

12 compassion sig abstracts, december '11

(Cardoso, Ellenbogen et al. 2011; Dwall, Lambert et al. 2011; Guéguen and Lamy 2011; Inagaki and Eisenberger 2011; Meltzer and McNulty 2011; Miller, Lachman et al. 2011; Mongrain, Chin et al. 2011; Rockliff, Karl et al. 2011; Schneider, Konijn et al. 2011; Schneiderman, Zilberstein-Kra et al. 2011; Shiota, Neufeld et al. 2011; Wortman and Wood 2011)

Cardoso, C., M. Ellenbogen, et al. (2011). "Acute intranasal oxytocin improves positive self-perceptions of personality." *Psychopharmacology*: 1-9. <http://dx.doi.org/10.1007/s00213-011-2527-6>.

Rationale Research suggests the experimental manipulation of oxytocin facilitates positive interactions, cooperation, and trust. The mechanism by which oxytocin influences social behavior is not well understood. Objective We explored the hypothesis that oxytocin alters how people perceive themselves, which could be one mechanism by which oxytocin promotes prosocial behavior. Method In a between-subject, randomized, and double-blind experiment, 100 university students received a 24 I.U. dose of intranasal oxytocin or placebo, and then completed the Revised NEO Personality Inventory (NEO-PI-R) and other self-report measures 90 min later. Results Intranasal oxytocin increased ratings of NEO-PI-R extraversion and openness to experiences [$F(1,98) = 4.910, p = .025, \text{partial } \eta^2 = .05$; $F(1,98) = 6.021, p = .016, \text{partial } \eta^2 = .06$], particularly for the following facets: positive emotions ($d = 0.48, p < .05$), warmth ($d = 0.47, p < .05$), openness to values ($d = 0.45, p < .05$) and ideas ($d = 0.40, p < .05$), trust ($d = 0.44, p < .05$), and altruism ($d = 0.40, p < .05$). Oxytocin had no influence on ratings of negative emotionality, conscientiousness, rejection sensitivity, depression, worry, self-esteem, and perceived social support. Conclusion The administration of oxytocin improved participants' self-perceptions of their personality, at least for certain traits important for social affiliation. Increased positive self-referential processing may be one mechanism by which oxytocin promotes positive social behaviors.

Dwall, C. N., N. M. Lambert, et al. (2011). "So far away from one's partner, yet so close to romantic alternatives: avoidant attachment, interest in alternatives, and infidelity." *J Pers Soc Psychol* **101**(6): 1302-1316. <http://www.ncbi.nlm.nih.gov/pubmed/21967006>.

Temptation pervades modern social life, including the temptation to engage in infidelity. The present investigation examines one factor that may put individuals at a greater risk of being unfaithful to their partner: dispositional avoidant attachment style. The authors hypothesize that avoidantly attached people may be less resistant to temptations for infidelity due to lower levels of commitment in romantic relationships. This hypothesis was confirmed in 8 studies. People with high, vs. low, levels of dispositional avoidant attachment had more permissive attitudes toward infidelity (Study 1), showed attentional bias toward attractive alternative partners (Study 2), expressed greater daily interest in meeting alternatives to their current relationship partner (Study 5), perceived alternatives to their current relationship partner more positively (Study 6), and engaged in more infidelity over time (Studies 3, 4, 7, and 8). This effect was mediated by lower levels of commitment (Studies 5-8). Thus, avoidant attachment predicted a broad spectrum of responses indicative of interest in alternatives and propensity to engage in infidelity, which were mediated by low levels of commitment.

Guéguen, N. and L. Lamy (2011). "The effect of the word "love" on compliance to a request for humanitarian aid: An evaluation in a field setting." *Social Influence* **6**(4): 249-258. <http://dx.doi.org/10.1080/15534510.2011.627771>.

In 14 bakeries we tested the effect of different messages associated with a fundraising solicitation. An opaque moneybox was placed near the cash register with a message explaining on a first line that the solicitation was for a humanitarian project for African children conducted by students. On the second line the words "DONATING = LOVING" (loving condition), "DONATING = HELPING" (helping condition), or no inscription (control) appeared. The second line was changed each day and for each bakery according to a random distribution. Results showed that more donations were made in the loving condition compared to the two others, whereas there was no difference between the helping and the control conditions. The results are explained using the spreading activation theory.

Inagaki, T. K. and N. I. Eisenberger (2011). "Neural correlates of giving support to a loved one." *Psychosomatic Medicine*. <http://www.psychosomaticmedicine.org/content/early/2011/11/09/PSY.0b013e3182359335.abstract>.

Objective: Social support may benefit mental and physical well-being, but most research has focused on the receipt, rather than the provision, of social support. We explored the potentially beneficial effects of support giving by examining the neural substrates of giving support to a loved one. We focused on a priori regions of interest in the ventral striatum and septal area (SA) because of their role in maternal caregiving behavior in animals. Methods: Twenty romantic couples completed a functional magnetic resonance imaging session in which the female partner underwent a scan while her partner stood just outside the scanner and received unpleasant electric shocks. Results: Support giving (holding a partner's arm while they experienced physical pain), compared with other control conditions, led to significantly more activity in the ventral striatum, a reward-related region also involved in maternal behavior (p values $< .05$). Similar effects were observed for the SA, a region involved in both maternal behavior and fear attenuation. Greater activity in each of these regions during support giving was associated with greater self-reported support giving effectiveness and social connection (r values = 0.55-0.64, p values $< .05$). In addition, in line with the SA's role in fear attenuation (presumably to facilitate caregiving during stress), increased SA activity during support giving was associated with reduced left ($r = -0.44, p < .05$) and right ($r = -0.42, p < .05$) amygdala activity. Conclusions: Results suggest that support giving may be beneficial not only for the receiver but also for the giver. Implications for the possible stress-reducing effects of support giving are discussed.

Meltzer, A. and J. McNulty (2011). "Contrast effects of stereotypes: "Nurturing" male professors are evaluated more positively than "nurturing" female professors." *The Journal of Men's Studies* **19**(1): 57-64. <http://dx.doi.org/10.3149/jms.1901.57>.

The stereotype that men are less nurturing than women frequently leads people to evaluate men less favorably than they evaluate equivalent women in situations that require nurturance and care. Nevertheless, theories of expectancy-violation suggest that such stereotypes may lead people to evaluate men who are unambiguously nurturing in such situations more positively than they evaluate equivalent women. Consistent with predictions, participants evaluated a hypothetical male professor who was described as "particularly nurturing" more favorably than they evaluated an equivalent female professor. This finding suggests that negative stereotypes do not always lead to less favorable evaluations; rather, negative stereotypes that are violated by unambiguous information can lead to more favorable evaluations through contrast effects. (Full free text available from <http://web.utk.edu/~jmcnulty/McNulty/Papers.html>).

Miller, G. E., M. E. Lachman, et al. (2011). "Pathways to resilience." *Psychological Science* **22**(12): 1591-1599. <http://pss.sagepub.com/content/22/12/1591.abstract>.

Children raised in families with low socioeconomic status (SES) go on to have high rates of chronic illness in adulthood. However, a sizable minority of low-SES children remain healthy across the life course, which raises questions about the factors associated with, and potentially responsible for, such resilience. Using a sample of 1,205 middle-aged Americans, we explored whether two characteristics—upward socioeconomic mobility and early parental nurturance—were associated with resilience to the health effects of childhood disadvantage. The primary outcome in our analyses was the presence of metabolic syndrome in adulthood. Results revealed that low childhood SES was associated with higher prevalence of metabolic syndrome at midlife, independently of traditional risk factors. Despite this pattern, half the participants raised in low-SES households were free of metabolic syndrome at midlife. Upward social mobility was not associated with resilience to metabolic syndrome. However, results were consistent with a buffering scenario, in which high levels of maternal nurturance offset the metabolic consequences of childhood disadvantage.

Mongrain, M., J. Chin, et al. (2011). "Practicing compassion increases happiness and self-esteem." *Journal of Happiness Studies* **12**(6): 963-981. <http://dx.doi.org/10.1007/s10902-010-9239-1>.

The current study examined the effect of practicing compassion towards others over a 1 week period. Participants (N = 719) were recruited online, and were assigned to a compassionate action condition or a control condition which involved writing about an early memory. Multilevel modeling revealed that those in the compassionate action condition showed sustained gains in happiness (SHI; Seligman et al. in *Am Psychol* 60:410–421, 2005) and self-esteem (RSES; Rosenberg in *Society and the adolescent self-image*. Princeton University Press, Princeton, 1965) over 6 months, relative to those in the control condition. Furthermore, a multiple regression indicated that anxiously attached individuals (ECR; Brennan et al. 1998) in the compassionate action condition reported greater decreases in depressive symptoms following the exercise period. These results suggest that practicing compassion can provide lasting improvements in happiness and self-esteem, and may be beneficial for anxious individuals in the short run.

Rockliff, H., A. Karl, et al. (2011). "Effects of intranasal oxytocin on 'compassion focused imagery'." *Emotion* **11**(6): 1388-1396. <http://www.ncbi.nlm.nih.gov/pubmed/21707149>.

This study explored the effects of oxytocin on Compassion Focused Imagery (CFI), that is, imagining another "mind" being deeply compassionate to oneself, and the interaction of these effects with self-criticism and feeling socially safe with others. Forty-four healthy participants (29 men and 15 women) completed self-report measures of self-criticism, attachment style, and social safeness before taking part in a double-blind randomized placebo controlled study. They attended two imagery sessions, receiving oxytocin in one and a placebo in the other. Positive affect was measured before and after each imagery session, and "imagery experience" was assessed after each session. Overall, oxytocin increased the ease of imagining compassionate qualities but there were important individual differences in how CFI was experienced. Participants higher in self-criticism, lower in self-reassurance, social safeness, and attachment security had less positive experiences of CFI under oxytocin than placebo, indicating that the effects of oxytocin on affiliation may depend on attachment and self-evaluative styles.

Schneider, I. K., E. A. Konijn, et al. (2011). "A healthy dose of trust: The relationship between interpersonal trust and health." *Personal Relationships* **18**(4): 668-676. <http://dx.doi.org/10.1111/j.1475-6811.2010.01338.x>.

The positive effects of trust are manifold. Recent research has shown that trust levels may even influence physical health. The current work explores this issue and aims to shed light on the mechanisms underlying the relationship between trust and health in a 5-wave longitudinal data set. Results showed that trust was positively related to physical health: Participants report fewer health problems when they trust their partner more, replicating earlier findings. More importantly, symptoms of anxiety and depression mediate the effect of trust on self-reported health. Finally, results of residual lagged analyses show that earlier levels of trust predict later symptoms of anxiety and depression symptoms, in turn predicting changes in physical health symptoms over time.

Schneiderman, I., Y. Zilberstein-Kra, et al. (2011). "Love alters autonomic reactivity to emotions." *Emotion* **11**(6): 1314-1321. <http://www.ncbi.nlm.nih.gov/pubmed/22142209>.

Periods of bond formation are accompanied by physiological and emotional changes, yet, little is known about the effects of falling in love on the individual's physiological response to emotions. We examined autonomic reactivity to the presentation of negative and positive films in 112 young adults, including 57 singles and 55 new lovers who began a romantic relationship 2.5 months prior to the experiment. Autonomic reactivity was measured by Respiratory Sinus Arrhythmia (RSA) to two baseline emotionally neutral films, two negative films, and two positive films. Results demonstrated that RSA in singles decreased during the presentation of negative emotions, indicating physiological stress response. However, no such decrease was found among new lovers, pointing to more optimal vagal regulation during the period of falling in love. Autonomic reactivity, indexed by RSA decrease from the positive to the negative films, was greater among singles as compared to lovers, suggesting that love buffers against autonomic stress and facilitates emotion regulation. Findings suggest that vagal regulation may be one mechanism through which love and attachment reduce stress and promote well-being and health.

Shiota, M. N., S. L. Neufeld, et al. (2011). "Feeling good: autonomic nervous system responding in five positive emotions." *Emotion* **11**(6): 1368-1378. <http://www.ncbi.nlm.nih.gov/pubmed/22142210>.

Although dozens of studies have examined the autonomic nervous system (ANS) aspects of negative emotions, less is known about ANS responding in positive emotion. An evolutionary framework was used to define five positive emotions in terms of fitness-enhancing function, and to guide hypotheses regarding autonomic responding. In a repeated measures design, participants viewed sets of visual images eliciting these positive emotions (anticipatory enthusiasm, attachment love, nurturant love, amusement, and awe) plus an emotionally neutral state. Peripheral measures of sympathetic and vagal parasympathetic activation were assessed. Results indicated that the emotion conditions were characterized by qualitatively distinct profiles of autonomic activation, suggesting the existence of multiple, physiologically distinct positive emotions.

Wortman, J. and D. Wood (2011). "The personality traits of liked people." *Journal of Research in Personality* **45**(6): 519-528. <http://www.sciencedirect.com/science/article/pii/S0092656611000985>.

There is surprisingly little understanding of how personality traits are associated with being generally liked by others after adolescence (Ozer & Benet-Martinez, 2006). We examined the relationship between self-reported personality traits and being generally liked in young adulthood in Greek organizations and freshman dormitories. We found a high level of consistency in which traits were associated with being liked. We examined the relationship between liked and socially desirable traits, using a recent theory on agency and communion (Wojciszke, Abele, & Baryla, 2009). Results help to create a personality profile of the person who is more liked by others, especially pointing to the importance of communal characteristics that are associated with behavior benefiting others.

