Abstracts

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Coping with the Pain of Rejection: Turning to Drugs, Friends, and Pleasure

Nathan DeWall

The current talk presents a program of research on how people cope with the pain of rejection. The first section demonstrates how drugs that blunt physical pain can reduce the pain of rejection. The second and third sections discuss how people cope with the pain of rejection by seeking out potential friends, whether by curbing their selfish desires or changing their self-concept. The final section illustrates how rejected people have a heightened sensitivity to stimuli that bring immediate pleasure to take the place of their pain.

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Emotional time travel: Forecasted and experienced sadness and anger after social exclusion

Wilco van Dijk

Being excluded by others has been documented as ubiquitous and powerful and causes a host of psychologically aversive reactions in targets of ostracism, including anger and sadness. But does it evoke as much anger and sadness as people would predict? Research on affective forecasting has repeatedly shown that people tend to overestimate the intensity of their future emotions. In the present research we examined whether people show this impact bias in the context of social exclusion (i.e. Cyberball). Results indicate that participants indeed overestimated their future anger and sadness following social exclusion. Moreover, findings suggest that the source of this impact bias is that people fail to anticipate their swift regulation of their emotional responses. As people fail to take into account how rapidly these regulation processes occur and how it affects their emotional lives, they tend to overestimate the intensity of their future emotional responses.

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Jumping on the BADwagon: When people do and do not go along with the exclusion of others.

Lotte F. van Dillen and Gert-Jan Lelieveld

Research has repeatedly shown that being socially excluded causes pain and distress, which suggests that humans are hard-wired to belong to a group. People therefore try to
prevent being excluded by others. However, do people also try to prevent social exclusion of others?

In two behavioral studies and one fMRI study, we used the Cyberball game to investigate under which conditions people are exclusion averse and under which conditions they go along with the exclusion of others. To answer this question, we adjusted the Cyberball game, by varying the percentage of throws of one player (the excluder) to the participant. The higher the percentage of throws from the excluder to the participant, the more the third Cyberball player is being excluded. Results of a first experiment showed that the higher the percentage of throws from the excluder to the participant, the more the participants threw the ball to the third (excluded) player, indicating that people were exclusion averse. A second experiment showed that this behavior was even stronger for high empathic people.

Finally, a third (fMRI) study showed that when the person initiating the exclusion was an in-group member and the excluded player an out-group member, people were less exclusion averse and more often threw the ball back to the excluder. This behavior was associated with increased activation in the Anterior Cingulate Cortex (ACC).

We add to the literature on social exclusion by using the Cyberball game to investigate the behavior of excluders instead of excluded individuals. We show that people tend to be exclusion averse, and that only under certain circumstances do people not actively prevent the exclusion of others.

An Anthropological Perspective on Avoidance and Ostracism as Mechanisms Social Control: Cross-Cultural Considerations and Evolutionary Implications

Douglas P. Fry

Interpersonal avoidance probably takes place in all societies. Avoidance may be short-term or long-term, informal or formal. Group level ostracism is also common. This presentation draws upon ethnography with two purposes in mind. The first is to illustrate some of the manifestations of avoidance and ostracism cross-culturally. The second is to take a look at these phenomena using a sample of nomadic forager societies (n = 21) from the Standard Cross-Cultural Sample (SCCS) to glean insights by ethnographic analogy, based on this ancestral form of human society, about these behaviors in the evolutionary past.

Cold-blooded Loneliness: Social Exclusion Leads to Lower Skin Temperatures

Hans Ijzerman
Being ostracized or excluded, even briefly and by strangers, is painful and threatens fundamental needs. Recent work by Zhong and Leonardelli (2008) found that excluded individuals perceive the room as cooler and that they desire warmer drinks. A perspective that many rely on in embodiment is the theoretical idea that people use metaphorical associations to understand social exclusion (see Landau, Meier, & Keefer, 2010). We suggest that people feel colder because they are colder. The results strongly support the idea that more complex metaphorical understandings of social relations are scaffolded onto literal changes in bodily temperature: Being excluded in an online ball tossing game leads to lower finger temperatures (Study 1), while negative affect typically experienced after such social exclusion is alleviated after holding a cup of warm tea (Study 2). The authors discuss further implications for the interaction between body and social relations specifically, and for basic and cognitive systems in general.

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Hormonal and Genetic Influences on Responses to Social Exclusion and Inclusion

Robert A. Josephs

Exclusion or eviction from a group is one of the most effective ways an individual can be denied access to valuable resources. Once ostracized, the individual lacks support, protection, resource exchange, and mating possibilities. Even brief instances of ostracism by strangers in the laboratory are sufficient to cause self-reports of social pain, sadness, loss of self-esteem, belonging, control, and meaningful existence. Consequently, social exclusion, with the likely loss of social status, is highly distressing to many people and activates a physiological response involving major components of the autonomic nervous system and the HPA axis. But does everyone suffer when ostracized, or just a fraction of the population, and what happens in the contrasting circumstance in which the individual is embraced by the group and appointed to the highest position within the group? Does everyone benefit from the esteem and respect that comes from being recognized as the best and brightest? I will present the results of two laboratory studies showing that not everyone responds negatively to social exclusion, and conversely, not everyone responds positively to social inclusion. Rather, a gene x hormone interaction governs responses. In fact, the same hormonal-genetic profile that shows worse-than-typical response when ostracized shows better-than-typical response under social inclusion. So too, the same hormonal-genetic pattern that shows better-than-typical response when ostracized shows worse-than-typical response under social exclusion. These “for-better-and-for-worse effects support differential susceptibility (Belsky & Pluess, 2008). A third study uses a prospective longitudinal design to extend these laboratory findings to the battlefield, testing soldiers’ differential responses to combat stress to assess onset and maintenance of affective illness. The mechanism underlying all three studies is thought to be functional changes in amygdala-cortical crosstalk. I will present evidence supporting this assertion.
Social rejection shares somatosensory representations with physical pain

Ethan Kross

How similar are the experiences of social rejection and physical pain? Extant research suggests that a network of brain regions that support the affective but not the sensory components of physical pain underlie both experiences. I will review findings from a recent study which demonstrates that when rejection is powerfully elicited—by having people who recently experienced an unwanted break-up view a photograph of their ex-partner as they think about being rejected—areas that support the sensory components of physical pain become active. The study demonstrates the overlap between rejection and physical pain in these areas by comparing both conditions in the same people using fMRI. It also demonstrates that the sensory brain regions activated by rejection are specific to physical pain. These results give new meaning to the idea that rejection “hurts.” They demonstrate that rejection and physical pain are similar not only in that they are both distressing – they share a common somatosensory representation as well.

How helping can negate separatism threat

Esther van Leeuwen

Separatism as a phenomenon receives frequent and widespread media attention, but is barely covered in psychological research. We present two studies in which we investigated the notion that separatist movements constitute a form of identity threat to the majority group, which is distinctly different from economic threat. Moreover, we hypothesized and found that members of the majority group can negate this threat by helping the separatist group. Through acts of generosity and kindness, the majority group can communicate, in a peaceful manner, that they want it to remain included within the majority group. As this is the first study to investigate separatism as a form of identity threat, the current research provides valuable new insights into a group members' response to rejection by a small minority.

Social Pain and Social Reward

Geoff MacDonald

A growing body of research suggests that describing the feelings caused by broken social bonds as painful is not simply a metaphor. This work shows that a number of
physiological systems involved in processing physical injury as painful are also involved in processing social injury as painful. Although much research has focused on the social threats that can lead to such pain, research suggests that loss of reward is also an important source of pain. I will describe work from my lab demonstrating the independence of social threat and reward constructs, and argue that low expectation of social reward is the primary defense against social pain for individuals high in avoidant attachment. In my discussion, I will explore the idea that loss of social reward is a source of social pain absent in most laboratory investigations of social exclusion.

Ostracism in Children and Adolescents: Clinical and Educational Implications

Steve Nida

Until recently, ostracism has not been investigated as a clinical factor in child and adolescent adjustment; this potential connection deserves attention because children so frequently are targets of social exclusion. This presentation focuses on a recent study in which more than 300 children and adolescents completed an ostracism scale and the Kovacs Children’s Depression Inventory, while their parents provided behavioral data via the Achenbach Child Behavior Checklists. Ostracism measures were consistently correlated with both self-reported depressive symptomatology and parent-reported problem behaviors. An ancillary portion of this talk will briefly present findings, drawn from another component of the same research program, that provide insights into the problem of ostracism in our schools – covering students’ and teachers’ perceptions of its prevalence, its relationship to bullying, and mechanisms for intervention.

Exclusion, Intergroup Hostility, and Religious Fundamentalism

Juliette Schaafsma

In recent years, media commentators have often argued that feelings of social exclusion and rejection among ethnic minority and majority members are among the root causes of interethnic tensions and religious radicalization in the Western world. So far, however, there was only limited empirical evidence for this. We present two studies in which we examined whether exclusion leads to increased intergroup hostility and stronger fundamentalist religious beliefs. In Study 1, we found that exclusion by ethnic ingroup members resulted in more support for fundamentalist religious beliefs than exclusion by ethnic outgroup members. Exclusion by ethnic outgroup members, however, resulted in more hostility toward those who exclude and toward the outgroup as a whole. In Study 2, we found that people also became more hostile when they were not personally excluded
but when they observed exclusion of ethnic ingroup members by ethnic outgroup members. These results show that people’s reactions to exclusion vary as a function of the social identity of those who exclude, and lend support to the idea that exclusion by ethnic outgroup members represents a different type of threat to a person’s identity than exclusion by ethnic ingroup members.

Buffer the Pain Away: Stimulating the rVLPFC decreases Feelings of Social Disconnection
Paoli Riva

How can the sting of social exclusion be reduced? Previous studies suggested that activity in the right ventrolateral prefrontal cortex (rVLPFC) is associated with regulation of painful or negative affective experience resulting in a lower report of feelings of social disconnection. In the present study we tested the effects of brain polarization through transcranial direct current stimulation (tDCS) of the rVLPFC on feelings of social disconnection and psychological distress. Participants were either socially excluded or included and tDCS or sham stimulation was applied over the rVLPFC. Excluded participants receiving anodal tDCS of rVLPFC reported lower feelings of social disconnection and psychological distress than those who were also excluded but received sham stimulation. Crucially, rVLPFC stimulation did not alter the participants' awareness of their inclusionary status. No effects emerged for included participants. Our findings are pioneer in demonstrating the modulatory function of the rVLPFC in the experience of social disconnection and can be helpful to develop interventions aiming at clinical benefits.

Is Negative Attention Better than No Attention? Comparing the Effects of Ostracism and Harassment in the Workplace
Sandra L. Robinson

Across three field studies we examine the comparative frequency and impact of ostracism and harassment in organizations. Study 1 finds that ostracism, compared to harassment, is generally perceived to be more socially acceptable and less psychologically harmful. In Study 2, we develop and test arguments that ostracism, because of its greater threat to belongingness needs, has a more harmful impact than harassment on its targets. Supporting our predictions, we show that ostracism, compared to harassment, is more strongly and negatively related to a sense of belonging, and has a stronger negative impact on various measures of employee well-
being and work-related attitudes. Study 3 replicates these results and expands them with longitudinal data, which shows that ostracism significantly predicts actual turnover four years later whereas harassment does not. Implications for theory, research, and practice are discussed.

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The seeds of stronger groups: Ostracism bolsters willingness to sacrifice for one’s group

Bill Swann

When ostracized by either an ingroup or outgroup, people may either withdraw or compensate by striving to reaffirm their social identity. We proposed here that identity fusion (which assesses permeability of borders between personal self and group) would influence amount of compensatory activity. As expected, in four experiments, irrevocable ostracism increased endorsement of fighting and dying for the ingroup among fused persons but not among non-fused persons. This effect emerged when an outgroup ostracized fused individuals due either to their nationality (Experiment 1) or their personal preferences (Experiment 2). Similarly, ostracism by the ingroup amplified the tendency for fused persons to both endorse extreme pro-group actions, refuse to leave the group (Experiment 3) and donate money to an ingroup member (Experiment 4). Finally, compensatory activities emerged even when ostracism was based on being “too good” for the group, suggesting that a desire for self-enhancement does not mediate such activities (Experiment 4). The ways in which ostracism may strengthen the ingroup and promote pro-group activities are discussed.

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Scenes from "Reject", a documentary work-in-progress

Ruth Thomas-Suh

“Reject” is the first feature-length documentary film to examine the universal experience of social rejection. With a blend of scientific evidence and personal stories, the film looks at a range of phenomena, from schoolyard exclusion to mass shootings and “bully-cide.” The film is driven by a core idea - that social rejection has a profound impact on human life, and that there is a correlation between social pain, subsequent physical pain and the perpetration of violent acts.

From social psychologists to neuroscientists to broken-hearted moms, our lead characters are rejection experts, by choice or by fate, and will lead us on a journey from rejection to acceptance. “Reject” is ultimately about human potential, and the price we pay as a society as long as these issues are not understood and addressed.
Who did it? Psychological and Interpersonal Consequences of Claiming as opposed to Being Granted Inclusion

Wendy de Waal-Andrews

People’s success or failure to gain inclusion in groups may result from their own actions or the actions of others. Two studies compared the personal and interpersonal consequences of inclusion and exclusion when they resulted from these two processes. People’s own failure to “claim” inclusion in a computerized ballgame was equally detrimental for fundamental needs and made people equally unlikely to behave prosocially to group members, as being denied inclusion by others. In contrast, the beneficial effects of inclusion depended on the process with which it was obtained and meta-perceptions of warmth mediated these differences; people who succeeded to claim inclusion thought their interaction partners liked them less than people who were granted inclusion, and as a result their fundamental needs were satisfied less and they behaved less prosocially.

Effects of Being Ignored and Excluded

Kipling D. Williams

The phenomena of ostracism, exclusion, and rejection have received considerable empirical attention in the last 20 years, in part because of a revitalized interest in the importance of belonging for human social behavior, but also because of a converging interest in social pain. I present a temporal model that describes and predicts processes and responses at three stages of reactions to ostracism: (a) reflexive, (b) reflective, and (c) resignation. The reflexive pain response triggers threats to four fundamental needs and directs the individual’s attention to reflect on the meaning and importance of the ostracism episode, leading to coping responses that serve to fortify the threatened need(s). Persistent exposure to ostracism over time depletes the resources necessary to motivate the individual to fortify threatened needs, thus leading eventually to resignation, alienation, helplessness, and depression. I examine the first two stages empirically, and provide qualitative evidence for the third stage of resignation.
When excluded people behave positively toward their excluders

Maartje Elshout

Previous social exclusion research has revealed that excluded people behave negatively toward their excluders. However, in all these studies, the relationship between the excluded and the excluders ended. In real life, relationships often continue. In such cases, it would not be beneficial to behave negatively toward excluders. In three experiments, we examined the effect of relationship continuity. Inclusionary status was manipulated by a real interaction (Experiment 1), a scenario (Experiment 2), or Cyberball (Experiment 3). In all experiments, relationship continuity was manipulated by the (im)possibility to switch to another group. If the relationship continued, forcibly or voluntarily, the excluded behaved more positively toward excluders than if the relationship could be discontinued. In fact, if the relationship continued, the excluded behaved just as positively toward their group as included members. Only when the relationship actually ended did we find the negative behaviors that have been emphasized in the exclusion literature.

Enhanced amygdala reactivity to emotional faces in adults reporting childhood emotional maltreatment

Anne-Laura van Harmelen

In the context of chronic childhood emotional maltreatment (CEM; emotional abuse and/or neglect), adequately responding to facial expressions is an important skill. Over time, however, this adaptive response may lead to a persistent vigilance for emotional facial expressions. The amygdala and the medial prefrontal cortex (mPFC) are key regions in face processing. However, the neurobiological correlates of emotional face processing in adults reporting CEM are yet unknown. We examined amygdala and mPFC reactivity to emotional (Angry, Fearful, Sad, Happy, Neutral) versus scrambled faces in healthy controls and unmedicated patients with depression and/or anxiety disorders reporting CEM before the age of 16 (n=60), and controls and patients who report no childhood abuse (n=75). We found that CEM is associated with enhanced bilateral amygdala reactivity to emotional, but not neutral faces, independent of psychiatric status. Furthermore, we found no support for differential mPFC functioning, suggesting that amygdala hyperresponsivity to emotional facial perception in adults reporting CEM
may be independent from top-down influences of the mPFC. These findings may be an important key in understanding the increased emotional sensitivity, and interpersonal difficulties, that has been reported in individuals with a history of CEM.

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**Peer relationships modulate fairness considerations after observing social exclusion**

**Berna Güroğlu**

Social exclusion is a common experience with negative consequences on mood and self-esteem. Recent studies have shown that not only the direct experience of social exclusion, but mere observation of others’ being excluded influences people’s mood negatively across age groups (Gunther Moor et al., 2012). Moreover, after observing a victim being excluded people are more likely to act more prosocially and more fairly towards the victim than towards the excluders. So far, these studies have focused on interactions among people who do not know each other whereas the majority of our social interactions include others we know. In this study we investigated the extent to which peer relationships modulate fairness considerations following observing social exclusion in a group of young adults (mean age = 20). Participants from vocational universities were contacted in their classrooms where they filled out sociometric questionnaires indicating who they like and dislike among their classmates. Subsequently participants were invited to the next session in groups of five consisting of two other classmates (peer1 and peer2) and two unknown confederates (confederate1 and confederate2). Participants were informed that they will play online games with each other and were taken to separate rooms. There they first played the inclusion Cyberball game with peer1 and peer2, then they observed exclusion of peer 1 by peer2 and confederate1, and finally, they observed exclusion of peer2 by peer1 and confederate2. In between the three Cyberball sessions participants played dictator games where they could divide money between themselves and all other participants involved in the interaction. Preliminary results show that anonymous excluders (i.e., confederates) were punished more severely (i.e., received lower dictator game offers) than peer excluders. Furthermore, when a liked peer was a victim of social exclusion, the excluders were punished more severely than when a disliked peer was a victim of social exclusion. Findings suggest that young adults are more tolerant of social exclusion when their friends are perpetrators than when an anonymous other is the norm violator. Along the same line, friends are compensated more for being a victim than anonymous others and disliked peers. Results are discussed in relation to the role of peer relationships in bullying and victimization.

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**Acting on social exclusion: neural underpinnings of punishment and forgiveness**

**Geert-Jan Will**
Social exclusion is a highly distressing experience, leading people to show decreased levels of prosocial behavior towards excluders and increased willingness to cooperate with includers. Previous neuroimaging research has demonstrated that interacting with excluders in a second interaction engaged regions implicated in social-decision making, including the temporo-parietal junction (TPJ), dorsal anterior cingulate cortex (dACC), insula and the lateral prefrontal cortex. The current fMRI study set out to test how a negative social interaction relates to subsequent social exchange behavior and its neural correlates. Participants (22 young adults) first played Cyberball with anonymous peers, which reliably induced feelings of social exclusion. Subsequently, in a Dictator Game (DG) they divided money between themselves and the players who previously included or excluded them during the Cyberball interaction. In this economic paradigm participants were given the opportunity to either punish the norm violators (i.e., excluders) by decreasing their outcomes or to forgive them by offering an equal distribution in spite of the violated norm. Behavioral results show that social exclusion resulted in a willingness to punish the excluders in the DG. Neuroimaging results revealed a network of regions associated with making offers to the excluders compared to the includers, including the TPJ, dACC and the ventrolateral prefrontal cortex (vIPFC). These activations might be interpreted in terms of higher mentalizing and affect regulation demands required in social decision-making when interacting with norm violators. Brain regions associated with cognitive control (dorsolateral prefrontal cortex) and conflict (dACC) were more active when participants forgave players who previously excluded them.