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Healthy social bonds: A necessary condition for well-being

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Abstract:

Do individuals need relationships with others to thrive? We begin this chapter with a review of the evidence that the formation and maintenance of positive social bonds contributes to mental and physical health and conclude that people need social bonds not only to thrive but to merely survive. This conclusion is based on the well-established empirical links between physical health and interpersonal relationships and the equally well-established links between subjective well-being and interpersonal relationships. We then turn our attention to the question of *how* relationships might contribute to well-being. Processes such as the reduction of negation emotion, shaping the self-concept, support for personal goals, and eliciting positive emotions are highlighted as mechanism through which social partners have the potential to enhance well-being. We then turn our attention to areas in the literature that we see as ripe for future attention.

Keywords: Close relationships, well-being, loneliness, interpersonal processes

In the seventeenth century when John Donne wrote that "no man is an island" he was observing that human beings do not seem to thrive in isolation from one another. Similarly, psychologists have asked the question of whether human beings need social bonds not only to thrive but also to survive. A nifty feature of the human mind is that it is has motives that prompt individuals to act to obtain the goods we need. For example, the experience of hunger and thirst prods us to seek food and water. Although it has long been evident that people are motivated to form and maintain social relationships (e.g., Murray, 1938), early theory and research viewed humans' social motivation as a derivative of other basic needs, such as the behaviorists' view that social bonds are rewarding because of leaned associations created when others provide rewards, such as food. However, this view did not hold up to empirical testing, perhaps the most famous demonstration coming from Harlow's (1958) findings that baby monkeys preferred a soft cloth mother "monkey" that offered no additional rewards over a hard one that fed them. Indeed, a mountain of empirical data indicates that people's motivation to form (and keep) social relationships is basic in that it is not a derivative or byproduct of other motives or needs (e.g., Deci & Ryan, 2000). Of course, just because humans are built to want social bonds does not in and of itself mean that they need them to survive and thrive. However, there is overwhelming historical and empirical evidence that there are substantial negative health and well-being consequences if social needs are not met, especially in the long term. (e.g., Akerlind, Hörnquist, & Hansson, 1987; Durkheim, 1897; Holt-Lunstad, Smith, & Layton, 2010).

Physical Well-Being, Mortality and Social Bonds

Large scale epidemiological studies on predictors of mortality have consistently revealed that social isolation is a substantial risk factor for death (e.g., Berkman & Syme, 1979). In fact, in their 1988 review House, Landis, and Umberson concluded that a lack of strong social ties carried a mortality risk that was similar to that of smoking. A more recent meta-analysis of 148 longitudinal studies by Holt-Lunstad, Smith, and Layton (2010) came to strikingly similar conclusions. The authors found that high quality connections were as robust predictors of death (or in most cases, more robust) as other well-established mortality risks such as excessive alcohol use, obesity, and failure to treat hypertension. Studies that measure disease and health symptoms show similar patterns such that disease instance is higher, recovery longer, and relapse greater in those who are socially isolated (e.g., Steptoe, Owen, Kunz-Ebrecht, & Brydon, 2004; Hawkley & Cacioppo, 2003).

The question of how social relationships "get under the skin" is the focus of much current research

and several physiological processes and systems linking social isolation to health have been documented. Studies have linked loneliness to disruptions in health restorative processes such as sleep (e.g., Hawkley & Cacioppo, 2010). Threats of negative evaluation by others are associated with a heightened stress response. Such responses, while adaptive in the short-term as a response to stress, have a host of negative physiological implications when chronically activated, as is the case of those who are socially isolated or lonely (e.g., Dickerson & Kemeny, 2004; Uchino et al., 2001). These findings are consistent with Cole and colleagues (2007) who found that people who suffer from chronic loneliness also have elevated pro-inflammatory activity, which is a risk factor for a host of inflammation-related disease, including cardiovascular disease. In short, being socially isolated and having a lack of supportive social bonds is associated with elevations in problems across a host of cardiovascular, endocrine, and immune systems (for review see Hawkley & Cacioppo, 2003; Uchino, Cacioppo, and Kiecolt-Glaser, 1996; Wilson et al., 2007).

In addition to the empirical evidence linking a lack of social ties to mortality and disease, there is also good evidence that the quality of social relationships, not their mere existence is linked to health. In the Holt-Lunstad and colleagues' meta-analysis cited above people who reported having poor social connections had a 40% higher mortality rate at follow-up than those who reported having positive and supportive connections to others (Holt-Lunstad, Smith, & Layton, 2010). Other work has supported the conclusions that conflictual, cold, or uncaring social bonds have negative health consequences (e.g., Kiecolt-Glaser & Newton, 2001; Miller, Rohleder, & Cole, 2009). For example, marriages characterized by hostile conflict and a high degree of negative emotion are a risk factor for cardiac disease and death (Eaker, Sullivan, Kelly-Hayes, D'Agostino Sr, & Benjamin, 2007; Wilcox, Kasl, & Berkman, 1994). Pathways for this risk lie in dysregulation of immune functioning and impaired cardiovascular reactivity (Kiecolt-Glaser, 1999; Uchino, Holt-Lunstad, Uno, & Flinders, 2001). Finally, another direct pathway linking relationships to mortality and physical health is violence at the hands of abusive relationship partners (e.g., Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008).

In summary, the empirical literature examining the links between social ties and health reveal two major themes. First, loneliness and social isolation are associated within increased mortality and disease incidence. Second, the presences of social ties in and of itself is not sufficient to lower these risks. Social relationships that are high in conflict, rejection, exploitation, or coldness do not offer protection from the risks and in fact add to them. On the contrary warm, caring, and supportive ties are associated with increased physical health, recovery from disease, and lower mortality. Of course, any one social bond can have both rewarding and costly components and have positive and negative effects on health (see also Gable & Gosnell, 2013; Uchino et al., 2013).

Psychological Well-being and Social Bonds

Mirroring the findings that link social ties to physical health, the literature examining social ties and psychological health and well-being also finds strong associations. For example, social isolation and loneliness are correlated with depression, schizophrenia, personality disorders, substance abuse and subjective well-being (e.g., Akerlind, Hörnquist, & Hansson, 1987; Helliwell & Putnam, 2004; Neeleman & Power, 1994; Overholser, 1992). Once again, the quality of social ties, beyond the mere existence of them, predicts well-being. For example, studies consistently find that people who have rewarding social and family relationships have higher overall life satisfaction than those with less rewarding social and family ties. In one study, the distinguishing feature separating those who were very happy (e.g., top 25% of sample) from those who are less happy (e.g., bottom 25% of sample) is the quality of their social ties (Diener & Seligman, 2002). Relationships that are hostile, conflictual, insecure, or cold are associated with low self-esteem, depression, anxiety, and substance abuse (e.g., Davila, Bradbuy, Cohan, & Tochluk, 1997; Holmes, 2002; Whisman, Uebelacker, & Settles, 2010).

The social domain is a better predictor of well-being than other domains of life which have long been assumed to drive well-being such as career and financial attainment (e.g., Campbell, Converse, & Rodgers, 1976). The link between relationship quality and well-being has been documented across the stages of human development, consistently showing strong and positive correlations in children, adolescents, younger adults, and older adults (e.g., Chen & Feeley, 2014; Sherman, Lansford, & Volling, 2006; Bradshaw, Hoelscher, & Richardson, 2007). Some recent evidence has also shown that relationship quality in early life (e.g., maternal sensitivity towards infants) is associated with later (i.e., adult) health and well-being (Farrell et al., 2017).

Much of the evidence on well-being reviewed above concerns subjective reports of well-being and happiness or what has been referred to as hedonic well-being. However, theories of eudaimonic well-being inevitably include high quality social relationships in their very definition. For example, Ryff & Keyes' (1995) model contends that having positive relationships with others is one of six components of well-being. Deci & Ryan (2000)'s theory of self-determination states that well-being is contingent on meeting

three fundamental human needs, one of which is feeling connected to other people. Models of well-being that place healthy social bonds at the core are consistent with Bowlby's (1969; 1988) model of attachment. He outlined a theory in which attachment figures (caregivers for infants and later in development peers, friends, and romantic partners) serve several functions necessary for survival—providing a safe haven to return to in times of stress and being a secure base from which to launch explorations into the world. Bowlby's model ties the attachment system closely to psychological well-being and stress reaction.

Although in the remainder of this chapter we focus on the role of healthy social bonds for subjective well-being, it is important to note that by definition, most models of eudemonic well-being include the criteria of positive interpersonal relationships and thus this review is relevant to both conceptualizations of well-being. Of course, as anyone who has taken an introductory statistics courses can tell you, correlations such as the ones reviewed in the previous section do not tell us whether social relationship quality contributes to well-being, or vice versa. Luckily there is substantial evidence from longitudinal studies that shows that both pathways occur (e.g., low well-being leading to later social isolation and social isolation leading to later lowered well-being; e.g., Whisman & Bruce, 1999). In this chapter, we focus much of our remaining attention on the pathways and mechanisms through which social relationship contribute to and detract from well-being, however we note that we could write an entire other chapter on pathways linking how well-being/ health to relationship functioning.

Mechanisms Linking Social Bonds to Well-Being

As the above sections hopefully make clear, our main theme is that warm, supportive, and trusting relationships that are low in hostility and insecurity are associated with high well-being. While this is certainly a two-way street, there is sufficient longitudinal and experimental evidence to conclude that at least part of this association can be explained by the fact that high quality social relationships contribute to an individual's overall health and well-being (e.g., Holt-Lunstad et al., 2010; Hawkley et al., 2009). In the next section, we turn our attention to a discussion of *how* social relationships contribute to or detract from well-being. That is, we review and critique the specific aspects of relationships that researchers have suggested link our social bonds to well-being. Three major themes emerged in our review of these mechanisms. First, social relationships help buffer individuals from the negative events and stressors in life. Second, social relationships can facilitate or hinder goals pursuit and growth of one's sense of self. Finally, social relationships provide rewards independent of reduction of threats or facilitation of goals.

Social Relationships Buffer Against Threats

Negative emotions are functional with clear implications for survival (e.g., Tooby & Cosmides, 2008). For example, the fear response to a predator can mobilize our physiological fight or flight responses; feeling guilty for standing up a friend can help motivate us to repair the fractured relationship (Keltner & Haidt, 1999; Tooby & Cosmides, 2008). Thus, the experience of negative emotions per se is healthy. However what is not physically or psychologically healthy is the chronic experience of negative emotions or experiencing negative emotions repeatedly in conditions where they are not warranted (e.g., Adler & Matthews, 1994; Repetti, Taylor, & Seeman, 2002). This work generally falls under the topic of threat or stress responses and research suggests that social relationships can play a role in people's experience of and reactions to stress (e.g., Hawkley, Thisted, & Cacioppo, 2009; Saxbe & Repetti, 2010). For example, there is evidence that the mere presence of social relationship partners can have an impact on our biological stress system as indicated by increases in the hormone cortisol. Saxbe and Repetti (2010) found evidence that spouses regulated one another's cortisol response such that when one spouse was experiencing negative emotions (and had a spike in cortisol) the other spouse experienced a corresponding spike in cortisol. Interesting, the less satisfied spouses were with each other in general the greater the synchronistic response. In the following sections we outline two general pathways that social relationships can reduce (or exacerbate) an individual's experience with stress--through influencing the exposure to stressors and through influencing the reaction to negative stimuli.

Exposure to negative events. Social relationships can increase or decrease the number of negative events that people are exposed to through several routes. In order to experience an event or stimuli as negative or threatening it needs to be noticed. In their Social Baseline Theory, Beckes and Coan (2011) have made an evolutionary argument that the presence of benevolent social partners reduced our vigilance to threat through a process they have called *risk distribution*. Specifically, they posit that in ancestral time that the number of people in a social group increases, the statistical distribution of environmental risks (e.g., attack by predators) for any one of the individuals in a group goes down. Therefore people can adjust their own vigilance to threat because the social partners literally provide more eyes and ears on the environment. This reduced threat vigilance can mean smaller or more distant threats do not register when in a group of benevolent social partners. The flipside is that isolation or being part of a hostile social group likely

increases vigilance and lowers the threshold of threat detection such that small or distant dangers are noticed and interpreted as threats. Social Baseline Theory is intriguing and while there is evidence supporting aspects of the model (e.g., Coan, Schaefer, & Davidson, 2006), there is a need for additional empirical evidence as to whether risk distribution influences attention per se, or rather has an influence on the interpretation of ambiguous or mildly threatening stimuli.

Other research has however shown that social relationship partners can serve as a context in which ambiguous or neutral events are appraised as benign or raise a stress response. For example, people who have been trained to seek out a smiling face in an array of disapproving faces on a previous task were less likely to show interference from negative words in a subsequent Stroop task (Dandeneau, Baldwin, Baccus, Sakellaropoulo, & Pruessner, 2007). Social partners can also directly influence exposure to unambiguously negative stimuli. Social partners can take on the responsibility of (or add to) some of life's tasks (e.g., paying bills), thus diffusing daily hassles, which are comparable to major life events in terms of their contributions to stress (Kanner et al., 1981). Interactions with social partners themselves can be potentially negative events (e.g., conflict, rejection) and thereby actually increase exposure to stress directly (e.g., Veroff, Douvan, & Kulka, 1981).

Responses to negative events. Research also shows that social partners can mitigate or exacerbate one's response to negative events and stimuli. For example, Eisenberger and colleagues (2011) found that simply viewing a close relationship partner while receiving mildly painful stimuli led to reductions in self-reported pain ratings as well as less activity in pain-related areas of the brain. Although recent work such as this has shown that the mere presence of close others can influence reactions to negative events, by far most of the evidence that social partners contribute to the stress reaction comes from the social support literature.

Numerous studies have shown that simply perceiving that social partners would be available to help if help were needed is closely tied to well-being (e.g., Kaul & Lakey, 2003). However, actually receiving emotional or tangible support from social partners, which is called enacted or received support shows are more nuanced association between well-being and social bonds (e.g., Dakof & Taylor, 1990). This literature has shown that when social partners offer support for stressors sometimes it leads to a decrease in recipients' negative emotions and other times it is associated with increases in the recipients' negative emotions, and still studies show that there is no association between the two (see Rafaeli & Gleason, 2009; Gleason, Iida, Bolger, & Shrout, 2003). Confounding the picture even further, the perception that others will be available in the future if needed (perceived support) is not strongly correlated with experiences of actually receiving support (Haber, Cohen, Lucas, & Baltes, 2007). The disconnect between perceived and actual support leads to confusing results. For example, Krause (1997) found that greater perceived availability of support was associated with decreased depression, but receiving actual support was associated increases in depression.

In this literature it is often difficult to account for the confound that stress and well-being are likely linked, such that those who are under more stress (and lower in well-being) may receive more support. However, studies that are able to tease apart these factors still show that received support has a negative impact on outcomes beyond this confound (e.g., Rini, Schetter, Hobel, Glynn, & Sandman; 2006). Researchers have hypothesized that receiving support can have a detrimental effect on well-being because of potential inadvertent consequences of receiving support even while contributing to the perceptions of future support availability (Rafaeli & Gleason, 2009). Receiving support may lead the recipient to feel indebted or incompetent (Gleason, et al., 2003; Shrout, Herman, & Bolger, 2006); be a blow to self-esteem because a vulnerability or weakness has been made salient, or even just draw more attention to the problem (e.g., Bolger, Zuckerman, & Kessler, 2000).

In short, receiving support may be helpful for reducing negative emotions associated with stressful events but those same actions from a social partner can create negative emotions. One intriguing line of research by Bolger and colleagues (2000) has suggested that the best type of support is that which is provided without the recipient even noticing, known as invisible support. In addition, support is difficult to provide effectively which can exacerbate these problems. The research shows that when relationship partners are responsive to one's needs they can provide support that is associated with increases in well-being in the recipient, while those who provide support that is unresponsive to one's needs can actually decrease well-being one helpful and positive social bonds (Maisel & Gable, 2009). However, the bottom line is that social bonds can have a strong effect on well-being through social support, but this effect can be either positive or negative.

Social Relationships, Goals, and the Self

As noted above, social support contributes to subjective well-being by buffering against stress (Cohen & Wills, 1985). However, social support has also been found to be associated with subject well-being *in the absence of threats* (Lakey & Orehek, 2011). One reason for this appears to be the importance

of support from social partners for the pursuit of personal goals and for continued shaping of the self-concept. In this section we describe research focused on how social partners contribute to goal pursuit and the self-concept as two mechanisms through which social others contribute to well-being. We then turn to a third mechanism, how individuals incorporate their social partners' well-being into their own goal pursuit.

      Social partners' support for personal goals. Recent research has suggested that support for personal growth, exploration, and goal striving by one's romantic partner is another mechanism by which social relationships influence subjective well-being. For example, Overall, Fletcher, and Simpson (2010) found that greater romantic partner support lead to greater self-improvement and relationship satisfaction over the course of a year, whereas those who had less supportive partners had worse self-improvement and relationship satisfaction. Molden and colleagues (2009) demonstrated that perceptions that one's personal goals are supported by a romantic partner are associated with subjective and relational well-being. These results are further supported by a recent meta-analysis of goal progress and subjective well-being, demonstrating that successful progress towards one's goals is robustly associated with subjective well-being (Klug & Maier, 2015).

      Although there is evidence that social support for goal pursuit is important, the conditions and ways in which such support functions still require elaboration. One theoretical perspective that endeavors to explore this function of support is Feeney and Collins' (2015) model of thriving through relationships. This theoretical model proposes that support for the pursuit of personal goals and challenges is one pathway through which social support can help individuals thrive. Thriving is defined by the presence of five components of overall well-being; eudaimonic well-being, subjective well-being, social well-being, psychological well-being, and physical well-being. This type of support, that which aids recipients in their pursuit of challenges and personal goals, is called relational catalyst support because it may serve as a catalyst for personal growth and thriving (Feeney & Collins, 2015, Feeney, Van Vleet, Jakubiak, & Tomlinson, 2017).

      Relational catalyst support is rooted in attachment theory, specifically exploration and the caregiver function of a secure base (Feeney & Collins, 2015). The innate motive to explore one's environment is interwoven with a desire for security and the minimization of risk. One function of caregiving is to provide a secure base to recipients from which they can venture forth and explore, secure in the knowledge that aid is available if difficulties are encountered (Bowlby, 1982, 1988). In providing a secure base, the recipient's needs are met through the knowledge that support will be available if needed. This notion of a secure base is expanded upon in relational catalyst support by changing the role of the support provider from largely passive to active. Relational catalyst support is provided when the caregiver actively encourages and facilitates the pursuit of challenges and opportunities that the recipient has expressed interest in or have been presented in the environment (Feeney & Collins, 2015, Tomlinson, Feeney, & Van Vleet, 2016). This form of support enables participants to accept greater risks and to embrace opportunities and challenges that they might not otherwise pursue. Feeney and Collins (2015) propose that this pursuit of personal goals and opportunities leads to immediate outcomes relevant to personal and relational well-being, which in turn influences long-term well-being and thriving.

      While research on relational catalyst support is quite recent, preliminary evidence has been provided for the immediate and long-term benefits of receiving this form of support. Tomlinson, Feeney, and Van Vleet (2016) found that married individuals who were provided greater relational catalyst support in a laboratory setting by their partners possessed greater immediate perceived capability than those whose partners did not provide relational catalyst support. One year later, those provided such support had greater self-esteem, reported more goal progress, and greater self-growth than those who weren't. Similarly, Feeney, Van Vleet, Jakubiak, and Tomlinson (2017) found that married couples were more likely to accept a challenging opportunity in a controlled setting when one partner provided relational catalyst support. The married couples that chose the challenging opportunity reported greater eudaimonic, subjective, psychological, and relational well-being six months later than those couples that declined the opportunity. While both studies are observational, they do provide evidence for the importance of relational catalyst support for immediate and long-term outcomes that are relevant to well-being.

      Secure base support (a component of relational catalyst support) functions similarly in regards to well-being. Observational studies of romantic couples have found that those who receive greater secure base support have better immediate outcomes such as greater self-esteem and positive mood (Feeney, 2004, Feeney & Thrush, 2010) than those who receive less support. Goal directed behaviors such as greater perception that one is likely to achieve one's goals (Feeney, 2004) and better performance and persistence on a laboratory task (Feeney & Thrush, 2010) have also been associated with secure base support. In addition, daily diary studies conducted by Jakubiak and Feeney (2016) found that daily spousal secure base support predicted both same day and next day goal progress as well as psychological, physical, and relational well-being. Subsequent mediational analyses found that goal progress indirectly mediated the

relationship between spousal support and the different types of well-being.

While the majority of this research does not allow for causal inferences, Feeney (2004) has experimentally manipulated the provision of secure base support. An experimental study was conducted in which participants believed they were chatting online with their partner while performing a fun and challenging puzzle activity. Participants either received intrusive and controlling messages, intrusive and supportive messages, nonintrusive and supportive messages, or no messages at all that were sent by the experimenter posing as the participant's romantic partner. Those in the nonintrusive and supportive condition found the messages significantly less frustrating and insensitive and perceived their partner as less intrusive and interfering than those in the two intrusive conditions. In turn, those who felt more supported by their partner (measured by a composite of perceptions of the partners messages and perceptions of the partner) experienced greater self-esteem and positive affect.

It is important to note that relational catalyst support is only effective when it is responsive to one's partner (Feeney & Collins, 2015). When the support provided is intrusive, it disrupts exploration and is associated with negative outcomes in children (Ainsworth, Bell, & Stanton, 1974) and attachment insecurity in adults (Feeney & Collins, 2001). Indeed, Feeney (2004) found that participants in the intrusive and supportive condition perceived their partner as less supportive overall, reacted with greater hostility and rejection, and had lower self-esteem and positive mood than participants in the nonintrusive conditions. This is consistent with findings by Feeney and Thrush (2010), who observed that more intrusive support from spouses was associated with worse performance and less persistence on a task as well as lower self-esteem.

The current evidence suggests that relational catalyst support acts as a mechanism through which close relationships influence well-being. Relational catalyst support has been shown to facilitate goal striving, exploration, and the pursuit of challenges (Feeney, 2004, Feeney & Thrush, 2010, Feeney, Van Vleet, Jakubiak, & Tomlinson, 2017, Tomlinson, Feeney, & Van Vleet, 2016) which, in turn, facilitate subjective well-being (Klug & Maier, 2015). Furthermore, provision of relational catalyst support is connected to immediate outcomes such as self-esteem and positive mood, both of which are relevant to overall well-being (Feeney, 2004, Feeney & Thrush, 2010, Tomlinson, Feeney, & Van Vleet, 2016). Future research should continue to examine long-term outcomes and overall well-being while performing experimental work that can establish causality between this type of support and well-being.

Social partners' influence on the self-concept. Social relationships can also influence well-being through changes to one's self-concept independent of their influence on goal strivings. Self-expansion theory argues that people are motivated to continually expand the self to increase perspectives and resources (e.g., Aron, Aron, Tudor, & Nelson, 1991). Self-expansion in relationships, refers to the process of including a close other in one's conception of the self and includes taking in a close other's "resources, perspectives and characteristics" as part of the self-concept (Aron et al., 1991, p. 243). The theory of self-expansion is supported by empirical evidence such that in close relationships, mental models of the self and other are seem to overlap with one other. Moreover, the closer the relationship, the greater this degree of overlap. With increasing closeness, a social partner's personal qualities and resources can become less distinguishable from the personal qualities and resources of the self.

Importantly, the theory states that the act of self-expansion is, in itself, rewarding and creates positive emotions. Experimental studies have demonstrated that creating opportunities for self-expansion in the lab by having couples participate in a novel and physiologically arousing task together leads to increases in positive affect and satisfaction (Aron et al., 2000). Aron and colleagues have argued that there is a naturally occurring rapid expansion of the self at the beginning of relationships, which at least partially accounts for the intense positive emotions experienced when falling in love (Aron et al., 1991).

The self-expansion process is a basic interpersonal process and seems to occur even among looser social ties. For example, Fraley and Aron (2004) found that closeness between strangers was increased through a shared humorous experience. On the other side of the coin, other work has shown the that self-expansion processes also can work in the reverse temporal order. Specifically, Slotter and Gardner (2009) found that when people are motivated to be close to another they can employ self-expansion. That is, when people desire social connection with another person, they integrate aspects of the other person into their own self-concept. This type of strategic self-expansion may be more weakly tied to well-being.

Another line process through which relationships can contribute to the self-concept is through what has been called The Michelangelo Phenomenon (e.g., Drigotas, Rusbult, Weiselquist, & Whitton, 1999, Drigotas, 2002; Rusbult, Kumashiro, Kubacka, & Finkel, 2009). This work has shown that social partners are also active participants in each other's personal development. That is, social partners can promote (or hinder) one's pursuit of the ideal self. The ideal self can be an explicit, clearly defined set of goals, or a more vague set of dreams or aspirations. Empirical work on Michelangelo Phenomenon has found evidence

that partners help (or hinder) the growth toward the ideal self though partner affirmations. That is, partners who see their partners as already possessing the attributes of their ideal self and treat their partners as if they are (already) that ideal self, actually can elicit aspects of the ideal self from the partner through these interactions (Rusbult et al., 2009). Partner affirmations are associated with the partner feeling more similar to his or her ideal self and higher personal well-being and relationship quality (Drigotas, 2002; Drigotas, et al., 1999; Rusbult, et al., 2009).

Individuals' goals toward social partners. The types of goals that individuals choose, in regards to their social relationships, serve as mechanisms that influence relationship quality, relational well-being, personal outcomes, and ultimately, subjective well-being. Research by Crocker and Canevello (2008) has examined two types of interpersonal goals, compassionate goals and self-image goals, that reflect distinct perspectives and systems of motivation. Compassionate goals are supportive of others and are motivated by concern for the well-being of others, while self-image goals focus on constructing and maintaining desirable public and private images of the self and are motivated out of a concern for one's own needs and desires (Crocker & Canevello, 2008, 2012, Canevello & Crocker, 2015). Compassionate goals reflect an ecosystem perspective of relationships in which the self is connected to others, the well-being of the self and others is viewed equally, and others care about one's well-being (Canevello & Crocker, 2015). This perspective supports the ideas that actions towards others will harm or aid the self because of the interconnected nature of relationships and that cooperation with others can lead to the fulfillment of one's needs (Crocker & Canevello, 2008, Crocker & Canevello, 2015). In contrast, self-image goals reflect an egosystem perspective in which others cannot be trusted to help fulfill one's needs and that others do not care about their well-being (Crocker & Canevello, 2012). In the egosystem, individuals view relationships as zero-sum affairs in which they can only gain benefits if others pay costs and others are only considered in terms of how they might help meet one's own needs and desires (Crocker & Canevello, 2008, Crocker, Canevello, & Lewis, 2017, Canevello & Crocker, 2015).

Compassionate and self-image goals lead to patterns of behavior that reflect these underlying systems of motivation. Those pursuing self-image goals attempt to use tactics such as persuasion, ingratiation, manipulation, and intimidation to control others in order to gain benefits for themselves (Crocker & Canevello, 2015) and to maintain their desirable public image to help in the pursuit of further benefits (Canevello & Crocker, 2015, Crocker & Canevello, 2012). Those pursuing compassionate goals show greater consideration of others needs in their decision making, are more constructive in how they address relationship problems (Canevello, Crocker, Lewis, & Hartsell, 2014), and are more supportive (Crocker & Canevello, 2008) and responsive (Canevello & Crocker, 2011a) to others.

These behaviors associated with compassionate and self-image goals lead to distinct relational and personal outcomes. Crocker and Canevello (2008) found that greater support provision by those who adopt compassionate goals leads to greater perceptions of perceived support from family, friends, and romantic partners as well as the receiving of more support from roommates. Those with self-image goals provided less support and, in turn, received and perceived less support from others. The greater responsiveness of individuals with compassionate goals has similarly been found to predict responsiveness from others (Canevello & Crocker, 2010, 2011a). In turn, the responsiveness of close others has been found to predict greater self-esteem (Canevello & Crocker, 2011a) and greater relationship quality (Canevello & Crocker, 2010). Those who have self-image goals are less responsive to others and others were less responsive to them in turn, leading to lower relationship quality and lower self-esteem. Furthermore, those with compassionate goals have greater relationship growth belief (Canevello & Crocker, 2011b) and relationship security (Canevello, Granillo, & Crocker, 2013), whereas those with self-image goals show greater relationship insecurity.

The associations between compassionate and self-image goals and interpersonal outcomes are consistent with findings that the quality of close relationships is highly relevant for subjective well-being (Diener & Seligman, 2002). This research elaborates upon how compassionate goals serve as a mechanism within relationships by which relevant interpersonal and personal outcomes can be improved (Crocker & Canevello, 2008, Canevello & Crocker, 2011a), but also reveal how, in the case of self-image goals, relationships can lead to worse relationships and overall well-being (Canevello & Crocker, 2011a, Canevello & Crocker, 2010). Future research should endeavor to make explicit connections between this past research and subjective well-being.

Social Relationships Provide Rewards

The final set of mechanisms we consider here are how social relationship partners provide rewards above and beyond the mitigation of threats and contributions to goal pursuit and the self-concept. Specifically, social relationships often provide the context in which people experience positive emotions. Social partners can create, maintain, or increase positive affective states in others (conversely they can

thwart them). Positive affective states are part and parcel to well-being and the degree to which relationships enhance or decrease positive emotions likely contributes a great deal to well-being (e.g., Fredrickson, 1998). We consider two specific positive emotions that an interpersonal in nature, love and gratitude, and then a process through which social partners enhance positive emotions that occur outside of the interpersonal relationship called capitalization.

Love. Love has been the topic of poems, songs, and plays for as long as there have been poems, songs, and plays. Theorists such as John Bowlby (1969) proposed that love and attachment bonds were part of the mind's architecture and critical to human development, and contemporary psychologists are trying to understand the biological systems involved in the experience of love (e.g., Bartels & Zeki, 2004). Empirical research has identified and focused on two kinds of love: passionate love and companionate love (e.g., Sprecher & Regan, 1998). Passionate love is the feeling of excitement for and attraction towards someone else. Companionate love is the warmth and liking we feel for someone else. Feelings of love of both kinds are closely tied to the reward system. For example, brain activity in areas associated with the reward motivation is higher when people are cured with photos of people for whom they feel passionate love (Aron et al., 2005). Communal relationships, which are social bonds characterized by mutual expectations that each will respond to the other's needs are closely entail companionate love (Clark & Mills, 2013). Love in both forms is an emotional state that is experienced as positive and rewarding and by definition occurs in the context of social bonds.

Gratitude. Feelings of gratitude enhance well-being (for review see Emmons & Mishra, 2011). Algoe (2012) has proposed that gratitude is fundamentally a social emotion and describes the "Find, remind, and bind" model of gratitude in which gratitude has social functions. Specifically, gratitude promotes relationship formation and maintenance by signaling which people would make good social partners and then reminding us of their generosity and promoting behaviors that facilitate bonding and intimacy (Algoe, 2012). The empirical support for this model supports the premise that gratitude is experienced frequently in the context of social bonds (e.g., Algoe, Gable, & Maisel, 2010). The empirical evidence also supports the notion that the emotion of gratitude functions to find, remind, and bind others closer to us. For example, Algoe and Haidt (2009) found that participants who were assigned to recall events that evoked feelings of gratitude were more likely to report that they noticed new positive qualities about the person to whom they felt grateful (i.e., find/remind) and that they wanted to spend more time with that person (i.e., bind) in the future than those who recalled events that evoked happiness (but not gratitude) with another person. Thus there is good evidence that gratitude occurs in social bonds (and helps maintain bonds) and gratitude is associated with well-being. However, what is not yet clear is whether it is gratitude per se that contributes to well-being or whether gratitude's contribution to the quality of social bonds influences well-being.

Capitalization. It is obvious that almost by definition, when good things happen people experience positive emotions. What may not be as obvious is that people often respond to positive events by telling someone else about the event, a process called capitalization (Langston, 1994). Early research on capitalization (Gable, et al., 2004) found that people experience benefits beyond the original positive event, such as increased daily positive affect and daily well-being, when they talk about those events with other people. The empirical data also make it clear that when people capitalize they do so with those with whom they have existing close social bonds, not strangers. (Gable et al., 2004). Moreover, similar to the work reviewed above on social support, the response of the person with whom the event is shared influences well-being.

There are four prototypical responses to capitalization attempts: active–constructive responses, passive–constructive responses, active–destructive responses, and passive–destructive responses (Gable et al., 2004/2006). Active-constructive responses entail excitement and enthusiasm for event and interest in the interaction. Passive-constructive response are pleasant but show restrained interest in the interaction. An active-destructive response is one that conveys interest in the interaction but is mainly negative in terms of diminishing the positive event. A passive-destructive response fails to acknowledge the positive event disclosed often by steering the conversation to something else.

When disclosers receive active-constructive and not passive or destructive responses to capitalization attempts, they gain additional positive personal outcomes such as positive affect, well-being, and a sense of connection to others (Gable, et al., 2012). The data also indicate that that active constructive responses signal understanding and caring and thereby have the additional benefit of strengthening the social bond with the responder (e.g., Maisel & Gable, 2009). Passive or destructive responses on the other hand are associated with reduced relationships quality and lower well-being. The process of capitalization is a common occurrence in social relationships and thus is mechanism that is strongly associated with well-being.

Gaps in the Literature and Future Directions

One promising pathway through which close relationships may also influence subjective well-being is through facilitating a sense of meaning and purpose in life. Research over the past decade has shown that social relationships are positively correlated with the experience of meaning in life (Krause, 2007, Steger, Kashdan, Sullivan, & Lorentz, 2008, Hicks & King, 2009). Experimentally induced social ostracism has also been found to decrease meaning in life (Zadro, Williams, & Richardson, 2004, Stillman, et al. 2009). Self-reports also lend support for the importance of relationships for meaning in life, as demonstrated in a study by Lambert and colleagues (2010) in which participants ranked family as the top source of meaning in their lives. Closeness to one's family was further found to predict a greater sense of meaning in life.

While the evidence for a connection between social relationships and meaning in life is considerable (Hicks & King, 2009, King, Heintzelman, & Ward, 2016), the exact nature of that connection and the mechanisms by which it acts are currently unknown. Future research should aim to uncover how specific relationship processes, such as those associated with personal growth (Drigotas, et al., 1999, Aron, Aron, & Smollan, 1992), may relate to perceived meaning in life.

Another area we see as ripe for future research is interpersonal emotion regulation more broadly. We already reviewed work suggesting that social partners can reduce negative affect after its onset following a negative event (i.e., social support) and increase positive affect even further after a positive event (i.e., capitalization). However, work on *intra*personal emotion regulation suggests that there are likely many other routes for *inter*personal emotion regulation. Specifically, Gross (1998) has outlined several different strategies employed by individuals that range from the selection of situations that have a high probability of eliciting certain emotions (e.g., going to an amusement park for excitement) to the suppression of the outward signals of an emotion once it is experienced (e.g., smiling while receiving hurtful criticism). Gross's model of emotion regulation separates emotion regulation strategies that are focused on the antecedents of an emotional experience—situation selection, situation modification, attentional deployment, cognitive change—from the strategies employed in response to the experience of the emotion—experiential modulation, behavior change, physiological modulation (Gross, 1998). To date, the vast majority of work in this area has focused on what individuals do personally to regulate their own emotions. Given the commonness of social support and capitalization, there are great reasons to suspect that social partners engage in many of these strategies to influence others' emotions (with or without a target's awareness) as well. Research aimed at more fully understanding these processes will provide a clearer picture of how close others contribute to well-being through emotion regulation.

Conclusions

We began this chapter with asking whether people can thrive without social bonds. The answer seems to be not only can they not thrive without interpersonal relationships, they cannot survive without interpersonal relationships. After all, historically the punishment reserved for the worst offenders in a prison has been solitary confinement. However, pathways through which social bonds have an impact on well-being may not be as obvious. Three general pathways were identified; buffering the impact of negative situations, contributions to intrapersonal goals and the self-concept, and increasing the experience of positive emotions. Through these processes, and likely additional processes, social relationships have great potential for increasing or decreasing individual well-being.

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