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Affective influences on moral decisions:

Mood effects on selfishness vs fairness

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Abstract

Treating others fairly and equitably is a basic requirement for moral behaviour, yet in many everyday situations the impulse to be selfish and benefit ourselves at the expense of others remains a powerful motive. This chapter reports five experiments investigating the influence of positive and negative affect on moral decisions involving the allocation of resources to ourselves vs others, using strategic games such as the dictator game and the ultimatum game. In the dictator game, proposers have unconstrained power to be selfish, and the option of being fair to others is entirely voluntary. In the ultimatum game, allocation decisions to self vs others require more sophisticated processing as they are subject to the veto power of recipients. All five experiments found that negative mood consistently increased, and positive mood reduced moral behaviour and concern with fairness. Allocators in a negative mood were consistently more fair and gave more resources to a partner than did those in a positive mood. These decisions also took longer to make, confirming mood-induced processing differences in moral decisions. The results are discussed in terms recent affect-cognition theories, suggesting that positive affect recruits a more assimilative, internally focused processing style promoting greater selfishness, while negative affect induces more externally oriented, accommodative thinking and greater concern fairness and external moral norms. The implications of the findings for everyday interpersonal behaviors and interactions involving selfishness versus fairness are considered.

Keywords: Affect, morality, fairness vs. selfishness, interpersonal decisions, dictator game, ultimatum game

Affective influences on moral decisions: Mood effects on selfishness vs fairness**Introduction**

Imagine that somebody gave you \$100, with the simple request that you divide this sum between yourself, and another person. How would you decide what to do? How much money would you keep for yourself? Although splitting the money 50-50 would appear to be a simple and manifestly 'fair' decision, in fact most people do display some degree of selfishness and favouritism towards themselves in such situations. Interestingly, doing the right thing by others – treating others fairly and equitably – lies at the core of some of the most common and important moral dilemmas people face in everyday life, with important implications for social relationships. Striking the right ethical balance between self-interest and fairness can also have a significant influence on developing interpersonal trust and team effectiveness (Jarvenpaa, Knoll & Leidner, 1998).

Dealing with such decisions is often perplexing, involving a subtle conflict between internal motivations – selfishness – and external social norms mandating fairness towards others. Could it be that feeling good, and feeling bad might have a significant impact on the ethical decisions taken when allocating resources to ourselves and others? These experiments use the dictator game and the ultimatum game to investigate affective influences on how moral dilemmas involving selfishness versus fairness are resolved.

Surprisingly, the possibility that affective states may influence moral decisions has received little attention to date. Yet affect has long been recognized as one of the primary dimensions influencing social cognition and interpersonal behavior (Fiedler, 2001; Forgas, 2002; Forgas & Eich, 2012; Zajonc, 1980). Weak, low-intensity moods in particular have been found to exert a subtle yet powerful influence on thinking, judgments and social

behaviors (Forgas, 2002; 2007; Bless, 2000; Clore & Storbeck, 2006). Moods are low-intensity, diffuse and relatively enduring affective states without a salient antecedent cause and therefore little conscious cognitive content. In contrast, emotions are more intense, short-lived and usually have a definite cause and conscious cognitive content (Forgas, 1995, 2002). It is the influence of moods rather than distinct emotions that will be of interest here, as moods typically produce more uniform, enduring and reliable cognitive and behavioral consequences than do more context-specific emotions (Forgas, 2002, 2006; Forgas & Eich, 2012).

There are a number of philosophical approaches to morality that have a direct bearing on how people deal with moral conflicts involving selfishness versus fairness, as we shall see below.

The ethical imperative of fairness

The ethical conflict between selfishness vs. fairness has been a major issue for religious and moral philosophers since time immemorial. The maxim of treating others as you would like to be treated yourself is a basic principle of several major religions. Since the enlightenment, however, rationalist thinkers such as Adam Smith argued that *rational* self-interest – that is, selfishness – may often be socially beneficial and may legitimately guide many of our social and economic transactions if properly channelled.

In terms of the rational, *utilitarian philosophy* of Jeremy Bentham and John Stuart Mill, we ought to make decisions that will produce the greatest benefit and the least harm, resulting in the greatest good for the greatest number of people. This principle assumes that we should treat our own benefits and dis-benefits in the same rational, dispassionate manner as we assess the benefits and dis-benefits of others – in practice, not an easy task to accomplish.

The alternative *fairness or justice approach* is based on the work of Aristotle, who argued that fairness requires that we treat equals equally and avoid favoritism and discrimination. Again, living up to this norm is not always easy when decisions involve distributing benefits to ourselves vs others without favouritism to ourselves. Fairness to others as a social norm is also mandated by moral theories that emphasize the common interests of people within a defined groups – treating them equitably is to everyone’s advantage, and thus constitutes a powerful demand. This view is echoed in more recent evolutionary theories that suggest that humans and higher primates evolved a sophisticated sense of justice and fairness as an adaptive strategy to constrain selfishness and promote social cohesion (Forgas, Haselton & von Hippel, 2007). Thus, based on purely rational, philosophical consideration, being fair to others (and in our example, distributing resources equally) is clearly the desirable and preferred outcome to the ethical problem described above. Yet, in practice the fairness norm is rarely followed, but complete selfishness is also rare, suggesting that moral decisions of this kind involve far more than rational consideration (Güth, Schmittberger & Schwarze, 1982).

This chapter will contribute to our understanding of how such ethical decisions are performed by describing a series of laboratory experiments exploring how everyday affective states and moods may influence the degree of selfishness and fairness people display when they are asked to divide scarce resources between themselves and another person in the *dictator game* and the *ultimatum game*.

Selfishness vs fairness in strategic interactions

Interpersonal conflicts involving the contrary demands of selfishness (benefiting yourself), versus fairness (obeying moral norms and doing the right thing by others) represent a basic and recurring ethical problem in relating to others, and are the source of many

historical and interpersonal conflicts. How can we study such moral decisions in a reliable and valid empirical manner? In these series of experiments we explored mood effects on selfishness and fairness in controlled strategic interpersonal situations, using interactive games such as the *dictator game* and the *ultimatum game*. In these interactions, benefiting the self or benefiting another represent a clearly defined and easily operationalized alternative strategies, measured by comparing the allocation decisions made by people in positive and negative affective states.

The dictator game and the ultimatum game

Economic games offer a reliable and valid method to study interpersonal strategies involving ethical conflicts, such as fairness, selfishness, trust and cooperation. In the *dictator game* the allocator has the power to allocate a scarce resource (eg. raffle tickets, a sum of money, etc.) between himself and another person in any way they see fit, with no input by the receiver. In the *ultimatum game*, proposers face a more complex task. They can allocate a scarce resource between themselves and a responder who in turn has a veto power to accept or reject the offer; if rejected, neither side gets anything.

These games represent a highly realistic and controlled context in which to study the way people resolve the conflicting moral requirements of being selfish, or being fair when dealing with others. In a sense, the ethical dilemmas presented in these games model the realism and conflicts of many everyday social interactions. Such decisions are often characterized by an uncommon degree of realism and intimacy producing real personal involvement (Walther, 1992; Joinson, 2001; Tidwell & Walther, 2002). At a phenomenological level, computer-based communication can be just as real as face-to-face encounters (Walther, 1992).

In terms of classical economic theories, allocation decisions by rational actors should

be designed to maximize benefits to the self as far as possible. In zero-sum situations such as the dictator game and the ultimatum game, earnings can only be maximized by keeping as much of the resource as possible. Contrary to this 'selfish' motive, moral philosophers emphasize the importance of fairness to others as a competing decision strategy (see above). Actual research suggests an intriguing pattern: instead of clear-cut selfishness or egalitarian fairness, decision maker frequently prefer a decision somewhere between these competing alternatives (Güth et al., 1982). Allocators often give over 30% to others, rather than simply maximize their own benefits. Interestingly, in ultimatum games where responders can veto unfair offers, they often do so and prefer to end up with nothing rather than feel unfairly treated (Bolton, Katok & Zwick, 1998; Camerer & Thaler, 1995; Forsythe, Horowitz, Savin & Sefton, 1994; Nowak, Page & Sigmund, 2000).

In other words, ethical decisions involving selfishness versus fairness are influenced a combination of motives, including the powerful ethical norm of fairness to others (Güth et al., 1982). Both in the dictator and ultimatum games selfishness must be balanced by attention to implicit fairness norms, confirming that ethical concern with fairness is a universal human characteristic, consistent with evolutionary evidence indicating that fairness norms serve important adaptive functions (Bolton et. al., 1998; Camerer & Thaler, 1995; Forgas et al., 2008).

Thus, decision makers must necessarily weight the conflicting *internal* demands of self-interest against the *external* norms requiring fairness to others (Pillutla and Murningham, 1995; Haselhuhn & Mellers, 2005). It is precisely these kinds of constructive social decisions that seem to be most commonly influenced by affective states, according to accumulating recent evidence (Fiedler, 2001; Forgas, 2002). For example, Andrade and Ariely (2009) found that angry individuals are more likely to reject unfair offers. In another study, Harle' and Sanfey (2007) report that unfair offers were more often rejected by people experiencing

negative affect. Concern with fairness, once established, remains influential in subsequent strategic decisions. It seems that when making difficult moral judgments, people are influenced by the subtle interplay of the conflicting *internal* demands of self-interest, and the *external* norm of fairness (Pillutla & Murningham, 1995; Haselhuhn & Mellers, 2005). The present studies investigate the possibility that temporary mood states can play an important role in influencing how such internal and external demands are evaluated in moral decisions, consistent with recent affect-cognition research, to be reviewed next.

Affective influences on ethical decisions

Considerable recent research suggests that affective states have a dual effect on social decision, by influencing both (a) the valence and content of the information considered (*informational effects*), and also by influencing (b) the processing strategies people adopt (*processing effects*).

Informational effects. Affect may influence moral decisions either *directly* as a source of information (Clore & Storbeck, 2006; Schwarz, 1990), or *indirectly*, by priming affect-congruent information in memory (Bower, 1981; Forgas & Bower, 1987). Both of these effects are likely to give rise to an affect-congruent bias in decisions: happy persons tend to access more positive information, and behave in a more optimistic, confident and assertive manner (Forgas, 1999; 2002). Negative mood in turn, by promoting the recall and use of more negative information, should produce more careful, cautious, pessimistic and socially constrained responses (Forgas, 1998; 2002; Schwarz, 1990).

Numerous experiments support this prediction. People in a positive mood tend to make more confident and less polite requests (Forgas, 1999), are more confident when negotiating (Forgas, 1998), and generally are more likely to impose their internal ideas on the social world (Bless & Fiedler, 2006). Happy mood may also function as a motivational

resource (Trope et al., 2001), allowing happy persons to better deal with more threatening information. Thus, positive affect should result in more self-serving and selfish allocations by *proposers*, but a greater tendency to reject unfair offers by *responders* in the ultimatum and the dictator games.

Processing effects. Affect can also influence *processing tendencies*, that is, *how* people process social information (Bless & Fiedler, 2006). Early work suggested that positive affect promotes a more superficial and lazy information processing style, while negative affect improves attention and processing vigilance. More recent theories by Bless and Fiedler (2006) suggest that negative affect may function as an evolutionary alarm signal calling for more *accommodative*, externally focused processing. In contrast, positive affect tends to facilitate more internally focused, *assimilative* thinking (Clore & Storbeck, 2006; Schwarz, 1990). *Accommodation* and *assimilation* denote these two fundamental adaptive functions, where negative affect promotes a more externally focused processing style as the individual seeks to *accommodate* to the demands of the external environment. In contrast, positive affect triggers a more *assimilative* processing style, focusing on internal inputs to the decision-making process.

Consistent with this processing dichotomy, negative affect can improve performance on tasks that require careful stimulus processing and attention to external norms and expectations (Forgas, 2007; Gasper & Clore, 2002; Fiedler et al, 2003; Walther & Grigoriadis, 2004). Positive affect in contrast improves performance on tasks that require assimilative processing – that is, reliance on internal, pre-existing knowledge. For example, people experiencing negative affect tend to pay greater attention to new, external information, and as a result, are better at detecting deception (Forgas & East, 2008), have better eyewitness memories (Forgas, Goldenberg & Unkelbach, 2009), are less likely to rely on stereotypes (Bless et al., 1996; Unkelbach, Forgas & Denson, 2008), and are less susceptible

to judgmental errors (Forgas, 1998).

The present studies

Extrapolating from this evidence, positive and negative affect may also have a significant influence on moral decisions involving selfishness versus fairness. Both informational and processing models predict that *proposers* should show greater selfishness when in a positive mood, and greater fairness when in a negative mood in both the dictator and the ultimatum games (Experiments 1,2,3). Informational theories imply that positive mood should produce more confident, assertive and selfish decisions, and negative mood should lead to more cautious and less selfish choices (Forgas & Eich, 2012). Processing models predict that positive affect should increase assimilative processing and attention to *internal* selfish impulses, while negative affective should trigger more accommodative and externally oriented processing and greater concern with fairness (Forgas, 2002; Tan & Forgas, 2010).

Can we distinguish between the effects of informational, and processing theories? Although for proposers both theories predict greater selfishness in positive mood, and greater fairness in negative mood, in the case of *responders* (Experiment 5), informational and processing theories make divergent predictions. Informational theories suggest that positive mood should produce greater confidence and assertiveness, and thus the rejection of unfair offers. In contrast, processing theories such as the assimilative/accommodative model predict that *responders* in negative mood should also pay greater attention to *external* norms of fairness and thus reject unfair offers more (Andrade & Ariely, 2009; Harle & Sanfey, 2007). If positive mood *responders* reject unfair offers more, this supports informational theories. If unfair offers are more likely to be rejected by those in a negative mood, this would support processing explanations (Bless & Fiedler, 2006). These predictions will be evaluated in Experiment 5.

In summary, we hypothesized that (1) positive mood should increase, and negative mood decrease selfishness by allocators in both the dictator, and in the ultimatum games, and (2) receivers in the ultimatum game should show greater concern with fairness, and consequently should reject unfair offers more when they are in a negative rather than in a positive mood. This second prediction is consistent with processing theories such as the assimilation/accommodation model, but could not be explained by informational theories of mood effects.

Can negative mood improve fairness?

The first study (Tan & Forgas, 2010, Exp. 1) explored mood effects on moral decisions by allocators in the dictator game, where they have unfettered freedom to impose their will - in other words, the dictator game represents an almost 'pure' measure of selfishness. The status of the receiver (ingroup vs. outgroup member) was also manipulated here. The experiment comprised of a 2 x 2 between-subjects design, with mood (happy, sad) and relationship (in-group, out-group other) as the independent variables. It was expected positive mood should increase and negative mood reduce selfishness overall, and these mood effects should be smaller when the decision concerns a partner who is an in-group member, where the norms of fairness may constrain mood effects (Forgas & Fiedler, 1996).

As part of the mood induction, student volunteers (N=45) first received manipulated positive and negative feedback about their performance on a bogus test of cognitive abilities. Next, they played the dictator game on a computer link-up and made allocations either to an in-group member or an outgroup member. The game was introduced as requiring the allocator to distribute ten raffle tickets between themselves and another person, with a \$20 voucher as the ultimate prize, so that every raffle ticket gained would increase one's chances of winning the prize. All participants were told that they have been 'randomly' assigned to be

allocators. In the in-group condition, they were also told that they will be allocating tickets to a fellow student in their own faculty (the in-group manipulation), or a student in another faculty (outgroup).

An ANOVA of self-rated mood confirmed that the mood induction was effective: those in the negative mood condition felt significantly worse than those in the positive condition. Next, a 2 (mood) x 2 (in-group / out-group partner) ANOVA showed a significant mood main effect on allocations, $F(1,44) = 5.02$; $p < 0.05$, but no other effects, $p > .05$, (Figure 1). Happy players kept more raffle tickets to themselves than did sad students ($M=5.61$ vs. 4.68). There was also a non-significant trend for greater selfishness towards a stranger in positive mood ($M=5.17$ vs. 6.09) than in negative mood ($M=4.69$ vs. 4.67) (Figure 1). The results of this first experiment confirm that affect had a significant influence on ethical decisions involving fairness vs. selfishness, such that negative mood promoted greater fairness. The next experiment was designed to confirm and extend these findings.

How robust is the mood effect on selfishness versus fairness?

In this study (Tan & Forgas, 2010, Exp. 2) a different mood induction (affect-inducing films) was used, and rather than using a single allocation task, a series of 8 allocations were used to different partners, with the names and photos of partners also displayed for each task to increase the realism of the task. Participants ($N=72$) first evaluated 'films for use in a later study' (in fact, the mood induction), before participating in an 'unrelated' second task, a computer-mediated interaction involving the allocation of 10 points to gain movie passes between themselves and a partner in a dictator game in each of 8 encounters. The mood induction films contained excerpts from a popular British comedy series ('Fawlty Towers'), and excerpts from a sad movie dealing with family misfortune (Angela's Ashes) (Forgas, 2002, 2007).

The mood induction was again successful, as self-ratings showed that those in the happy condition were significantly happier than those in the sad condition, $F(1,70) = 274.21$; $p = .01$ ($M = 1.89$; $SD = 1.04$ vs. -1.33 ; $SD = 0.49$). Next, an ANOVA of allocation decisions again revealed a significant mood main effect. Overall, happy individuals were again more selfish and kept more points to themselves ($M = 6.68$ out of 10; $SD = 1.47$) than did sad individuals ($M = 5.82$; $SD = 1.63$; $F(1,70) = 5.45$; $p < 0.05$), supporting the main hypothesis. A further 2 by 8 mixed ANOVA showed a significant interaction between mood and the eight trials, $F(7,64) = 3.31$; $p < 0.01$, as well as a significant trial by mood linear trend, $F(1,70) = 8.17$; $p < 0.01$. As the trials progressed, happy individuals actually became *more* selfish, and sad individuals became more *fair* (Figure 2).

Thus, this study again confirmed that mood had a significant influence on selfishness and fairness, and these effects were repeated across 8 trials, using a different mood induction procedure, and a more realistic decision context. As in experiment 1, positive affect increased selfishness, and negative mood reduced selfishness, consistent with both the informational and processing theories of mood effects on cognition.

The influence of fairness norms.

In both experiments 1 and 2, positive mood reduced, and negative mood increased fairness. It is noteworthy that even when having complete power in a dictator game, there is nevertheless a marked tendency towards some degree of fairness. What would happen if we explicitly manipulate the fairness norm? In Experiment 3 (Tan & Forgas, Exp. 3), the fairness norms was explicitly manipulated, by giving allocators selective information about the alleged fair or unfair behaviours of *previous* players, so as to reinforce or undermine the social norm of fairness. It was expected that mood effects on ethical decisions should be strongest when the prior behaviour by others undermines the external social norm of fairness.

The procedure was similar to Experiments 1 and 2. Participants (N=64) first viewed affect inducing films, before playing the dictator game with a randomly assigned partner. The mood induction videos included excerpts from “Monty Python: Life of Brian” (positive mood), and scenes from the movie “My Life” (negative mood). Before the game, participants were also exposed to information about *fair* or *unfair* offers of “past proposers” to emphasize or de-emphasize the fairness norm. The experiment employed a 2 x 2 between subject design with mood (positive and negative) and prior allocations (fair vs. unfair) as the independent variables, and selfishness (the number of points kept) as the dependent variable.

The mood induction was again successful: happy participants rated their mood as significantly better than did the negative group ($M = 1.91$, $SD = 1.08$ vs. $M = -1.24$, $SD = 0.86$). Allocations were next analysed using a 2 x 2 ANOVA. There was a significant interaction between mood and fairness norm, $F(1,60) = 4.35$; $p < .037$ (Figure 3). When prior allocators were unfair, there was a significant difference between happy and sad people $F(1,33) = 3.79$; $p < .05$: happy allocators were significantly more selfish ($M = 7.56$; $SD = 2.47$) than the sad group ($M = 5.59$; $SD = 3.44$). In contrast, when fairness by prior allocators was emphasized there was *no difference* in allocations between happy and sad participants, $F(1,27) = 1.18$; $p < .287$ ($M = 6.56$; $SD = 1.78$; $M = 7.38$; $SD = 2.29$).

These results show that prior emphasis on the ethical fairness norms indeed reduced mood effects on allocations. In contrast, when selfish behaviour by prior allocators was emphasized, undermining the fairness norm, there was less external pressure and greater latitude for mood-induced differences to emerge. This pattern suggests that mood effects on selfishness are greatest when fairness norms are weak, allowing greater scope for mood-induced differences in processing style to influence outcomes.

These three experiments looked at mood effects on ethical decisions in the dictator

game, characterized by unrestricted freedom by the allocators to do as they wish. What happens when this 'dictatorial' choice is constrained, because an allocation can be rejected by the other party, in which case, neither side receives anything? By its very nature, the ultimatum game forces allocators to give more careful consideration to the expectations of the recipient, who can veto any proposition. The next two experiments explored affective influences on ethical decisions by allocators, and recipients in the ultimatum game.

Mood effects on fairness in the ultimatum game.

This study (Forgas & Tan, 2013, Exp. 1) sought to replicate the kind of mood effects on fairness demonstrated in Experiments 1-3 in the more complex decisional environment of the ultimatum game, where proposers must also consider the willingness of responders to accept or reject their offers. The second main aim of this experiment was to collect direct evidence about the processing strategies involved in producing these effects, by directly measuring the time taken to reach their decisions by happy and sad participants. It was expected that the more accommodative and externally oriented processing recruited in negative mood should result in increased processing latencies compared to assimilative processing and reliance on internal information in a positive mood.

On arrival, participants were informed that they will be participating in two unrelated experiments, a film evaluation task (in fact, the mood induction) and an interaction task (the ultimatum game). Both tasks were presented consecutively on a computer using the DirectRT program. First, positive and negative moods were induced by watching a short film. Participants viewed brief 10 minute positive (excerpts from the 'Fawlty Towers' comedy series) or negative (excerpts from 'Angela's Ashes') edited video clips, and were instructed to view the films as if they were watching TV at home.

Next, all participants (N=81) were 'randomly' assigned to be *proposers*, and played the ultimatum game dividing 10 points between themselves and a responder, each worth one

ticket in a draw to win free movie passes. Thus, mood (positive and negative) was the independent variable, and *fairness level* (number of points kept) and *response latencies* (in seconds) were the dependent variables. To make the task more realistic, bogus photos of responders were displayed and participants believed that their own photo taken at the start of the session was visible to responders.

An ANOVA confirmed that the mood induction was successful, $F(1,79) = 146.61$; $p = 0.001$, showing that participants in the positive condition were in a significantly better mood than those in the negative condition ($M = 1.62$ vs. -1.12). An analysis of the fairness of allocations also showed a significant mood main effect, $F(1,79) = 4.58$; $p < 0.05$. As hypothesized, those in a negative mood were more fair and allocated significantly more points ($M = 5.90$; $SD = 0.94$) to others than did happy individuals did ($M = 5.33$; $SD = 1.44$). An ANOVA of response latencies also revealed a significant mood effect, $F(1,79) = 9.19$; $p = 0.003$. As expected, sad individuals took longer to make allocation decisions ($M = 10.40$ secs) than did happy individuals ($M = 9.62$ secs), consistent with their predicted more accommodative and attentive processing style.

This experiment is the first to demonstrate that mood-induced differences in selfishness and fairness can be directly linked to different processing strategies and processing latencies. Those in a negative mood were significantly more fair and also performed the allocation task more slowly than did participants in a positive mood (Bless & Fiedler, 2006; Forgas, 2002; Schwarz, 1990). Only processing theories such as the assimilative / accommodative processing theory imply differences in processing style and processing latency, as found here. By focusing attention externally, negative mood increased processing latencies, and resulted in more fair and equitable decisions. The next experiment will look at mood effects on the behavior of *responders* rather than proposers in the ultimatum game.

Mood effects on willingness to accept unfair decisions in the ultimatum game

This study was designed to show that mood can also influence the degree of fairness recipients are willing to *accept* in the ultimatum game (Forgas & Tan, 2013, Exp. 2). If negative mood indeed promotes more accommodative and norm-aware processing, responders in a negative mood should be more concerned with fairness norms, and thus be more likely to reject unfair offers. In contrast, according to *informational models*, positive affect should increase confidence and assertiveness and the tendency to reject unfair offers. Thus, analyzing mood effects on the behaviour of respondents will allow a direct evaluation of the differential predictions of informational and processing theories of mood effects.

The same procedure was employed as in Experiment 4, but this time all participants (N=90) were ‘randomly’ allocated to be *responders* rather than allocators. The same mood induction procedure was employed. Each participant received four offers of different levels of fairness (2, 3 or 4 out of 10 points) in four consecutive allocation trials by 2 male and 2 female proposers in a random order, and indicated their decision to accept or reject each offer. The experiment employed a 2 x 4 mixed design, with *mood* (positive, negative) and *fairness offer type* (2, 3, 4 points) as the independent variables, and *acceptance rate* as the dependent variable.

The mood induction was again highly effective, as those in the positive mood condition rated their mood as significantly better than did those in the negative mood condition, $F(1,88) = 176.31; p = 0.001$ ($M = 4.88$ vs. 2.69). An ANOVA of responders acceptance or rejection of allocations found a significant mood main effect on acceptance, $F(1,88) = 4.55; p < .05$. Overall, 57% of those in negative mood rejected unfair offers compared to only 45% in the positive condition (see Figure 4). This mood effect was most marked in reactions to the less fair, 2 and 3 point offers, but disappeared for the most fair 4 point offers, accepted by 98% of respondents.

Acceptance for unfair offers of 2 points was low, but acceptance gradually increased as offers become more fair (26%, 48% and 98% for the 2, 3 and 4-point offers respectively). No significant mood by offer size interaction effect was found, $F(3,88) = 1.41, p > .20$. This result confirms that rejections were consistently higher in negative than in positive mood, a finding that clearly supports processing theories that predict that negative mood should increase and positive mood reduce attention to external fairness norms. This pattern is not readily explained by informational models that imply greater confidence and assertiveness, and higher rejection rates by those in a positive mood.

General Discussion

Deciding between selfishness and fairness, how much to keep and how much to give to others is one of the more common ethical dilemmas we encounter in everyday life. These experiments are the first to show that mild positive and negative moods can have a significant and consistent influence on such moral decisions. The dictator game and the ultimatum game offer particularly suitable methods for exploring such effects, as they represent well defined and realistic decision contexts. All five experiments consistently showed that fairness was greater when people experienced *negative* rather than *positive* moods.

Positive affect in contrast increased selfishness and reduced fairness both in the dictator game (Experiments 1 - 3), and in the ultimatum game (Experiments 4 and 5). We also found that decisions in negative mood took longer to perform than in a positive mood, providing direct evidence that mood-induced differences in processing style may be responsible for these effects (Experiment 2). The final experiment, Experiment 5, provides selective support for processing rather than informational theories of mood effects on moral decisions. These results have some interesting theoretical and practical implications for understanding mood effects on how people resolve ethical dilemmas.

Theoretical implications

The dictator game used in experiments 1, 2 and 3 represents a simple, almost pure framework to behave selfishly. Interestingly even when allocators face no constraint on how selfish they want to be, they still display some degree of fairness, and allocate some resources to their partners. Across all conditions examined, negative mood significantly increased, and negative mood reduced fairness, consistent with those in a negative mood paying more attention to external norms mandating fairness. These results are consistent with theories predicting mood-induced differences in processing strategies (Bless & Fiedler, 2006). Those in a negative mood, thinking more accommodatively, paid more attention to the external ethical norm of fairness, while those in a good mood, thinking more assimilatively were more willing to follow their internal selfish dispositions.

Focusing more on external information when in a negative mood is also in line with recent findings showing that negative mood improves eyewitness memory, reduces stereotyping, increases politeness, and reduces judgmental errors (Forgas, 1998, 1999; Forgas et al., 2009; Unkelbach et al., 2009). These findings converge towards indicating that affect has an important signalling function when performing complex decisions (Clore & Storbeck, 2006; Forgas et al., 2007; Schwarz, 1990), with negative affect calling for more externally focused, accommodative thinking, and positive affect promoting a more assimilative, internally focused strategy (Bless, 2001; Bless & Fiedler, 2006; Fiedler, 2001). Greater concern with fairness when in a negative mood in all five experiments here is consistent with this prediction.

An analysis of mood effects on the behaviour of recipients (Experiment 5) showed

that their concern with fairness was also greater in negative than in positive mood, supporting processing theories. This pattern is also consistent with other research showing that happy persons are generally more likely to follow their internal inclinations (in this case, selfishness) (De Vries, Holland & Witteman, 2008; Unkelbach et al., 2008), consistent with affect having an important adaptive signalling function directing attention to internal versus external information (Clore & Storbeck, 2006; Schwarz, 1990). Processing accounts are also supported by recent findings showing that negative mood improves attention to the external world (Foerster, 2010; Forgas, 1998, 1999; Forgas et al., 2009; Unkelbach et al., 2008; Walther & Grigoriadis, 2004).

We should note that the encounters we studied did not involve real face-to-face communication, although the partners' photos were displayed, and participants did believe that they are interacting with a real person. As similar effects have now been obtained in a wide range of laboratory as well as real-life situations, we believe that face-to-face communication should show similar mood effects.

Practical implications

Many scenarios in our private as well as working lives involve some conflict between acting selfishly and acting fairly. Social cognitive process, such as the ones examined here, can play an important role in such ethical conflicts. Despite some evidence for mood effects on social decisions (Forgas & Eich, 2012), the effects of moods on selfishness in ethical conflicts have received little empirical attention in the past. The kind of mood effects on selfishness demonstrated here may have important implications for real-life behaviours in romantic relationships, organizational decisions, and many other everyday situations where decisions by one person have incontestable consequences for others.

Interestingly, our results further challenge the common assumption in much of

applied, organisational, clinical and health psychology that positive affect has universally desirable social and interpersonal consequences. Together with other recent experimental studies, our findings confirm that negative affect often produces adaptive and more socially sensitive and ethical outcomes. For example, negative moods can improve the detection of deception (Forgas & East, 2008), improve impression formation (Forgas, 1998), benefit eyewitness accuracy (Forgas, Vargas & Laham, 2005), and result in more effective interpersonal communication strategies (Forgas, 2007). The present experiments confirm this pattern by demonstrating that mild negative moods also increase fairness and sensitivity to the needs of others.

Limitations and future prospects

We focused on selfishness vs. fairness here, one of the most important and ubiquitous ethical conflicts people face in interpersonal situations. Other kinds of interpersonal decisions may well recruit different processing approaches, and may produce different results, as also found in the voluminous literature on altruism and helping (Batson, 1991; Carlson & Miller, 1987; Dovidio et al., 2006). Having the power to impose one's preferences (as in the dictator game), or making the first move to propose a sharing of resources (as in the ultimatum game) represents a complex, yet highly controlled setting with considerable face validity in which to investigate mood effects on interpersonal strategies

Behavior in economic games can also be influenced by framing and context effects, such as playing with a real versus a hypothetical person (Fantino et al., 2007), whether partners are able or not to propose a counter-offer (Stephen & Pham (2007), and the personal relevance of the task (Forgas and Fiedler, 1996). Investigating such issues deserves further attention. Even though the decisions studied here did not involve face-to-face contact, affect is likely to have similar consequences on ethical decisions in a face-to-face situation (Joinson,

2001; Joinson et al., 2007; Wallace, 1999).

As we have seen, mood effects on selfishness are highly dependent on the processing strategies adopted by allocators (Fiedler, 2001; Forgas, 1995, 2002; Sedikides, 1995), which in turn are often influenced by a variety of contextual and situational factors. For example, when normative information was provided about the fair behavior of others, reinforcing the norm of fairness, the size of mood effects decreased (Experiment 3), suggesting that external, normative pressures can reduce open and constructive processing and impair mood effects as also found in other research (Forgas & Eich, 2012).

As the results were conceptually consistent across the five experiments, and are also in line with findings obtained in conceptually similar studies (Andrade & Ariely, 2009; Harle & Sanfey, 2007; Tan & Forgas, 2010), we can be reasonably confident that they are reliable. However, further research may also look at the consequences of more intense and specific emotions on moral decisions such as anger, disgust, pride or embarrassment (Bondini et al., 2011; Lerner & Keltner, 2001; Srivastava et al., 2009).

Conclusions

In conclusion, interpersonal decisions involving a moral conflict between selfishness and fairness represent a common everyday task that seem open to affective influences. There is an urgent need to investigate how affective states impact of the way people deal with everyday moral conflicts. These experiments extend research on affect and social cognition (Bower, 1981; Fiedler, 2001; Fiedler & Bless, 2001; Forgas, 1995; 2002) to the new domain of moral conflicts and show that negative mood can increase, and positive mood reduce attention to external fairness norms in such encounters. Our results are broadly consistent with recent affect cognition theorizing in experimental social psychology (Bless & Fiedler, 2006), and extend this work to the area of solving ethical dilemmas. We hope that these

studies will stimulate further empirical interest in this interesting and relevant field.

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Figure Captions

Figure 1. The effects of mood (good, bad) and relationship (in-group member vs. stranger) on the selfishness of allocations in a dictator game.

Figure 2. The effects of mood on selfishness vs. fairness: happy persons kept more rewards to themselves, and this effect is more pronounced in later trials.

Figure 3. The effects of mood and emphasizing or de-emphasizing the norm of fairness on allocations in the dictator game: Mood effects are stronger when the fairness norm is de-emphasized (prior allocators are unfair) rather than emphasized (prior allocators are fair).

Figure 4. The effects of mood (good, bad) and offer fairness on the acceptance of offers by responders in the ultimatum game.

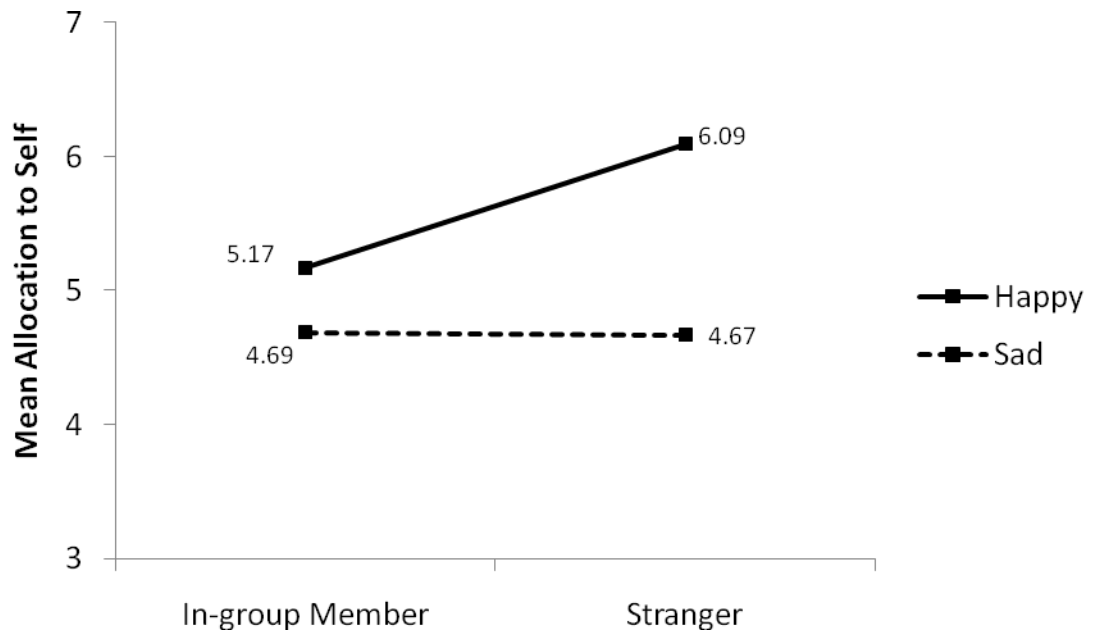


Figure 1.

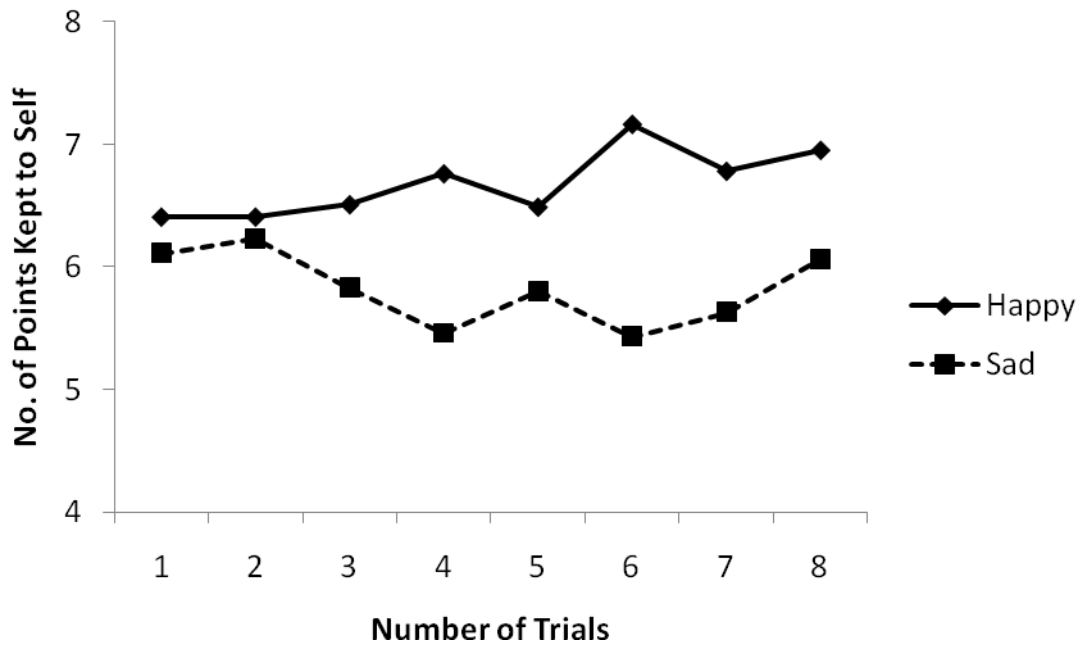


Figure 2.

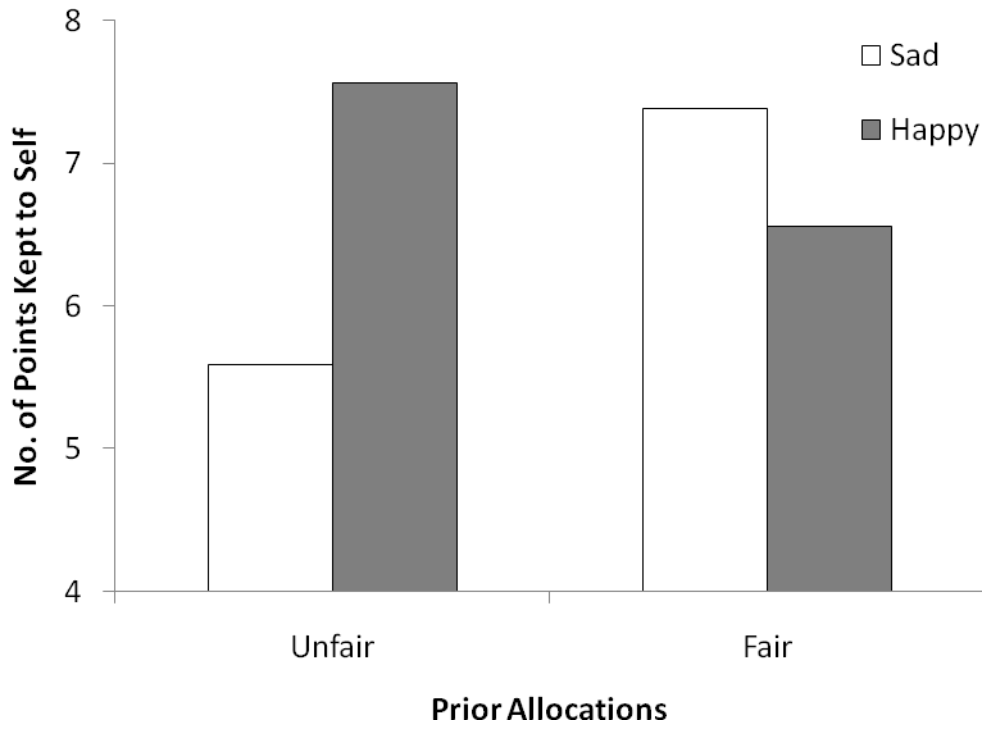


Figure 3.

