RRT, providers help recipients regulate their affect on a moment-by-moment basis through ordinary, yet affectively consequential, conversations and shared activities rather than by talking about stress and how to cope with it. Although ordinary, these interactions have important influences on affect. For example, conversations about football or celebrities might be ordinary in that they occur daily, but such conversations might consistently elicit emotional well-being in a recipient. Shared activities also play an important role. Simply put, dyads do things together that elicit favorable affect. When a provider has a history of successfully regulating a recipient's affect in these ways, the recipient sees the provider as supportive. Note that according to RRT, perceived support does not typically cause affect. Instead, affect and perceived support emerge in tandem from specific kinds of social interaction. RRT is similar to theory and research that focuses on how providers respond to recipients' positive events and how perceived support can be inferred from conversations about such events (Gable, Gosnell, Maisel, & Strachman, 2012).

Drawing from theory and research on modeling and emotion, (Bandura, Blanchard, & Ritter, 1969), RRT predicts that merely observing other people's conversations and activities can help regulate affect. For example, one might be enthralled by listening to conversation at a dinner party, or excited by watching others play sport. If so, it might not matter whether the observed people are real. According to RRT, people that recipients know only through mass media (i.e., symbolic providers; e.g., TV characters, celebrities, and public figures) should also be able to regulate affect because they mimic the mechanisms used by real providers (i.e., conversation and shared activities). According to RRT, given that perceived support and affect can emerge from merely observing conversation and shared activities, we should observe the well-replicated correlation between perceived support and affect when participants rate symbolic providers.

Recent investigations on parasocial interaction suggest the plausibility of RRT's predictions regarding symbolic providers (Giles, 2002; Klimmt, Hartmann, & Schramm, 2006). For example, participants reported viewing TV to combat loneliness, and after belonging needs had been activated experimentally, recipients spent more time writing about favorite TV shows (Derrick, Gabriel, & Hugenberg, 2009). Participants who wrote about favorite TV programs had higher self-esteem and lower accessibility of exclusion-related concepts (Derrick et al., 2009). Single participants with high need to belong or high attachment anxiety reported more imagined psychological intimacy with symbolic providers than did controls (Greenwood & Long, 2011). Participants perceived viewing a symbolic provider as similar to interacting with a real provider when the symbolic provider spoke directly to the viewer (Hartmann & Goldhoorn, 2011). As with real people, participants were more committed to symbolic providers insofar as participants were satisfied with and had invested substantial time in viewing the symbolic provider (Branch, Wilson, & Agnew, 2013). As with real providers, perceived similarity of symbolic providers is linked to perceptions of relationship quality (Lakey, Lutz, & Scoboria, 2004; Tian & Hoffner, 2010). Yet, previous studies have not shown that the well-replicated links between perceived support and affect occur when participants rate symbolic providers.

RRT applies to socially influenced support and affect rather than trait like support and affect. Trait-like support and affect are stable across support providers and time. Socially influenced support and affect ebb and flow as a recipient interacts with or thinks about different providers. Within this framework, there are two types of social influences: relational and provider effects. RRT applies to relational effects and adopts Kenny's (1994) quantitative definition of relationships. Relational effects (Rij) for a given variable for Recipient i and Provider j are defined as $Rij = Xij - Ri - Pj + M$, where Xij is Recipient i's score on a variable with regard to Provider j, Ri is recipient i's mean reaction across all providers (trait-like influences), Pj is the mean reaction to Provider j across all recipients (i.e., provider or partner effects) and

M is the grand mean. For example, perceived support is relational when Richard sees Kate as more supportive than (a) how Richard typically perceives other providers (Ri) and (b) how other recipients typically see Kate (Pj). To simplify expression, we use the phrase "unusually supportive" and "relational support" to refer to relational effects for perceived support. Provider effects reflect the extent to which recipients agree that some providers are more supportive than other providers, and as such reflect the objective supportiveness of providers.

Perceived support is primarily relational when recipients rate real providers who are well known to recipients, accounting for over 60% of the variance in perceived support in a recent meta-analysis (Lakey, 2010). These findings have been replicated in the United States and three European nations, as well as with students, young adolescents, and community dwelling adults. If symbolic providers mimic how real providers help recipients regulate affect, then the perceived supportiveness of symbolic providers should also be strongly relational.

In the current studies, we investigated RRT's predictions about the role of symbolic providers in affect regulation and perceived support. Study 1 compared findings when recipients rated their own real support providers to when recipients rated symbolic providers. RRT predicts that the findings for symbolic providers will be highly similar to those for real providers. Study 2 examined how people used contact with symbolic providers to restore affect after affect had been worsened. Study 3 used recipients' preferred conversation topics to forecast which symbolic providers recipients would see as unusually supportive.

Study 1

If symbolic providers mimic the processes by which real providers regulate recipients' affect, then perceived support should show similar results when recipients rate real providers as when they rate symbolic providers. To test this, we used a method that yields well-established findings for perceived support and lends itself to use with both symbolic and real providers. In this method, recipients rate their mothers, fathers, and closest peers on supportiveness and affect elicited, which permits the isolation of two types of effects: recipient trait and social influences (Lakey, 2010; Lakey & Orehek, 2011). As described previously, social influences reflect the extent to which recipients' perceived support and affect ebb and flow depending upon the provider that recipients are with or thinking about. Recipient trait influences reflect the extent to which recipients are consistent in their reactions across providers.

RRT predicts that for both real and symbolic providers: (a) perceived support will be significantly more socially influenced than trait-like and (b) socially influenced support will be significantly linked to positive, and low negative affect. In addition, Study 1 tested hypotheses regarding perceived similarity. A recipient's perception that a provider is similar to the recipient is one of the best markers for whether the recipient will see the provider as supportive (Lakey & Orehek, 2011; Lakey et al., 2002). RRT predicts that similarity items are effective markers for perceived support because they indicate dyads that like to do and talk about the same things. Thus, RRT predicts that (c) socially influenced perceived similarity will be significantly linked to favorable affect and perceived support for both real and symbolic providers. RRT does not make predictions about recipient trait influences.

Method

Participants

One hundred and seventy-six college students (83% female; 90% of European ancestry; median age = 18) participated for course credit.

Procedure

Participants completed measures on a laboratory computer in a cubicle. Real and symbolic providers were rated in different blocks and block order was randomized. Within blocks, the order of providers was randomized and measures were randomized within providers.

To assess perceptions of real providers, each participant rated her or his mother (or mother figure), father (or father figure) and closest peer on supportiveness, similarity to the participant, and affect elicited. Ninety-eight percent were biological mothers and 90% were biological fathers. Eighty-eight percent reported contact with mothers several times a week, 73% reported contact with fathers several times a week, and 90% reported contact with peers several times per week.

Participants also rated symbolic providers on the same constructs. Participants were presented with three lists of symbolic providers ($N = 224$) and asked to indicate from each list, the three symbolic providers with which participants were most familiar. One list was composed of male and female providers approximately similar to participants' ages (e.g., Laura Harris, Zachary Quinto). These providers were intended to parallel participants' ratings of real peers. Two other lists were composed of providers roughly similar in age to participants' parents. One list included men (e.g., Dan Rather) and one included women (e.g., Diane Sawyer). One provider from each list of middle-aged men and women was randomly assigned for participants to rate. Participants did not choose which providers to rate because participants did not choose their parents and thus we wanted the procedures to be as similar as possible when rating real and symbolic providers. Each participant chose a similar-aged, symbolic provider to rate because each participant chose a real peer. Each participant was instructed to select a symbolic provider that he or she would like as a close peer or romantic partner if the participant knew the symbolic provider in real life. Recipients had exposure to 28% of the symbolic providers they rated (i.e., read about, watched, or listened to) at least several times per week, and had exposure to 77% at least several times per month.

Measures

Provider supportiveness was assessed with the seven support items from the Quality of Relationships Inventory (Pierce, Sarason, & Sarason, 1991), designed to measure the supportiveness of specific providers. For symbolic providers, participants were asked to make ratings as if participants actually had relationships with the providers. Internal consistency for real providers was .91 (recipient influences) and .87 (social influences). For symbolic providers, internal consistency was .98 (recipient) and .83 (social). Example items are: "To what extent could you turn to her/him for advice about problems?" (symbolic provider) and "To what extent can you turn to him for advice about problems?" (father). Participants made responses on a 5-point scale anchored by (*not at all*) and (*very much*).

Participants rated affect elicited by providers using Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Schedule. When participants rated real providers, internal consistency for positive affect was .96 (recipient) and .81 (social), and for negative affect, internal consistency was .93 (recipient) and .75 (social). When participants rated symbolic providers, internal consistency for positive affect was .97 (recipient) and .85 (social), and for negative affect, internal consistency was .85 (recipient) and .77 (social). Example items are "interested" (positive affect) and "nervous" (negative affect). Participants made responses on a 5-point scale anchored by *very slightly or not at all* and *extremely*. Instructions for real providers asked about affect "when with" the provider. Instructions for symbolic providers asked about when "watching, listening to, talking about or reading about" the provider.

Perceived similarity was measured using six items regarding hobbies, interests, and values (Lakey et al., 2002). For real providers, internal consistency was .94 (recipient) and .86 (social). For symbolic providers, internal consistency was .84 (recipient) and .89 (social). An example item is "he or she is similar to me in values." Participants made responses on a 5-point scale anchored by *not at all* and *very much*.

Statistical analyses

Following our team's previous research (e.g., Lakey & Scoboria, 2005; Shorey & Lakey, 2011), we first estimated the relative strength of trait and social influences. Second, we estimated correlations among constructs for social

influences. We do not report correlations for recipient influences as RRT does not make predictions about these influences. Recipient correlations are available upon request.

We estimated trait and social influences using restricted maximum likelihood estimation with random factors, using the VARCOMP procedure within SPSS (Version 16.0). This was a Providers Nested Within Recipients × Items design, an example of a one-with-many design (Kenny, Kashy, & Cook, 2006). Providers and items were within-subjects factors and recipients were the between subjects factor. Each participant was a level of the recipients factor, each provider was a level of the providers factor, and items formed the levels of the items factor. Items were completely crossed with recipients and providers. The design yielded five effects: recipients (i.e., recipient trait influences), providers nested within recipients (i.e., social influences), items, Recipients × Items, and Providers Nested Within Recipients × Items. The highest order interaction served as the error term as there was only one observation per cell (Kenny, 1994; Kenny et al., 2006). We report only recipient trait and social influences as the three effects involving items are typically viewed as error. Effects for items are available upon request.

To estimate correlations among constructs for social influences, we calculated multivariate generalizability correlations (Brennan, 2001; Cronbach, Gleser, Nanda, & Rajaratnam, 1972) using mGENOVA (Brennan, 2001). Following our previous research (Lakey & Scoboria, 2005; Shorey & Lakey, 2011), we used bootstrapped estimates of standard errors.

Results and discussion

The findings for real providers were nearly identical to those from previous studies (e.g., Lakey & Scoboria, 2005; Shorey & Lakey, 2011). Each construct had significant trait and social influences (Table 1). Perceived support and perceived similarity were significantly more socially influenced than trait-like. That is, these constructs varied from provider to provider more so than they were consistent across providers. Negative affect was approximately equally trait-like as socially influenced. That is, negative affect varied across providers as much as it was consistent across providers. Positive affect was significantly more trait-like than socially influenced. That is, positive affect was more consistent across providers than it varied across providers. Correlational analyses indicated that the real providers who elicited better affect were perceived as more supportive and as more similar to recipients (Table 2). In addition, real providers perceived as similar to recipients were seen as more supportive.

The results for symbolic providers were virtually identical to those of real providers. There were significant trait and social influences for all constructs, except there were no recipient trait influences for perceived similarity (Table 1). Perceived support and similarity were significantly more socially influenced than trait-like, indicating that they varied more in response to specific symbolic providers than they were consistent across providers. Both positive affect and negative affect were approximately equally socially influenced as trait-like. That is, they varied across symbolic providers to about the same extent as they were consistent across providers. Correlational analyses indicated that the symbolic providers that elicited better affect were perceived as more supportive and as more similar to recipients (Table 2). In addition, the symbolic providers perceived as similar to recipients were seen as supportive.

In summary, the findings for symbolic providers were nearly identical to those for real providers. These findings are consistent with RRT's prediction that symbolic providers mimic the mechanisms by which real providers regulate affect.

A limitation of Study 1 is that it did not isolate relational effects, and RRT makes predictions about relational effects specifically. To isolate relational effects, participants must rate the same providers. Such a design was not consistent with the goals of Study 1, which was to compare findings for symbolic providers with findings for participants' most important support providers. Participants have different most important providers, and so it was not possible to have participants rate the same providers.

Table 1. *Variance components, standard errors, and proportion of variance explained for real and symbolic providers in Study 1*

	Variance component	Standard error	Proportion of variance
Real providers			
Perceived support			
Trait	.11	.03	.17*
Social	.40	.04	.59*
Positive affect			
Trait	.41	.06	.55*
Social	.19	.02	.25*
Negative affect			
Trait	.13	.02	.43*
Social	.10	.01	.31*
Perceived similarity			
Trait	.24	.05	.27*
Social	.47	.04	.51*
Symbolic providers			
Perceived support			
Trait	.29	.06	.27*
Social	.55	.05	.51*
Positive affect			
Trait	.40	.06	.46*
Social	.32	.03	.37*
Negative affect			
Trait	.06	.01	.23*
Social	.11	.01	.41*
Perceived similarity			
Trait	.06	.03	.07
Social	.54	.05	.67*

*$p < .05$.

Thus, relationship and provider effects were combined into a single social influence effect. The effects for social influences in Study 1 likely reflect relational effects primarily, however, as relational effects are typically about 9 times stronger than provider influences for perceived support (Lakey, 2010). Nonetheless, it is important to document that symbolic providers produce large relational effects.

Study 2

Study 2 attempted to replicate links between perceived support and affect for symbolic providers, as well as test hypotheses about affect regulation. The supportiveness of real providers is primarily relational, and if symbolic providers mimic the effects of real providers, then the supportiveness of symbolic providers should also be primarily relational. Furthermore, we should observe links between favorable affect and the relational supportiveness of symbolic providers. RRT describes relational regulation as a dynamic process whereby in response to suboptimal affect, recipients restore affect by seeking exposure to select providers. If symbolic providers mimic how real providers regulate affect, then one should observe dynamic affect regulation for symbolic providers as well.

All recipients viewed three symbolic providers and rated each provider's supportiveness and the affect elicited by each. Next, recipients listened to music that worsened affect.

Table 2. *Study 1: Multivariate generalizability correlations and (standard errors) for social influences for real and symbolic providers*

	Perceived support	Positive affect	Negative affect	Perceived similarity
Perceived support				
Real providers	—	.58* (.04)	−.41* (.05)	.55* (.04)
Symbolic providers	—	.50* (.05)	−.35* (.05)	.58* (.03)
Positive affect				
Real providers		—	−.42* (.08)	.51* (.04)
Symbolic providers		—	−.33* (.06)	.50* (.04)
Negative affect				
Real providers			—	−.42* (.05)
Symbolic providers			—	−.33* (.05)
Perceived similarity				
Real providers				—
Symbolic providers				—

*$p < .05$.

Some participants were given the opportunity to choose to view one of the three symbolic providers again. RRT hypothesizes that when given the choice, most recipients will choose to view again the symbolic provider that elicited the most favorable affect during the previous viewing. In addition, recipients who chose to view the favorable-affective-inducing provider again will restore their affect more successfully than recipients who (a) viewed a control video and (b) chose to view other providers again.

Method

Participants

One hundred and thirty-three college students (69% female; median age = 19; 76% European ancestry) participated for course credit; 50 participated in the fall semester and another 83 participated in the subsequent winter. The design was identical for the two samples, except that in the winter semester, the experimenter was blind to condition and participants also completed trait measures of affect. The two samples yielded similar findings and thus we describe the two samples as a single study. Trait measures of affect did not yield interesting findings and are not discussed further.

Procedure

Participants viewed three video interviews of symbolic providers in randomized order. After each video, participants rated their own affect experienced during the video as well as the expected supportiveness of the symbolic provider. Affect and support ratings were counterbalanced. Next, participants listened to a 10-min selection of Barber's *Adagio for Strings*, a musical piece previously shown to induce unfavorable affect in many college students (Eich & Metcalfe, 1989). Participants again rated affect after listening to the music. Next, participants were randomly assigned to view a control video (a portion of a documentary on polar bears) or to choose to view one of the three symbolic providers again. As described later, the polar bear video had no effect on participants' affect and thus was an appropriate control. After viewing the control or symbolic provider, participants rated affect again. Finally, to eliminate any effects of the unfavorable affect induction, participants viewed a short comedy video.

Measures

Affect was assessed with the state form of Watson and colleagues' (1988) Positive and Negative Affect Schedule. The expected supportiveness of symbolic providers was

assessed with 12 items used in Lakey and colleagues' (2004) study of symbolic providers. Participants made responses on a 5-point scale anchored by *very slightly or not at all* and *extremely*. Six items were from Cohen and Hoberman's (1983) Interpersonal Support Evaluation List and six were from Cutrona and Russell's (1987) Social Provisions Scale.

For the initial presentation of the three symbolic providers, reliability was calculated separately for recipient, provider, and relational influences. For perceived support, internal consistency reliability was .85 (recipient), .88 (provider), and .91 (relational). For positive affect, reliability was .94 (recipient), .45 (provider), and .92 (relational). For negative affect, reliability was .95 (recipient), 0 (provider), and .50 (relational). The 0 indicates that there was no provider variance for negative affect.

Recipients rated affect the last two times in response to a single musical induction, and a single provider. Thus, we estimated internal consistency reliability using Cronbach's alpha. Across the two, the median reliability was .91 for positive affect and .81 for negative affect.

Symbolic providers and control videos

Each symbolic provider video was a 10-min compilation of segments from a documentary film about the provider: Jane Goodall, a biologist (Hallet, 1990); I. M. Pei, an architect (Rosen, 1997); and Jim Ryun, an athlete and politician (Akagi & Stone, 1999). We chose providers who were accomplished enough to be the subject of commercially available biographies, but were less well known among students than contemporary celebrities. In the videos, the symbolic providers discussed the events of their lives, their interests, and their beliefs. Sixty percent of participants reported prior familiarity with Goodall, 6% with Pei and 8%, with Ryun. There were no effects of prior familiarity on the study findings. The control video was taken from a nature film about polar bears (Lipscomb & Deckard, 1990).

Results and discussion

First, we examined relational effects for the perceived supportiveness of, and affect elicited by symbolic providers. We analyzed the data as a Recipient Nested Within Sample × Provider × Item design using VARCOMP within SPSS. As predicted, provider supportiveness was primarily relational (Table 3). There were also significant relational effects for both positive and negative affect. In addition, consistent with Study 1, relational support was significantly correlated with relational affect. That is, symbolic providers who were seen as unusually supportive elicited unusually high positive ($\rho = .56$*) and unusually low negative ($\rho = -.15$*) affect in recipients. Relational positive and negative affect were not significantly correlated ($\rho = -.14$). Separate analyses of the two samples revealed virtually identical findings. There were significant recipient effects for all constructs, but we do not report correlations for these effects because they are not relevant to RRT. There were no significant provider effects.

Tests of hypotheses about affect regulation required that listening to the musical selection worsened recipients' affect. We conducted mixed analyses of variance (ANOVAs) with time (premusic vs. postmusic) as the repeated measures factor and sample as the between-subjects factor, separately for both positive and negative affect. Sample was included as a factor to determine whether the findings differed between Sample 1 and Sample 2. Affect was worse following the musical induction for both positive affect ($M_{\text{preinduction}} = 23.6$, $M_{\text{postinduction}} = 20.6$), $F(1, 131) = 16.02$, $p < .05$, and negative affect ($M_{\text{preinduction}} = 11.9$, $M_{\text{postinduction}} = 14.8$), $F(1, 131) = 55.34$, $p < .05$. These effects did not differ by sample, as the Sample × Time interaction was not significant for either positive affect, $F(1, 131) = 0.23$, or negative affect, $F(1, 131) = 3.36$, $p = .07$.

RRT predicts that recipients commonly regulate affect by viewing symbolic providers. If so, then recipients should chose to view the symbolic providers that elicited the most favorable affect in the previous viewing. Recipients chose significantly more often (70%) the symbolic providers that elicited the highest positive affect in the previous viewing compared to symbolic providers that elicited less positive affect (30%), $\chi^2(1) = 10.88$,

Table 3. *Variance components, standard errors, and proportion of variance explained for Study 2*

	Variance component	Standard error	Proportion of variance
Perceived support			
Study	.00	.01	.01
Recipient within study	.04	.01	.14*
Provider	.01	.01	.04
Relational within study	.16	.02	.61*
Positive affect			
Study	.00	.01	.00
Recipient within study	.24	.05	.36*
Provider	.00	.01	.00
Relational within study	.34	.03	.50*
Negative affect			
Study	.00	.00	.00
Recipient within study	.07	.01	.54*
Provider	.00	.00	.00
Relational within study	.02	.00	.12*

*$p < .05$.

$p < .05$. This effect did not vary significantly by sample (Wilcoxon $W = 1{,}386$). In contrast, recipients did not choose the symbolic providers that elicited the least negative affect, $\chi^2(1) = 0.31$, and this pattern did not differ by sample (Wilcoxon $W = 813.5$).

According to RRT, recipients who viewed again the providers that elicited the most positive affect should be more successful in restoring their positive affect than (a) recipients who viewed a neutral nature film and (b) recipients who viewed providers who did not elicit the most positive affect (i.e., other providers). As these hypotheses are about change over time, we conducted multiple regression analyses in which we predicted residualized change in positive affect as a function of experimental condition (i.e., symbolic provider vs. control). Thus, positive affect after the experimental condition was the dependent variable, positive affect after affect induction was the first step, sample was the second step, condition (symbolic provider vs. control) was the third step, and the Sample × Condition interaction was the fourth step. The findings did not differ by sample, as none of the Condition × Sample interactions was significant. Figure 1 depicts the patterns of means for each group.

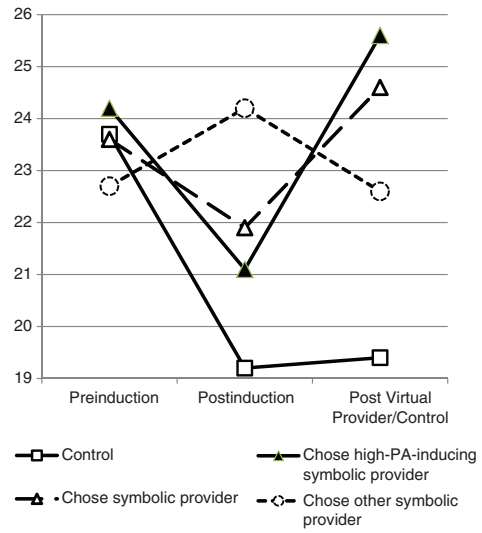

Figure 1. Change in positive affect (PA) as a function of time and which symbolic providers were viewed (Study 2).

Recipients who viewed symbolic providers that previously elicited high positive affect had greater increases in positive affect than did recipients who viewed the nature film (Table 4). Among those who viewed the high-postive-affect-inducing providers,

Table 4. *Change in positive affect (PA) as a function of condition and sample*

Variable	Standardized β	*t*	R^2 change
Positive affect: High-PA-inducing providers vs. controls ($N = 111$)			
Postinduction positive affect	.49*	5.84	.24
Sample	.11	1.32	.01
Condition	.33*	4.24	.11
Sample × Condition	−.39	−1.41	.01
Positive affect: High-PA-inducing providers vs. other providers ($N = 66$)			
Postinduction positive affect	.53*	5.05	.28
Sample	−.07	−0.61	.00
Condition	−.26*	−2.50	.06
Sample × Condition	−.40	0.89	.01
Positive affect: Choice of providers vs. control ($N = 132$)			
Postinduction positive affect	.48*	6.32	.23
Sample	.06	0.74	.00
Condition	.25*	3.37	.06
Sample × Condition	.66	1.96	.02

*$p < .05$.

positive affect increased significantly from postaffect induction to postprovider ($M_{\text{postinduction}} = 21.1$, $M_{\text{postprovider}} = 25.6$), $t(46) = 3.90$, $p < .05$. Recipients who viewed the nature film showed no significant change in affect, ($M_{\text{postinduction}} = 19.2$; $M_{\text{postcontrol}} = 19.4$), $t(64) = 0.23$. In addition, recipients who viewed any symbolic provider again, regardless of whether the provider elicited positive affect previously, had greater increases in positive affect than recipients who viewed the nature film (Table 4). Positive affect significantly improved after viewing any symbolic provider ($M_{\text{postinduction}} = 21.9$, $M_{\text{postprovider}} = 24.6$), $t(67) = 2.66$, $p < .05$, whereas the nature film did not influence positive affect, as reported earlier.

Both of the previous analyses leave open the possibility that the effects of viewing symbolic providers result from giving participants choice as to what to view rather than the effects of the symbolic provider per se. Thus, comparison between recipients who chose to view high-postive-affect providers and those who chose to view other providers is especially informative given that these recipients had equal choice. Recipients who viewed high-positive-affect-inducing providers had greater increases in positive affect than recipients who viewed other symbolic providers (Table 4). Positive affect did not change significantly for recipients who viewed other providers ($M_{\text{postinduction}} = 24.2$, $M_{\text{postcontrol}} = 22.6$), $t(19) = .905$. Thus, the effects of viewing symbolic providers does not appear to reflect only choice.

We also conducted analyses of the extent to which recipients could regulate negative affect by viewing symbolic providers. Recipients who viewed any symbolic provider had significantly larger reductions in negative affect compared to recipients who viewed the nature film, $\beta = -.17$, $t(131) = -2.39$, $p < .05$. There were no significant differences for comparing low-negative-affect-inducing providers versus the nature film or for comparing low-negative-affect-inducing providers versus other providers. There was no significant Condition × Sample interaction. It is not clear why there were weaker effects for affect regulation for negative affect. It seems unlikely that symbolic providers do not influence negative affect, because strong effects for negative affect were observed for Study 1. Perhaps the particular symbolic providers used in Study 2 were less effective in eliciting low negative affect. This explanation is consistent with the observation that the link between relational

perceived support and low negative affect was small in Study 2 compared to Study 1.

Thus, Study 2 documented strong relational influences for symbolic providers on perceived support and affect, as well as links between relational support and affect. In addition, Study 2 documented the dynamic quality of affect regulation as described by RRT. When recipients' affect was worsened, most recipients sought out the symbolic provider that elicited high positive affect in a previous viewing. Recipients who did so restored their positive affect more effectively than recipients who viewed a nature film or those who chose to view other providers again.

Study 3

Study 3 tested RRT's prediction about the mechanisms by which symbolic providers elicit relational affect and perceived support. In real dyads, the link between perceived support and favorable affect emerges primarily because dyads talk about things that elicit favorable affect in both dyad members (e.g., sports, music, or shopping). Recipients do not have to participate directly. Merely observing conversations among other dyads can have similar benefits. Symbolic providers harness this mechanism by providing recipients with an opportunity to observe conversations among symbolic providers. Thus, in Study 3, participants observed five video clips in which conversations were presented and participants rated the expected supportiveness of providers, as well as affect experienced when viewing the videos. As observed in Study 2, participants' reactions to the videos should be largely relational and relational perceived support should be linked to favorable affect.

If conversation is the mechanism for the link between relational affect and perceived support, then we should be able to forecast, from recipients' conversation preferences, the symbolic providers that will been seen as unusually supportive by some recipients, but not others. For example, if a participant likes to talk about sports, but not personal relationships, he or she should find the symbolic provider who talks about sports as unusually supportive, but not the symbolic provider who talks about relationships.

Finally, the perceived similarity between providers and recipients is one of the best markers for whether a recipient will see a provider as supportive (Lakey & Orehek, 2011; Lakey et al., 2002). RRT predicts that similarity items are effective markers for perceived support because they indicate dyads that like to do and talk about the same things. Thus, when a symbolic provider talks about the favored conversation topics of a participant, the participant will see the provider as unusually similar to the participant.

Method

Participants

One hundred and thirty-six college students (54% female; median age = 19; 86% European ancestry) received partial course credit for their participation.

Procedure

Participants viewed five video clips in small groups. After each, participants rated affect elicited while viewing the conversation as well as the supportiveness and similarity of the symbolic provider. Participants used the same measures of affect and similarity as in Study 1, but rated the expected supportiveness of symbolic providers with seven items from the Social Provisions Scale (Cutrona & Russell, 1987). Participants responded on a 5-point scale anchored by *strongly disagree* and *strongly agree*. To control for order effects, clips were presented in a Latin square design.

Videos were selected to reflect a wide range of conversation topics. In each, two people engaged in conversation but one was the primary focus. An experimenter told participants who was the focal person before and after each clip. In "Facing the Giants," a high school football coach (the focal person) challenges a player to perform at a high level in a very difficult drill (http://www.youtube.com/watch?v=-vB59PkB0eQ). The player learns that he can perform at a higher level than he thought. We expected that participants who like to talk about athletic achievement would see this focal person as unusually supportive. In "Before Sunset" the

focal person describes frustrations in finding persistent satisfaction in romantic relationships (http://www.youtube.com/watch?v=ohdOGzMoUkI&feature=related). We expected that participants who like to talk about their personal relationships would find the focal person unusually supportive. In the animated video, "Waking Life" the focal person talks about the difficulty of integrating the concept of free will with the deterministic universe suggested by the natural sciences (http://www.youtube.com/watch?v=vejSAt-MgAM&feature=related). We expected that participants who liked to talk about philosophy would find the focal person unusually supportive. In "Chariots of Fire," the focal person talks about running a competitive race as a metaphor for a well-lived life, from a Christian perspective (http://www.youtube.com/watch?v=7yoDE-3dTvU&feature=related). We expected that participants who like to talk about religion would find the focal person unusually supportive. In the "Poetry of Science," a physicist describes a few key ideas in cosmology, including the limits of observing the universe from earth, set by the age of the universe, its rate of expansion, and the speed of light (http://www.youtube.com/watch?v=9RExQFZzHXQ). We expected that participants who like to talk about science would find the focal person unusually supportive. The length of the videos ranged from 2:43 min ("Before Sunset") to 6:24 min ("Poetry of Science").

We constructed a 25-item measure of participants' conversation preferences, with 5 items devoted to the topics of each video. For example, "I like to talk about uplifting success stories in sports" was an item for "Facing the Giants." "I like to talk about romantic love" was an item for "Before Sunset." "I like to talk about the meaning of life" was an item for "The Waking Life." "I like to talk about the preachers or ministers that inspire me," was an item for "Chariots of Fire." "I like to talk about science" was an item for "The Poetry of Science."

For expected supportiveness, reliability was .81 (recipient), .94 (provider), and .76 (relational). For positive affect, reliability was .95 (recipient), .98 (provider), and .94 (relational). For negative affect, reliability was .99 (recipient), .95 (provider), and .82 (relational). For similarity, reliability was .76 (recipient), .99 (provider), and .91 (relational). For conversation preferences, reliability was .91 (recipient), .82 (provider), and .89 (relational).

Twenty-six participants (19%) reported seeing "Facing the Giants" before the study. Of the remaining videos, fewer than six participants had seen any one before. Analyses restricted to "Facing the Giants" revealed no significant correlations between having seen the video before and any other study construct.

Results and discussion

Consistent with Study 2, there were significant and strong relational effects for all constructs (Table 5), including our new measure of conversation preferences. There were also significant recipient effects for all constructs except perceived similarity. That is, some recipients saw symbolic providers as more supportive and had more favorable affect across all providers than did other recipients. Similarly, some recipients liked to talk about all topics more than did other recipients. In contrast, there were no significant provider influences. Provider influences were large for several constructs, but our sample of five providers was too small to be confident that the effects differed from zero.

Study 3 also replicated our previous findings that the symbolic provider that elicited unusually favorable affect in a recipient was also viewed as unusually supportive by the recipient (Table 6). That is, there were significant correlations among these constructs for relational influences.

Most importantly, as predicted by RRT, Study 3 found that conversation preferences forecasted the provider that a recipient saw as unusually supportive (Table 6). For example, if a recipient liked to talk about science, but not about sports, then we could forecast with good accuracy that he or she would see the physicist in "Poetry of Science" as more supportive than the coach in "Facing the Giants." Similarly, conversation preferences also forecasted whether a symbolic provider would elicit unusually favorable affect in a recipient. Finally, as predicted by RRT, perceived similarity was an effective marker for recipients'

Table 5. *Variance components, standard errors, and proportion of variance explained for symbolic providers in Study 3*

	Variance component	Standard error	Proportion of variance
Conversation preferences			
Trait	.08	.03	.07*
Provider	.07	.06	.06
Relational	.71	.05	.65*
Perceived support			
Trait	.04	.02	.06*
Provider	.11	.08	.14
Relational	.34	.03	.46*
Positive affect			
Trait	.22	.05	.15*
Provider	.49	.36	.33
Relational	.62	.04	.42*
Negative affect			
Trait	.18	.03	.42*
Provider	.02	.02	.05
Relational	.15	.01	.36*
Perceived similarity			
Trait	.02	.02	.02
Provider	.13	.10	.13
Relational	.66	.04	.68*

*$p < .05$.

Table 6. *Symbolic providers: Multivariate generalizability correlations and (standard errors) for relational and trait influences for Study 3*

	Relational influences				
	Conversation preferences	Perceived support	Positive affect	Negative affect	Perceived similarity
Conversation preferences	—	.39* (.04)	.48* (.04)	−.14* (.05)	.47* (.03)
Perceived support		—	.64* (.03)	−.32* (.05)	.75* (.03)
Positive affect			—	−.25* (.04)	.62* (.03)
Negative affect				—	−.25* (.05)
Perceived similarity					—

*$p < .05$.

conversation preferences as well as for which symbolic provider would be seen as unusually supportive. These findings are consistent with RRT's predictions that providers will be seen as supportive insofar as they talk about the things that recipients like.

General Discussion

RRT (Lakey & Orehek, 2011) hypothesizes that the main effect between perceived support and favorable affect does not reflect conversations about stress and how to cope with it primarily, but instead emerges from ordinary conversation and shared activities. The extent to which a provider elicits favorable affect and perceived support in a recipient is largely relational; that is, perceived support reflects recipients' idiosyncratic perceptions and affective reactions rather than the consensus among recipients that some providers are objectively more supportive than others. Furthermore, it is not necessary to participate in conversation directly. Some benefits can be

derived from merely observing conversation. It is not even necessary that the providers are real. Some benefits can be derived from merely observing people who are known only through viewing TV or film (symbolic providers). If so, then we should observe very similar empirical findings when recipients rate symbolic providers as when recipients rate their friends and family. For example, when rating real providers, perceived support is linked to favorable affect (Barrera, 1986; Cohen & Wills, 1985) and is primarily relational (Lakey, 2010; Lakey & Orehek, 2011). The perceived similarity of providers to recipients is among the strongest indicators of provider supportiveness (Lakey & Orehek, 2011).

Across the three studies described here, the results for symbolic providers were remarkably similar to those obtained in studies of real providers. In all studies, expected supportiveness of symbolic providers was strongly socially influenced, and specifically relational in Studies 2 and 3. Socially and relationally influenced perceived support was strongly linked to positive affect and significantly linked to low negative affect. That is, the symbolic provider that elicited unusually favorable affect in a recipient also elicited unusually strong perceptions of supportiveness. The symbolic providers that were seen as unusually similar to recipients were also seen as unusually supportive (Studies 1 and 3). Study 1 is perhaps the most convincing in documenting the similarity between real and symbolic providers, as participants rated both real and symbolic providers.

RRT and the current findings suggest the provocative view that public figures, celebrities, and TV characters help recipients regulate their affect on a day-to-day basis and do so by mimicking the processes by which real support providers help regulate recipients. This might be one reason why Americans spend so much time watching TV. Indeed, symbolic providers seem to have some advantages over real providers. Symbolic providers are always available. Yet they do not make demands on recipients, criticize them, or become jealous. When a symbolic provider becomes tedious, one can merely turn the provider off without consequence. Moreover, as described by RRT, symbolic providers give real people something to talk about as well as a shared activity (e.g., watching TV together). Still, for most people, we do not expect that symbolic providers are as effective in regulating affect as are real providers (although Study 1 did not support this). Spending too much time viewing symbolic providers might be harmful. For example, viewing TV violence in youth increases aggression (Anderson et al., 2003) and excessive TV viewing has also been linked to increased risk for depressive symptoms (Primack, Swanier, Georgiopoulos, Land, & Fine, 2009).

The current findings are consistent with a growing body of research that indicates that symbolic providers can have properties similar to real relationships (Giles, 2002; Klimmt et al., 2006). For example, several studies have found that participants viewed TV to combat loneliness (Derrick et al., 2009). Other research indicates that some of the same processes involved in commitment to real providers also occur in commitment to symbolic providers (Branch et al., 2013). The studies reported here add to this literature by showing that several social support processes observed for real providers also occur for symbolic providers.

Some readers might respond that perceived support by definition involves real providers and thus cannot apply to symbolic providers. Such an a priori restriction makes it impossible to conduct and report studies such as those presented here. We believe that understanding similarities and differences in social support mechanisms for real and symbolic providers should be accomplished by examining research findings for the two types of providers. Doing so requires studies of symbolic providers. Such an approach might even be useful to scholars interested in stress and coping social support processes. For example, symbolic providers might be able to promote effective coping or appraisal in recipients through observation. Some readers might worry that studying symbolic providers leads to a slippery slope whereby investigators speak of the supportiveness of pets or even inanimate objects. McConnell, Brown, Shoda, Stayton, and Martin (2011) have already documented social support-like phenomena with pets.

Although it would present a serious challenge if key perceived support effects occur when people rate inanimate objects, we believe it is important to know if such effects occur.

In conclusion, the present research tested RRT's hypotheses that symbolic providers regulate recipients' affect by mimicking the mechanisms by which real providers regulate recipients' affect. If so, then the same types of social support effects observed with real providers should be found for symbolic providers. In three studies, the results were as predicted and shed new light on how people use symbolic providers to regulate affect.

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