

Chapter to appear in:

K. Sheldon, T. Kashdan, and M. Steger (Eds.),

Designing The Future Of Positive Psychology: Taking Stock And Moving Forward.

Oxford University Press.

Positive Relationship Science: A New Frontier for Positive Psychology?

Nathaniel M. Lambert

Frank D. Fincham

A. Marlea Gwinn

Christine A. Ajayi

Word Count: 8,049

Relationship Science: A New Frontier for Positive Psychology?

When an idea is independently noted by multiple scholars it is usually quite apparent that its time has come. Such is the case regarding the marriage of close relationships and positive psychology research. The important role of close relationships for personal well-being has long been documented in the broader psychological literature (e.g., Bloom, Asher & White, 1978; Argyle, 1987; Proulx, Helms, & Buehler, 2007), a circumstance that the field of positive psychology has also recognized. The centrality of relationships to individual well-being has been acknowledged repeatedly in the positive psychology literature with many texts in the field (e.g., Carr, 2004; Ong & van Dulmen, 2007; Snyder & Lopez, 2007) openly acknowledging that "close relationships are essential to well-being" (Diener & Oishi, 2005, p. 162). Indeed, in his positive psychology textbook, Peterson (2006), states simply that there is a "three-word summary of positive psychology: *Other people matter*" (p. 249, italics in original).

It would therefore seem that the marriage between research on close relationships and positive psychology has long been consummated, a view that is endorsed by at least some in the field (e.g., Caughlin & Huston, in press). However, this consummation is more apparent than real as the focus in positive psychology tends to be on "experience, engagement, and personal feelings of well-being. Rather than a focus on relationships per se, there is typically only a recognition that relationships contribute to these goals" (Beach & Fincham, in press). As a result, most of the material on relationships in positive psychology is usually that found in standard textbooks of social psychology. As Maniaci & Reis (in press) so aptly note, "positive psychologists have paid relatively little attention to how strengths, well-being, and human flourishing may be embedded in relational contexts."

In light of the above observations, it is not surprising that explicit attempts to develop a positive psychology of close relationships are relatively recent (e.g., Fincham & Beach, in press; Reis & Gable, 2003). Indeed, these efforts have culminated in the call for establishing close relationships to constitute the fourth pillar of positive psychology (Fincham & Beach, in press), a sentiment well-received by the field as evidenced by Seligman's endorsement of this view at the first World Congress on Positive Psychology.

Yet some researchers have found that negative life experiences tend to bear more weight than positive experiences (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001), and the study of negative relationship processes, especially destructive conflict, has dominated the literature on prototypic close relationships such as marriage (see Bradbury, Fincham & Beach, 2000). Why then advocate for positive relationship processes to be emphasized? Although negative experiences may be more salient, positive experiences occur much more frequently. More specifically, estimates from studies of daily experiences conservatively place the ratio at about three positive to every negative event (Gable & Haidt, 2005). Moreover, positive and negative affect have been conceptualized as different dimensions, and each appears to have distinct neural processes (e.g., the amygdala in negative affect, Irwin et al., 1996; the dopaminergic pathways in positive affect, Hoebel, Rada, Mark & Pothos, 1999). It is therefore not surprising to find evidence that positive affect can be seen as critical to individual and relationship flourishing (Frederickson & Losada, 2005, identify positivity ratios above about 3-to-1 and below about 11-to-1 as ones that humans need to flourish). For example, Gable, Gonzaga and Strachman (2006) showed that responses to positive, rather than negative events tend to be better predictors of relationship well-being. Thus, a complete picture of the role of close relationships in human

functioning cannot emerge from the study of negative relationship processes alone (for more complete discussion see Fincham & Beach, in press).

The current chapter thus joins an ongoing effort to establish a positive relationship science (PRS). It has a twofold objective: (1) to capture the current status of research on the proposed fourth pillar by briefly reviewing research on positive constructs likely to facilitate relationship flourishing and (2) to make specific recommendations for improving the quality of research in this realm and in positive psychology more generally.

Current status of research: Can we bank on it?

Early on, psychologists studying marital behavior found that distressed couples contingently exchanged behavior but that “lack of reciprocity in the context of high positive exchange” (Gottman et al., 1976, p. 21) characterized happily married couples. That is, happy spouses functioned in accordance with a bank account model. In a popular book, *Seven Habits of Highly Effective People*, Covey (1989) compared human relationships to bank accounts positing that we are constantly making deposits or withdrawals from each relationship account. He argued that keeping a positive reserve by making regular deposits helped buffer negative behavior in the relationship. This metaphor of emotional capital is helpful in thinking about a positive psychology of relationships and hence we use it to highlight constructs that contribute to such capital.

Why Daily Relationship Deposits Matter

As noted earlier, there are approximately three positive experiences to every negative experience (Gable & Haidt, 2005). This would suggest that—in stark contrast to actual bank accounts that are fraught with frequent withdrawals—there are typically far more deposits (or at least opportunities for deposits) in relationship bank accounts than there are withdrawals. Thus, the study of how daily relationship deposits

are made and under what circumstances these deposits are most valued is an important priority for positive psychology researchers.

Although they may seem mundane, the opportunities to make regular positive deposits through daily interactions are abundant. Daily positive interactions have important implications for positive affect, intimacy, and health symptoms. For example, participants had higher levels of positive affect not only if they disclosed a positive daily event, but also if their partner disclosed a mundane positive event (Hicks & Diamond, 2008). Additionally, self-disclosure and perceived partner responsiveness in daily social interactions play a role in intimacy (Lin & Huang, 2006). People are also happier and experience fewer negative health symptoms when they feel understood in daily social interactions (Lun, Kesebir, & Oishi, 2008). Finally, accumulated positive deposits should provide a buffer against later withdrawals that are inherent in every relationship.

An individual's perception of his or her partner is largely contingent on specific interactions. These daily interactions provide many opportunities for deposits or withdrawals. To illustrate further the potential influence of daily interaction deposits on relationships, we will describe research that has been done on intimacy, capitalization, gratitude, and forgiveness. Then we will discuss some evidence on how an accumulation of such daily relationship deposits seems to provide a buffer against the impact of conflict.

Intimacy

Daily deposits are critical for building intimacy. Intimacy has been positively correlated with individual need fulfillment (Prager & Buhrmester, 1998), marital satisfaction (Patrick, Sells, Giordano & Tollerud, 2007), and well-being (e.g., Waltz & Badura, 1987; Prager &

Buhrmester, 1998). Conversely, deficiencies in marital intimacy are correlated with a higher severity of depression (Waring & Patton, 1984).

With regard to intimacy, disclosure and responsiveness in daily interactions are paramount. In fact, using daily diary methods Laurenceau, Rovine, and Barrett (2005) found that the relationship between partner disclosure and intimacy seems to be mediated by perceived partner response. Enthusiastic positive responses (which will be expanded upon in a later section) are positively correlated with levels of intimacy (Gable, Reis, Impett, & Asher, 2004). This effect of partner response on intimacy goes beyond the response itself. Specifically, responses that were perceived by the participants to be intentionally hurtful had more of a distancing effect on their relationship than responses that were unintentionally hurtful (Vangelisti & Young, 2000). Another study suggests that males' disclosure and empathetic responses predicted their feelings of intimacy while women's feelings of intimacy were predicted by their partners' displays of these actions (Mitchell, Castellani, Herrington, Joseph, Doss, & Snyder, 2008). These studies imply that daily interactions can provide a means of daily deposits that contribute specifically to intimacy and the relationship bank account as a whole.

Capitalization

There is evidence that between 60 and 80 percent of the time, people disclose their most positive daily experience (Gable, Reis, Impett, & Asher, 2004; Gable & Maisel, 2008). Thus, responding in an appropriate manner to a relationship partner's good news could be one of the most prevalent opportunities to make a deposit in a relationship bank account; thus most people are presented the chance to enhance or dampen levels of relationship satisfaction almost every day. In fact, even though past research has focused on the importance of partners' responses to negative

events, responses to positive events tend to be better predictors of relationship well-being (Gable & Gonzaga, 2006).

A person's response to the good news of another person has been termed capitalization and the most effective response is an active-constructive one (e.g., "enthusiastic support"), which has been found to be positively correlated with commitment, satisfaction, intimacy and trust (Gable, Reis, Impett, & Asher, 2004). Conversely active-destructive ("quashing the event") and passive-destructive ("ignoring the event") responses and also passive-construction ("quiet, understated support") responses have been related to negative relationship outcomes. The research on capitalization demonstrates the need for humans to feel genuinely cared about and supported by their partner during daily interactions (Gable, Reis, Impett, & Asher, 2004). Assessment of how individuals respond to the good news of their partner can tell us a lot about the daily deposits and withdrawals that are being made to and from the relationship bank account.

Gratitude

Gratitude is a construct that has received considerable attention from positive psychologists (e.g., Emmons & Crumpler, 2000). Building on this work, relationship researchers have now recognized that expressing gratitude on a regular basis is another means by which positive deposits may be made into relationship bank accounts. In a recent study, participants were randomly assigned to write about daily events, express gratitude to a partner, discuss a positive memory with a partner, or think grateful thoughts about a partner twice a week for three weeks. At the end of the three weeks, those assigned to the expression of gratitude in relationships condition reported higher positive regard for their partner (a friend) and more comfort voicing relationship concerns than did those in the other conditions, even when

controlling for the baseline scores of these variables and frequency of participation in the intervention. In addition, positive regard mediated the relationship between condition and comfort in voicing relationship concerns (Lambert & Fincham, 2009). Furthermore, those assigned to express gratitude to a friend reported greater perceived communal strength (e.g., caring, willingness to sacrifice, etc.) than participants in all control conditions (Lambert, Clark, Durtschi, Fincham, & Graham, in press). These studies indicate that expressing gratitude to a partner is an important way by which individuals make positive relationship deposits.

Forgiveness

Potentially more controversial is forgiving a partner transgression as a means of making deposits in the relationship bank account. This is because forgiveness has a potential dark side. For example, among newlyweds, McNulty (2008) found frequency of partner negative behavior moderated the effect of forgiveness: more forgiveness led to a lower decline in satisfaction but only for spouses married to partners who infrequently engaged in negative behavior and that among spouses married to partners who frequently engaged in negative behavior, increased forgiveness appeared to be harmful over time. In a similar vein, forgiving domestic violence is potentially dangerous because women in domestic violence shelters who were more forgiving were more likely to form an intention to return to their partner (Gordon, Burton & Porter, 2004). Our view of such findings is that they result largely from lay persons confusing forgiveness with condoning and/or reconciliation (see Kearns & Fincham, 2005).

When properly understood, forgiveness is robustly and positively related to core relationship constructs such as relationship satisfaction (e.g., Fincham, 2000; Paleari, Regalia, & Fincham, 2003), and commitment (e.g., Finkel, Rusbult, Kumashiro, & Hannon, 2002;

Karremans & VanLange, 2008). In each case, there are data to suggest that the association may be bidirectional (e.g., Fincham & Beach, 2007; Tsang McCullough, and Fincham, 2006).

Unresolved conflict provides a potential mechanism that links forgiveness and relationship satisfaction. Specifically, it can be argued that transgressions that are not forgiven may spill over into future conflicts and, in turn, impede their resolution, thereby putting the couple at risk of developing the negative cycle of interaction that characterizes distressed relationships. Supporting this line of reasoning, lack of forgiveness is linked to ineffective conflict resolution (Fincham, Beach, & Davila, 2004). Moreover, for wives, forgiveness predicted husbands' reports of better conflict resolution 12 months later, controlling for initial levels of conflict resolution and degree of hurt (Fincham, Beach, & Davila, 2007).

It is telling that the search for a mechanism linking forgiveness to relationship satisfaction involves the negative. This is because an explicit link to positive psychology has not been made, an omission that this chapter seeks to rectify. Making such a link immediately draws attention to constructs such as empathy and humility as potential mediators. In any event, forgiveness appears to be a powerful means of building emotional capital in the relationship.

Accumulated Positive Deposits and Conflict Management

The level of positive deposits in the relationship account should affect conflict management and how much of a withdrawal is made during an argument. There is evidence to support this suggestion. Some research indicates that that husband's levels of enthusiasm in everyday marital interactions was correlated with wife's affection in the midst of conflict, and that husband's playful bids during a neutral interaction, predicted couple's humor during conflict (Driver & Gottman, 2004). Another study found that positive behavior during conflict is important for predicting changes in satisfaction attributable to negative behavior (Johnson,

Cohan, & Davila, et al., 2005). Furthermore, in an earlier study Gottman and Levinson (1992) found that couples rated as having higher positive affect (compared with couples displaying lower positive affect) reported (a) marital problems as less severe (at Time 1); (b) higher marital satisfaction (Time 1 and Time 2); (c) better physical health (Time 2); (d) less negative ratings for interactions; (e) less negative emotional expression; (f) more positive emotional expression; (g) less stubbornness and withdrawal from interaction; (h) less defensiveness; and (i) less risk for marital dissolution (lower marital satisfaction and higher incidence of consideration of dissolution and of actual separation). Finally, Janicki et al. (2006) showed that the intensity of contemporaneously recorded, everyday conflictual interactions with the spouse predicted marital satisfaction but did not do so when positive partner interactions were also considered (conflict frequency was unrelated to marital satisfaction). Thus, positive partner behaviors and a store of positive deposits seem to affect the degree to which withdrawals are made during a conflict, which would contribute to the overall level of emotional capital.

The positive relationship bank likely matters so much because in intimate relationships we voluntarily make ourselves most vulnerable to another human being. We do so by linking the realization of our needs, aspirations, and hopes to the goodwill of a relationship partner. Rendering ourselves vulnerable in this way is a double edged sword. It makes possible the profound sense of well-being that can be experienced in close relationships. At the same time, the imperfection of any partner means that hurt or injury is inevitable, and when it occurs, the hurt is particularly poignant precisely because we have made ourselves vulnerable. It is therefore perhaps not surprising that ongoing injury (e.g., chronic conflict) takes a toll physiologically and is related to general responses (e.g., immunological down-regulation and pro-inflammatory responding, Kiecolt-Glaser et al., 2005) as well as specific disorders (e.g., congestive heart failure, Coyne et al., 2001).

Critique. In this critique we offer an answer to the question posed in the section heading. No, we cannot bank on building a Positive Relationship Science (PRS) by simply continuing with research like that reviewed thus far. The above review is far from complete but it suffices to illustrate some serious conceptual problems. One critical issue concerns the boundary between the positive and the negative. Any PRS must necessarily define the positive, a more difficult task than it first appears to be. As Maniaci and Reis (in press) point out, nearly all relational activities (e.g., forgiveness, social support, conflict) can lead to positive or negative outcomes depending on how they unfold and the context in which they do so. As a consequence these authors question the wisdom of defining processes in terms of whether they are beneficial or harmful to the relationship. This critique applies more generally to positive psychology as accepted virtues such as generosity are not inexorably positive and can be manifest in ways that are harmful to the individual.

For example, a study by McNulty, O'Mara, & Karney (2008) well illustrates this point. The process of benevolent cognitions (making positive attributions or disengaging global evaluations of the relationship from negative experiences) might be expected to have very positive effects on a relationship. Indeed, at Time 1 benevolent cognitions were positively related to relationship satisfaction, and such a strategy continued to benefit healthier marriages four years later. However, benevolent cognitions predicted steeper declines in satisfaction among more troubled marriages, as spouses allowed problems to worsen over time. The authors suggest that this highly touted strategy for improving relationships may be harmful for some as it could decrease their motivation to address problems directly. Thus, context matters. What may be helpful for certain types of couples may be harmful for others.

On a related note, oftentimes the tendency of researchers is to empirically measure and analyze positive and negative variables as if they are two points on one continuum. Eagly and Chaiken (1993) suggested that “social scientists typically assess people's attitudes by placing them on a bipolar evaluative continuum” (p. 90). In fact attitudes “are largely treated as unidimensional summary statements” even though they are often considered to be multidimensional (Thompson, Zanna, & Griffin, 1995, p. 362). In the realm of relationships, Fincham and Linfield (1997) provided evidence that the common conception of relationship satisfaction as a bipolar construct is incomplete. They used confirmatory factor analysis to demonstrate that separate positive and negative dimensions exist which they then used to define a two dimensional space. The authors then identified ambivalent (high positive and high negative), as well as indifferent (low-positive and low-negative) relationship types and showed that even though they were indistinguishable in (bipolar) marital satisfaction they differed in important ways. Mattson, Paldino and Johnson (2007) using the two dimensional measure developed by Fincham and Linfield (1997) found that it captured well the relationship quality of engaged couples and accounted for unique variability in observed behavior and attributions. Thus, researchers in positive psychology should avoid the temptation to treat positive or negative constructs as two points on one continuum. The research evidence points to much greater complexity.

A final, important concern is that a collection of positively valenced constructs does not a PRS make, no matter how intensively they are studied. A general criticism of positive psychology is that it lacks a set of organizing principles and the same can be said of the emerging PRS. If it is to avoid this criticism, PRS needs to develop in a more integrative, theory driven manner than hitherto. Attachment theory has had a profound impact on relationship research and so it is not surprising that Lopez (2009) builds on Mikulincer and Shaver's (2005) suggestion

that attachment security become “a theoretical foundation for a positive social psychology” (p. 233) by identifying it as “the relational scaffolding of positive psychology” (Lopez, 2009, p. 405). Certainly there is much merit to such a view though other candidates such as self expansion theory (Aron, Aron, Tudor & Nelson, 1991), and Reis and Gable’s (2003) analysis of appetitive and avoidance motivational systems in relationships should not be overlooked.

The Future: Rigor and Diversity

Added to the knotty conceptual problems identified are critical methodological issues that have important implications for our understanding of positive processes in relationships. These also need to be attended to in building a viable PRS. The majority of past research on relationships has focused exclusively on only one member of the dyad, which provides an incomplete picture of what is going on in the relationship. Increased use of appropriate dyadic data analysis procedures would greatly enhance what is known about positive relationship deposits. Also, overreliance on cross-sectional designs, or experimental designs with weak controls, plagues past research. We make several specific suggestions for improving the rigor of study designs. Finally, past research has relied almost entirely on self-report data and so we provide examples of using implicit measures and observational data.

Rigor in Analysis

The vast majority of the studies on positive relationship processes have focused exclusively on one member of the relationship. To analyze the interactions between individuals nested within couples the Actor-Partner Interdependence Model (APIM) uses the dyad as the unit of analysis (Kenny, 1990, 1996; Kenny & Cook, 1999; Kenny, Kashy, Cook, & Simpson, 2006). This type of statistical procedure is important, because most frequently only one partner’s responses has been taken into consideration and the other partner’s response is either left out, or

is not analyzed appropriately. To truly understand dyadic relationships, these types of procedures need to be used more regularly. APIM is a mixed models approach, in which data from two dyad members are treated as nested scores within the same group. This model suggests that a participant's independent variable score affects both his or her own dependent variable score (actor effect) as well as the dependent variable of his or her partner (partner effect). The APIM analysis is an important advance as traditional methods do not take into account both actor and partner effects on dependent variables. This information is obviously critical for an accurate assessment of the relationship bank account.

Use of the APIM is fast becoming routine in relationship research and provides a healthy corrective to past practices in which interdependency in relationship data was not recognized, was ignored (both can lead to inaccurate estimates of standard errors, incorrect degrees of freedom and improper effect sizes) or dealt with in non-optimal ways (e.g., use of couple average scores, which due to the extreme score of one member may not be an accurate reflection of the couple). Positive psychologists who wish to contribute to the “fourth pillar” will thus have to add the APIM to their skill set. A useful introduction full of practical (“how to”) advice is provided by (Ackerman, Donnellan & Kashy, in press). However, this will not be sufficient for besides including the partner in an appropriate analysis strategy, there are several other things that need to be done to improve rigor so that we may find out more about what activities make a contribution to positive daily deposits.

Rigor in Study Designs

Much of the research done in positive psychology has utilized a cross-sectional design which is not particularly useful if trying to assess the relationship bank account, as tracking the accumulation of daily deposits over time is central to understanding the current emotional capital in the relationship. Also, these types of designs do little to expand knowledge about the

interrelationship between variables as they reflect only one instance in time (limiting knowledge about the direction of effects), do not allow for causal inferences to be drawn (because of the lack of experimental design), and there is often no examination of why the variables are related (through mediators) or for whom and under what conditions they are related (using moderators).

Longitudinal designs provide stronger information about the direction of effects and help us to begin to understand the effects of the accumulated deposits over time. Such designs should be used more frequently in positive psychology. Of course, there is also a need for more studies using experimental designs. However, in several cases, even when an experimental design is used it may not be particularly informative if rigorous control conditions are absent. For example, if a researcher is attempting to demonstrate the effect of gratitude journaling on depression and the control condition is to write about daily news reports (which are predominantly negative), then it may not be surprising nor informative that gratitude journaling had an effect on depression when compared to such a control condition. Positive psychologists should consider designs that control for other *positive* alternative explanations to the phenomenon of interest as well as mood.

For example, in a recent study (Lambert, Clark, Durtschi, Fincham, & Graham, in press) we wanted to test whether expressing gratitude to a relationship partner increased the expresser's sense of communal strength, defined as the degree of felt responsibility for a partner's welfare (Mills, Clark, Ford, & Johnson, 2004). We proposed that simply thinking grateful thoughts about a partner would not have the same effect as expressing gratitude to a partner. In order to rigorously test the hypothesis, we used a four condition journal study design, collecting pre and post test reports of participants' communal strength. We found that even when controlling for baseline scores of communal strength, those who had expressed gratitude to their

partner reported higher perceived communal strength than those who (a) wrote about daily activities, (b) wrote about grateful thoughts, or (c) had positive interactions with their partner.

In this study we were attempting to demonstrate how one positive construct—gratitude—may build upon another positive construct—perceived communal strength. Including a truly neutral referent condition can aid in providing a comparison group necessary to demonstrate the effect of the target variable. Including positive control conditions, however, such as the grateful thoughts condition and the positive interaction condition, helped rule out the potential confound that naturally occurring covariance between positive constructs was producing an artificial or inflated result. Also, such rigorous controls provide a test of whether the target independent variable has specific, unique effects on the target dependent variable.

Finally, there is a shortage of studies in positive psychology that include questions of “how” and “why” (through mediators) or that answer questions of “for whom” or “under what conditions” (through moderators). Once the main effect of one variable on another is demonstrated, further attempts should be made to determine why. For example, in the first study of our research on prayer (Lambert, Fincham, Stillman, Graham, & Beach, 2010), we established a link between praying for one’s partner and forgiveness of that partner. Our next step was to provide data on mechanisms that could explain the connection between prayer and forgiveness. We hypothesized that praying for benefits for a specific individual increased one’s general sense of selfless concern for others, and this increase in selfless concern mediated the effect of experimental condition on increased forgiveness. To test our hypothesis, we conducted a journal study in which the design very closely resembled the one described earlier in that it included two positive activities that might have served as confounds.

We found that praying for the well-being of a friend and being a positive aspect of the friend's life had an effect on forgiveness even when compared to the rigorous control conditions of undirected prayer and thinking positive thoughts about the friend. Praying for a friend also increased a general sense of selfless concern for others, which mediated the relationship between praying for a friend and forgiveness. Examining this mediator provided helpful information as to why praying for one's partner increases forgiveness. Identification of mechanisms accounting for phenomena should enhance the explanatory power of studies in positive psychology.

In sum, increased rigor points to the need for more longitudinal research (yielding information on duration and direction of effects) and adding positive control conditions to experiments (to test the unique contribution of a specific independent variable), and increased investigation of mediators and moderators (providing answers to questions like "why," "how," "for whom," and "under what conditions"). Although making such improvements will significantly raise the bar for research in positive psychology and should help us discover under what conditions positive deposits may be most helpful for a relationship, further steps should be taken to overcome the limitations of self-report data which is omnipresent in positive psychology.

Diversity: Overcoming the Limitations of Self-Report Data

The limitations of self-report have been extensively documented (e.g., see Stone, Turkhan, Bachrach, Jobe, Kurtzman, & Cain, 2000) and include impression management, motivated distortion, and the limits of self-awareness (Fincham & Rogge, in press). We focus on impression management, which is the tendency of individuals to present themselves in a favorable light, or to respond in a socially desirable manner (Reynolds, 1982). This is a serious source of bias in any research, but especially for the field of positive psychology because all, or

nearly all, the constructs we study are socially desirable and people want to portray themselves favorably. This results in an inflated covariance between variables, due to the shared variance with social desirability.

In marital research, Edmonds (1967) created the Marital Conventionalization Scale, which contains items that describe the marriage in an impossibly positive light portraying it as "perfect" and "meeting my every need." It correlates strongly (in the .50 to .73 range) with numerous measures of marital adjustment and satisfaction (Fowers & Applegate, 1996). Edmonds (1967) argued the social desirability bias in responses to assessment of marital satisfaction was unconscious and unintended and therefore involved "fooling oneself rather than fooling others" (Edmonds, 1967, p. 682).

In our research on young adult romantic relationships, we noticed a ceiling effect in which most students report their relationship satisfaction at the high end of the scale. An average satisfaction score in our sample has often been a score of six on a seven-point scale. Of course we recognize that young adults likely are more satisfied with their romantic relationships than couples at other stages of life due in part to the novelty of the relationship and lack of constraints (e.g., having to provide, the responsibility of caring for children, etc.). Nonetheless, there is some social pressure (e.g., Fowers & Applegate, 1996) to report a great deal of satisfaction in one's relationship, regardless of life stage.

Researchers in the field of positive psychology should, at a minimum, include measures of social desirability in their battery of measures and control for this tendency in analyses. However helpful including such measures may be there are even better and more rigorous ways to overcome the limitations of self-report. We describe three alternatives to typical self-report measures and include examples of implementing such techniques in our own studies on

relationships. These include the need for (1) implicit measures, (2) behavioral measures, and (3) observational methods.

Need for Implicit Measures of Positive Relationships. Implicit measures aim to assess attitudes (or constructs) that respondents may not be willing to report directly, or of which they may not even be aware. Such measures provide an assessment of the construct of interest without having to ask directly for a verbal report and they are therefore likely to be free of social desirability biases (Fincham & Rogge, in press).

Given the ceiling effect that we observed in self-reported relationship satisfaction, we saw the need to create an implicit measure of relationship satisfaction. Cognizant of Fazio and Olson's (2003, p. 303) observation that modern implicit measures that assess constructs without directly asking about them are, in this regard, no different from "earlier proposals regarding projective methods," we were prompted to think quite literally about projective techniques. As a result, we presented participants with a blank sheet of paper, some colored pencils, and the following instructions: "Please draw a picture with (a) a house, (b) a tree (c) a car and (d) two people *who represent you and your partner*. You may draw them in any way you like, but you must include the above items. Please label the figure that represents you as 'me' and the one that represents your partner as 'partner'." Research assistants then measured the distance between the necks of two depicted partners and recorded them in millimeters. One distinct advantage to the way this measure is administered is that there is no social pressure or apparent reason why individuals should draw themselves closer to or further from their partner. Also, participants remain unaware that we are measuring the distance between the necks and of course are not privy to any of the implications that we have found regarding distance between necks.

As it turns out, the distance between the necks is predictive of several important indicators of relationship well-being. Across three samples there was good evidence of convergent validity. For example, neck distance correlated significantly with relationship satisfaction, as well as with the likeability of the partner and commitment to him/her. The neck distance measure predicted a number of relevant variables four weeks later over and beyond relationship satisfaction and initial level of the variable predicted. The variables thus predicted included expression of appreciation, commitment to partner, likeability of partner, intimacy, mattering, perceived relationship maintenance efforts of the partner, and perceived commitment of partner. Finally, the “neck measure” may also foretell extradyadic sexual behavior and how safe a person feels in the relationship ($p < .06$ in each case). Other studies have demonstrated the validity of this measure as neck distance has consistently been positively correlated with relationship satisfaction and other indicators of well being. Using or developing such implicit measures to assess constructs important to positive psychologists is essential for future research.

Need for Behavioral Measures. Our aforementioned journal studies utilized a longitudinal design, included rigorous controls, and tested for mechanisms. However, the studies were limited by exclusive use of self-report data. Thus, we perceived the need to obtain a behavioral measure of forgiveness that was free from some of the limitations of self-report data that we have previously discussed. To do so, we needed to create a transgression that would be the same across participants and then provide some type of quantifiable activity related to forgiveness that participants could engage in following the supposed “transgression.” Having already collected the “neck measure,” we decided to make further use of that activity. Thus, upon completion of their drawings, participants were told that the purpose of the task was to assess creativity and that their partner would rate their drawing on a scale of “1—not at all creative” to

“5—extremely creative.” The research assistant took each participant’s drawing as if to give to the partner to rate.

A few minutes later, the research assistant returned with an envelope containing the supposed feedback rating of their partner, and said, “I thought you might be interested to see how your partner rated your picture, it’s here in this envelope. I’ll let you go ahead and look at your partner’s rating of your drawing, and then I need you to do a short task for a different study.” All participants were then handed the false rating sheet with the number “1—not at all creative” circled, as if by their partner. They also received instructions for a three minute activity that varied based on their condition, which they completed after having looked at the false rating supposedly by their partner. Then, depending on the group to which they were randomly assigned, participants either prayed for their partner or wrote a response to a philosophical religious question.

Following the manipulation, participants engaged in the prisoner dilemma game in which they believe they are playing a game with their partner and are required to decide to “cooperate” with or “antagonize” their partner for a specified amount of points. In actuality, the participants were playing against the computer, which simulates the partner by providing the same responses to all participants. The number of “cooperative” choices was summed, and in this case, those participants who prayed for their partner demonstrated more cooperative responses during the game (Lambert, Fincham, DeWall, & Beach, 2010). This is simply one example of a behavioral measure that could be implemented as part of a study design. This type of measure provides evidence that ought to be much less subject to social desirability and limits of self-awareness.

Need for Observational Data. Numerous marital studies have utilized observation of couple interaction and analyzed observers’ coding of positive affect (among other things). The

rigor demonstrated by these methods needs to be extended to other areas of positive relationships research as well as to positive psychology in general. Furthermore, observational methods should be more frequently utilized in evaluating the efficacy of positive relationship interventions, as this level of rigor has rarely been applied to experimental tests of factors that positively affect relationships. To illustrate the potential usefulness of observational coding, we further describe some of our prayer research.

In a recent study (Fincham, Lambert & Beach, in press) we assigned one group of participants to say a daily prayer for their partner and another group to think positive thoughts about their partner for four weeks. At the conclusion of the four weeks, participants returned to the laboratory with their original partner where they were seated with their partner in front of a video camera. The following question was posed to the study participants: “Please describe the short or long-term future of your relationship with your partner.” The videotaped responses to this question were coded by a group of five trained research assistants blind to study hypotheses. After watching the participants’ response to this question, the research assistants coded their response based on the question, “How would you rate the commitment that the participant demonstrated to the partner during this interaction?” on a scale from (1= “Not at all committed” to 7= “Extremely committed”). Our hypothesis was supported as comparisons revealed higher objective reports of commitment for those in the prayer for partner condition than among those in the positive thought condition. These results indicate that the effect of praying for one’s partner on commitment is apparent even to objective observers. Again, this is just one example illustrating the usefulness of observed behavior.

In sum, by increasing the use of implicit measures, behavioral measures, and observational methods, researchers of positive relationship processes may greatly improve the

quality and contribution of their research. And use of such methods will provide a more objective understanding of a couple's relationship bank account.

Conclusion

To summarize, relationships have now been acknowledged as the fourth pillar in positive psychology. As a result, there has been a recent uptick in the amount of research that has been done on positive relationship processes. To truly understand the nature and status of relationships and the accumulated emotional capital that exists, we need to examine the daily deposits and withdrawals into and out of the relationship bank account. To provide an accurate assessment of the accumulation of deposits and withdrawals, data from both partners in the relationship dyad needs to be included in analysis. In addition, the quality of research in this area and in the realm of positive psychology generally could be improved by implementing more rigorous study designs and by going beyond traditional self-report data. As positive psychologists enter the field of close relationship research there is the potential not only to enrich the relationship literature but also to enhance the credibility and scientific contribution of positive psychology research more generally.

References

- Ackerman, R.A., Donnellan, M.B., & Kashy, D.A. (in press). Working with dyadic data in studies of emerging adulthood: Specific recommendations, general Advice, and practical tips. In F. Fincham & M. Cui (Eds), *Romantic Relationships in emerging adulthood*. New York; Cambridge University Press.
- Argyle, M. (1987). *The psychology of happiness*. New York: Methuen.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, 60, 241-253.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5, 323 – 370.
- Beach, S.R.H. & Fincham, F.D. (in press). Conflict can be constructive: Reflections on the dialectics of relationship science. *Journal of Family Theory and Review*.
- Beach, S.R.H., Fincham, F.D., Hurt, T., McNair, L.M., & Stanley, S.M. (2008). Prayer and marital intervention: Toward an open empirically grounded dialogue. *Journal of Social and Clinical Psychology*, 27, 693-710.
- Bloom, B.L., Asher, S.J., & White, S.W. (1978). Marital disruption as a stressor: A review and analysis. *Psychological Bulletin*, 85, 867-894.
- Bradbury, T.N., Fincham, F.D., & Beach, S.R.H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and the Family*, 62, 964-980.
- Carr, A. (2004). *Positive psychology: The science of happiness and human strengths*. New York: Brunner-Routledge.
- Caughlin , J.P., & Huston, T.L. (in press). The flourishing literature on flourishing relationships. *Journal of Family Theory and Review*.
- Covey, S. R. (1989). *The seven habits of highly effective people*. New York: Simon and Schuster.

- Coyne, J.C., Rohrbaugh, M.J., Shoham, V., Sonnega, J.S., Nicklas, J.M., Cranford, J.A. (2001). Prognostic importance of marital quality for survival of congestive heart failure. *The American Journal of Cardiology*, 88:5, 526-529.
- Diener, E., & Oishi, S. (2005). The nonobvious social psychology of happiness. *Psychological Inquiry*, 16, 162-167.
- Driver, J. & Gottman, J. (2004). Daily Marital Interactions and Positive Affect During Marital Conflict Among Newlywed Couples. *Family Process*, 43, 301-314.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Orlando, FL: Harcourt Brace Jovanovich.
- Edmonds, V. H. (1967). Marital conventionalization: Definition and measurement. *Journal of Marriage and the Family*, 24, 349-354.
- Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, 19, 56-69.
- Fincham, F.D. (2000). The kiss of the porcupines: From attributing responsibility to forgiving. *Personal Relationships*, 7, 1-23.
- Fincham, F. D. & Rogge, R. (in press). Understanding Relationship Satisfaction: Theoretical Challenges and New Tools for Assessment.
- Fincham, F.D., & Beach, S.R.H. (2007). Forgiveness and marital quality: Precursor or consequence in well-established relationships. *Journal of Positive Psychology*, 2, 260-268.
- Fincham, F., Beach, S. & Davila, J. (2004). Conflict Resolution in Marriage and Forgiveness. *Journal of Family Psychology*, 18, 72-81.
- Fincham, F.D., Beach, S.R.H., & Davila, J. (2007). Longitudinal relations between forgiveness and conflict resolution in marriage. *Journal of Family Psychology*, 21, 542-545.

- Fincham, F. D., & Linfield, K. J. (1997). A new look at marital quality: Can spouses feel positive and negative about their marriage? *Journal of Family Psychology, 11*, 489-502.
- Fincham, F. D., Lambert, N. M., & Beach, S. R. H. (in press). Faith and unfaithfulness: Can praying for your partner reduce infidelity? *Journal of Personality and Social Psychology*.
- Fincham, F. & Beach, S. R.H. (in press). Of memes and marriage: Towards a positive relationship science. *Journal of Family Theory and Review*.
- Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness? *Journal of Personality and Social Psychology, 82*, 956-974.
- Fowers, B. J., & Applegate, B. (1996). Marital satisfaction and conventionalization examined dyadically. *Current Psychology, 15*, 197-214.
- Fredrickson, B. L. & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist, 60*, 678-686.
- Gable, S. L., Gonzaga, G., & Strachman, A. (2006). Will you be there for me when things go right? Social support for positive events. *Journal of Personality and Social Psychology, 91*, 904-917.
- Gable, S. & Haidt, J. (2005). What (and Why) Is Positive Psychology? Review of General *Psychology, 9*, 103-110.
- Gable, S., Reis, H., Impett, E., & Asher, E. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology, 87*, 228-245.
- Gordon, K, Burton, S., & Porter, L.(2004). Predicting the intentions of women in domestic violence shelters to return to partners: does forgiveness play a role? *Journal of Family Psychology, 18*, 331-38.

- Gottman, J.M. & Levenson, R.W. (1992). Marital processes predictive of later dissolution: Behavior, physiology and health. *Journal of Personality and Social Psychology*, 63, 221-233.
- Gottman, J.M., Notarius, C., Markman, H., Banks, S., Yoppi, B., & Rubin, M.E. (1976). Behavior exchange theory and marital decision making. *J. Personality and Social Psychology*, 34, 14-23.
- Hoebel, B. G., Rada, P. V., Mark, G. P., & Pothos, E. N. (1999). Neural systems for reinforcement and inhibition of eating: Relevance to eating, addiction, and depression. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 558- 572). New York: Cambridge University Press.
- Irwin, W., Davidson, R. J., Lowe, M. J., Mock, B. J., Sorenson, J. A., & Turski, P. A. (1996). Human amygdala activation detected with echoplanar functional magnetic resonance imaging. *Neuroreport*, 7, 1765-1769.
- Janicki, D., Kamarck, T., Shiffman, S., & Gwaltney, C. (2006). Application of ecological momentary assessment to the study of marital adjustment and social Interactions during daily life. *Journal of Family Psychology*, 20, 168-172.
- Johnson, M.D., Cohan, C. L., Davila, J., Lawrence, E., Rogge, R. D., Karney, B. R., Sullivan, K. T., & Bradbury, T. N. (2005). Problem-solving skills and affective expressions as predictors of change in marital satisfaction. *Journal of Consulting and Clinical Psychology*, 73, 15-27.
- Karremans, J. C., & Van Lange, P. A. M. (2008). Forgiveness in interpersonal relationships: Its malleability and powerful consequences. *European Review of Social Psychology*, 19, 202-241.
- Kearns, J.N., & Fincham, F.D. (2005). Victim and perpetrator accounts of interpersonal transgressions: Self-serving or relationship-serving biases? *Personality and Social Psychology Bulletin*, 31, 321-333.

- Kenny, D. A. (1990). Design issues in dyadic research. In C. Hendrick & M. S. Clark (Eds.), *Review of personality and social psychology: Research methods in personality and social psychology* (pp. 164–184). Newbury Park, CA: Sage.
- Kenny, D. A. (1996). Models of interdependence in dyadic research. *Journal of Social and Personal Relationships, 13*, 279–294.
- Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic and illustrations. *Personal Relationships, 6*, 433–448.
- Kenny, D. A., Kashy, D. A., Cook, W. L., & Simpson, J. A. (2006). *Dyadic Data Analysis*. New York: Guilford Press.
- Kiecolt-Glaser, J. K., Loving, T. J., Stowell, J. R., Malarkey, W. B., Lemeshow, S., Dickinson, S. L., et al. (2005). Hostile marital interactions, proinflammatory cytokine production, and wound healing. *Archives of General Psychiatry, 62*, 1377-1384.
- Lambert, N. M., Clarke, M. S., Durtschi, J. A., Fincham, F. D., & Graham, S. M. (in press). Benefits of expressing gratitude: Expressing gratitude to a partner changes the expresser's view of the relationship. *Psychological Science*.
- Lambert, N. M., Fincham, F. D., Stillman, T. F., Graham, S. M., & Beach, S. R. M. (2010). Motivating change in relationships: Can prayer increase forgiveness? *Psychological Science, 21*, 126–132.
- Lambert, N.M., Fincham, F.D., DeWaal, N., & Beach, S.R.H. (2010). Can prayer change behavior?: Prayer increases forgiving behavior toward relationship partners. Manuscript submitted for publication.
- Laurenceau, J-P., Barrett, L. F., & Rovine, M. J. (2005). The interpersonal process model of intimacy in marriage: Daily-diary and multilevel modeling approach. *Journal of Family Psychology, 19*, 314-323.

- Lopez, F. G. (2009). Adult attachment security: The relational scaffolding of positive psychology. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 405-416). New York: Oxford University Press.
- Maniaci, M.R. & Reis, H.T. (in press). The marriage of positive psychology and relationship science: A reply to Fincham and Beach. *Journal of Family Theory and Review*
- Mattson, R.E., Paldino, D. & Johnson, M.D. (2007). The increased construct validity and clinical utility of assessing relationship quality using separate positive and negative dimensions. *Psychological Assessment, 19*, 146-151.
- McNulty, J, K., O'Mara, E. M., & Karney, B. R. (2008). Benevolent cognitions as a strategy of relationship maintenance: "Don't sweat the small stuff"...but it is not all small stuff. *Journal of Personality and Social Psychology, 94*, 631-646.
- McNulty, J. K. (2008). Forgiveness in marriage: Putting the benefits into context. *Journal of Family Psychology, 22*, 171-175.
- Mikulincer, M., & Shaver, P. R. (2005). Mental representations of attachment security: Theoretical foundation for a positive social psychology. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 233–266). New York: Guilford.
- Mills, J., Clark, M.S., Ford, T.E., & Johnson, M. (2004). Measurement of communal strength. *Personal Relationships, 11*, 213-230.
- Mitchell, A. E., Castellanie, A. M., Herrington, R. L., Joseph, J. I., Doss, B. D., & Snyder, D. K. (2008). Predictors of Intimacy in Couples' Discussions of Relationship Injuries: An Observational Study. *Journal of Family Psychology, 22*, 21-29
- Ong, A. D., & van Dulmen, M. H. M. (Eds.) (2007). *Oxford handbook of methods in positive psychology*. New York: Oxford University Press.

- Paleari, G., Regalia, C., & Fincham, F.D. (2003). Adolescents' willingness to forgive parents: An empirical model. *Parenting: Science and Practice, 3*, 155-174.
- Patrick, S., Sells, J. N., Giordano, F. G., & Tollerud, T. R. (2007). Intimacy, Differentiation, and Personality Variables as Predictors of Marital Satisfaction. *The Family Journal, 15*, 359-367.
- Peterson, C. (2006). *A primer in positive psychology*. New York: Oxford University Press.
- Prager, K. J. & Buhrmester, D. (1998). Intimacy and need fulfillment in couple relationships. *Journal of Social & Personal Relationships, 15*, 435-469.
- Proulx, C. M., Helms, H. M., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage and Family, 69*, 576-593.
- Reis, H. T., & Gable, S. L. (2003). Toward a positive psychology of relationships. In C. L. Keyes & J. Haidt (Eds.). *Flourishing: The positive person and the good life* (pp. 129-159). Washington, DC: American Psychological Association.
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability scale. *Journal of Clinical Psychology, 38*, 119-125.
- Snyder, C. R., & Lopez, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.
- Stone, A. A., Turkan, J. S., Bachrach, C. A., Jobe, J. B., Kurtzman, H. S., & Cain, V. S. (2000). *The science of self-report: Implications for research and practice*. Mahwah, NJ: Lawrence Erlbaum.
- Thompson, M. M., Zanna, M. P., & Griffin, D. W. (1995). Let's not be indifferent about (attitudinal) ambivalence. In R. E. Petty & J. A. Drosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 361-386). Hillsdale, NJ: Erlbaum.

- Tsang, J., McCullough, M. Fincham, F.D. (2006). Forgiveness and the psychological dimension of reconciliation: A longitudinal analysis. *Journal of Social and Clinical Psychology, 25*, 404-428.
- Vangelisti, A. L., & Young, S. L. (2000). When words hurt: The effects of perceived intentionality on interpersonal relationships. *Journal of Social and Personal Relationships, 17*, 393-424
- Waltz, M. & Badura, B. (1988). Subjective health, intimacy, and perceived self-efficacy after heart attack: Predicting life quality five years afterwards. *Social Indicators Research, 20*, 303-332
- Waring, E. M., & Patton, D. (1984). Marital Intimacy and Depression. *British Journal of Psychiatry, 145*, 641-644.