Effect of conflict and emotions on perceptions of social loafing in groups

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Abstract: We investigate the impact different types of conflict have on social loafing perceptions within groups/teams. In a sample of 164 respondents, the perception of social loafing was found to be directly and positively influenced by contribution conflict and negative emotions, while task conflict, logistical conflict, and relationship conflict did not have direct positive effects on perceived social loafing. However, task conflict was found to have a marginally significant direct suppressing effect upon perceived social loafing once the influences from logistic conflict, contribution conflict, relationship conflict and negative emotions were controlled for. Implications of the findings are discussed.

Keywords: social loafing; conflict; emotions; groups; teams.


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1 Introduction

The knowledge of how perceived social loafing unfolds itself in groups is especially useful for group members to anticipate and manage tensions associated with social loafing. Some preventative measures may help the group to maintain a positive emotional environment, revitalise the group energy, promote cohesiveness, and enhance group performance, once the knowledge of the timing of perceived social loafing is clear. Thus, it is important to explain group members’ perceptions of social loafing within groups/teams. Researchers have looked at the changes in perceived social loafing at different stages of group development (Singh et al., in press). Another approach to investigate the perception of social loafing in the group is by seeking answers to the question of how perceived social loafing is resulted. Two sets of the variables – group conflicts and emotions – are identified that correspond to the two dimensions of the group dynamics, respectively: substantive vs. socio-emotional (Bales, 1953; Bennis and Shepard, 1956; Tuckman, 1965). Since any dysfunction of the group arises from the problems along those two dimensions, it is believed that the perception of social loafing should also result from the problematic interactions within each of those two dimensions. Therefore, group conflicts and emotions should be where our explanation of perceived social loafing starts.

Perception of social loafing is entangled with conflict and emotion in groups. For instance, disagreement over the workload distribution and disruption in group’s relational harmony are related to perceived social loafing (Behfar et al., 2011; Kerr, 1983; Mulvey and Klein, 1998). Furthermore, negative emotions, such as frustration, anxiety, and anger, not only suggest the effects of conflict on the overall group climate, but also reflect individual member’s appraisal of the problematic interaction within the group. Such appraisal will further indicate one’s behavioural tendencies, such as fight or flight, either of which may potentially cause one to commit social loafing. Because both conflict and emotion have distinctive patterns across the stages of group development (Baxter, 1982; Bales, 1950; Bennis and Shepard, 1956; Bion, 1961; Ellis and Fisher, 1975; Jehn and Mannix, 2001; Pondy, 1967; Rummel, 1976; Steven-Long and Trujillo, 1995; Tuckman, 1965; Tuckman and Jensen, 1977), it would be interesting to know how conflict and
emotion co-evolve with the perception of social loafing across the process of group development. Such knowledge will not only help us see the patterns of association between conflict and perceived social loafing in conjunction with emotions in each stage of group development, but also assists group practitioners and participants in locating problems in the group interaction and hence developing strategies to better group performance.

Not only does this study explore the trend patterns of perceived social loafing, conflicts, and emotions in groups, it also extends this knowledge by seeking explanations. That is, we want to know further the mechanism in which conflicts and negative emotions influence the perception of social loafing in the group setting. By dividing conflict into four subsets (i.e., task conflict, relational conflict, logistic conflict, and contribution conflict), the current research seeks to test a concise model that depicts how different types of conflict, together with negative emotions, trigger group members’ perception of social loafing.

2 Conflict, emotion, and perceived social loafing

The former review on conflict and emotion has laid a foundation for understanding how conflict and emotions are related to the perception of social loafing. Their possible relationships are proposed as follows. In the first place, perceived social loafing is directly incited by contribution conflict, because the perceptions of unequal share of workload and unfair reward distribution are where social loafing starts to be perceived. Negative emotions pervade as a result of the contribution conflict, based upon VanYperen et al.’s (2000) finding that unjust reward outcomes (i.e., distributive injustice) lead to negative affect in workplace. The negative affect aroused by the contribution conflict may further incline the group members toward the judgment that social loafing is occurring in the group, because negative emotions facilitate both the speed with which the arousing information is processed (Öhman et al., 2001) and the likelihood that it will be processed (Phelps et al., 2006; Vuilleumier and Schwartz, 2001). When group members are under the influence of the negative emotions aroused by the contribution conflict, they are highly likely to attend to such relevant cues as concerning free-riding, interaction withdrawal, and effort reduction in their following conflict interaction within the group.

In addition, perceived social loafing would also stem directly or indirectly from relationship conflict. Their direct association can be derived by arguing that withdrawing from conflict and making reduced contribution to the group (i.e., the two basic elements that define social loafing) can be intuitively adopted by at least one party when relationship conflict arises in a group setting, as compared to the other conflict management tactics. That is, collaboration or compromising involves rounds of discussion and negotiation, which cost time and energy. The accommodation strategy in handling relationship conflict may not only cause the accommodating party to lose face and say, but also incur humiliation. The use of competition strategy, however, is prone to drive the confrontation to escalate, especially in face of the other party who adopts the same strategy. Even though withdrawal and effort reduction are by no means pro-social considering their negative influences on group productivity and morale (Deutsch, 1973; Folger et al., 2001), they are strategic in that:
they save the less powerful individual from being a target of continued attack or denigration

2 the person who withdraws can retaliate the other party (often the one with comparatively more power in the conflict) by adding relatively more workload to that party or the others concerned (which is quite typical of retributive loafing)

3 the loafer asserts his or her importance to group’s task completion once the loafing causes delay or undermines group performance (which is quite typical of self-enhancing loafing) (cf. Comer, 1995).

Baxter (1982) also argued similarly that avoidance is a prevalent means of coping with conflicts in group settings, considering the total efforts when other conflict management styles are adopted. Group members are quite alert and sensitive to others’ avoiding and effort reducing tendencies, because they do not want to be exploited unfairly by the potential loafers in the relationship conflict. At the same time, relationship conflict can also influence the perception of social loafing through the mediation of negative affect. It has been found that stress, anxiety, and resentment aroused from the troubled relationship may trigger fleeing tendencies in group members, especially in members who are in an inferior position in the conflict (Jehn, 1997; Peterson, 1983; Ross, 1989; Walton and Dutton, 1969). Meanwhile, through group’s emotional contagion mechanisms (Barsade, 2000; Barsade and Gibson, 1998), those who are in the dominant position in the conflict are also under the influence of negative emotions (e.g., anger and outrage), which prompted them to attend to those cues signalling effort reduction and judge them as the evidence of social loafing in the group. It is also interesting to note that sometimes those negative emotions may even bias some members toward attributing social loafing to their peers with whom they have troubled relationships, even though their peers may not actually loaf at all, a case corresponding to the negativity bias (see Carreti et al., 2001; Vaish and Grossmann, 2008, for detail).

Based upon the above breakdown on the relationship among perceived social loafing, contribution conflict, relationship conflict, and the negative emotions, it is seen that both contributions conflict and relationship conflict can directly cause perceived social loafing in the group. In addition, contribution conflict and relationship conflict assert their influence on the perception of social loafing through the mediation of negative emotions. However, it should be noted that in group settings, contribution conflict and relationship conflict are entangled in such a way that mutual causation is possible. On the one hand, the sense of unfairness and injustice aroused by the contribution conflict may lead one party into believing that they are being exploited by the other party, thus bringing tensions and relational discordance to the group. On the other hand, the tensions caused by the troubled relationship in the group may lead some members into reducing their involvement with group activities by being late, absent, or postponing, thus generating contribution conflict in the group. Considering their reciprocal causal relationship, it is at least safe to say that contribution conflict and relationship conflict are correlated in a group situation. Therefore, the following hypotheses are proposed to describe the association between contribution conflict, relationship conflict, perceived social loafing and negative emotions:

H1a The higher the level of contribution conflict, the higher the level of perceived social loafing in the group.
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H1b The higher the level of contribution conflict, the higher the level of negative emotions in the group.

H2a The higher the level of relationship conflict, the higher the level of perceived social loafing in the group.

H2b The higher the level of relationship conflict, the higher the level of negative emotions in the group.

H3 The higher the level of negative emotions, the higher the level of perceived social loafing in the group.

H4 Contribution conflict and relationship conflict tend to covary, such that the higher the level of contribution conflict, the higher the level of relationship conflict in the group.

The association of task and logistic conflicts with perceived social loafing may be contingent upon the level of negative emotions in the group. Research has shown that groups discuss, argue, and debate about goal issues or task delegations when confronting moderate levels of task or logistic conflict (Jehn, 1995). Those conflict interactions indicate group members’ motivation to reorganise the group’s human resource structure by assigning the right job to the right person. They may also serve to minimise the occurrence of social loafing because group members believe that their involvement in resolving task or logistic conflict is intrinsically meaningful and important to achieving their personal as well as the group’s goals (see Karau and Williams, 1993, for details of reducing social loafing in groups). Furthermore, although a moderate level of task and logistic conflicts may coincide with animated discussions and personal excitement, they are, by definition, void of intense interpersonal emotions (Jehn and Mannix, 2001). As has been suggested above, when negative emotions are low in the group, the chance for social loafing to be perceived is also low. Therefore, moderate levels of task and logistic conflicts may be associated with low levels of perceived social loafing in the group. However, if negative emotions become intense in either of those two conflict situations (indicating the escalation of the intensity and severity of the conflict), group members tend to perceive those conflicts more as relationship conflicts, thus making biased judgment regarding the efforts contributed by their co-workers. This would suggest the possibility of high levels of social loafing being perceived in the group. Since the relationship between perceived social loafing and task or logistic conflict is contingent upon the intensity of negative emotions, it can be proposed that negative emotions may moderate the association of task and logistic conflict with perceived social loafing. Therefore, the above analysis generates the following four hypotheses:

H5a When the level of negative emotions is low (i.e., not or very little felt), task conflict and perceived social loafing are negatively correlated in the group.

H5b When the level of negative emotions is high (i.e., very much or extremely felt), task conflict and perceived social loafing is positively correlated in the group.

H6a When the level of negative emotions is low (i.e., not or very little felt), logistic conflict and perceived social loafing is positively correlated in the group.

H6b When the level of negative emotions is high (i.e., very much or extremely felt), logistic conflict and perceived social loafing is negatively correlated in the group.
3 Methods

We collected data from 200 students at a Midwestern university. The respondents were students in a small group communication course taught by multiple instructors in nine different sections. The instructors used very similar grading scales; 40% of the grade was based on group performance. Groups were formed in consultation with the instructors, group membership was not allowed to change throughout the semester. After a pool of the participants was created, the total number of people was divided by 12, corresponding to the 12 weeks in which they were about to work in groups. Data were collected by randomly choosing 14–15 students from the pool of participants each week. The final usable sample was 164 respondents, out of which 65.2% were female, 69.5 were white, and 89.0% were between 19 and 23 years of age.

3.1 Measures

3.1.1 Conflict types

Behfar et al. (2011) four-scale categorisation of conflict was used as the instrument to measure the four conflict types: relationship conflict, task conflict, logistical conflict, and contribution conflict. The scale had 13 questions that asked subjects to report the extent to which they had experienced each of the four conflict types in their group. All questions were answered on five-point Likert scales (1 = not at all, 5 = a great deal/extremely).

Relationship conflict is defined as interpersonal animosity and tension among group member (Behfar et al., 2011; De Dreu and Weingart, 2003; Guetzkow and Gyr, 1954; Jehn, 1995, 1997; Pearson et al., 2002; Priem and Price, 1991). In Behfar et al.’s (2011) instrument, relationship conflict was measured on such questions as ‘How much friction is there among members of your team?’ and ‘How much are personality conflicts evident in your team?’ The internal consistency of this scale was tested on a sample of 264 people, and the corresponding Cronbach’s alpha was .91.

Task conflict is defined as disagreements and debates over the content of the work and goals to be achieved (Behfar et al., 2011; De Dreu and Weingart, 2003; Guetzkow and Gyr, 1954; Jehn, 1995, 1997; Priem and Price, 1991). In Behfar et al.’s (2011) four-scale instrument, task conflict was measured on such questions as ‘How often do your team members argue about different viewpoints regarding your group task?’ and ‘How frequently do your members of the team engage in debate about different opinions or ideas?’ The Cronbach’s alpha of this scale was .83 on the basis of a sample of 264.

Logistical conflict is the disagreement about how to best coordinate the resource of group work, including issues of timing and workload distribution (Blount and Janicik, 2000; Blount et al., 2004; Hackman, 1990; Janicik and Bartel, 2003; Kabanoff, 1985). In Behfar et al.’s (2011) four-scale instrument, logistical conflict was measured on such questions as ‘How frequently do your team members disagree about the optimal amount of time to spend on different parts of teamwork?’ and ‘How often do members of your team disagree about who should do what?’ The internal consistency of this scale was tested on a sample of 264 people. The corresponding Cronbach’s alpha was .84.

Contribution conflict is defined as conflict about member contributions that disrupt group process, such as lack of preparation or free-riding (Benne and Sheats, 1948; Hackman and Morris, 1975; McGrath, 1964). In Behfar et al.’s (2011) four-scale instrument, contribution conflict was measured on such questions as ‘How often is there
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tension in your team caused by members not performing as well as expected?’ and ‘To what extent is there tension in your team caused by members not completing their assignments on time?’ The Cronbach’s alpha that reflected the internal consistency of this scale was reported at .92 on the basis of a sample of 264.

Behfar et al. (2011) also continued testing the reliability and validity of the instrument by employing three more samples from the business schools in the USA and the UK. The Cronbach’s alphas for the scale of relationship conflict ranged from .76 to .96. For task conflict the Cronbach’s alphas ranged from .92 to .96. For logistical conflict, the Cronbach’s alphas were from .89 to .92. For contribution conflict, the Cronbach’s alphas were from .87 to .92. Confirmatory factor analysis conducted by Behfar and her colleagues also revealed that the four-factor model had a better fit than the more traditional three-factor model (i.e., task, relationship, and process conflict) and the basic one-factor model. Discriminant validity analysis showed that task conflict was not significantly correlated with logistical conflict, and marginally correlated with contribution conflict ($r = .13, p < .05$ in the first sample, and $r = .29, p < .05$ in the second sample). However, relationship conflict was significantly correlated with both types of process conflict (logistical $r = .49, p < .05$, contribution $r = .47, p < .05$ in the first sample, and logistical $r = .54, p < .05$, contribution $r = .46, p < .05$ in the second sample). Behfar et al. (2011) explained that such high correlations might be due to the inclusion of ‘tension’ and ‘friction’ in the coding scheme of both process conflicts, suggesting an emotional tone and the source of relationship conflict.

With respect to the predictive validity of the four-factor scale of conflict types, Behfar et al. (2011) conducted multivariate regression analysis and found that logistical conflict was only negatively associated with group performance ($\beta = -3.6, p < .01$) and team coordination ($\beta = -3.4, p < .01$). Contribution conflict was negatively associated with group satisfaction ($\beta = -3.0, p < .01$). Task conflict was positively associated with task commitment ($\beta = .25, p < .01$). Relationship conflict had significant negative association with task commitment ($\beta = -3.5, p < .01$), team coordination ($\beta = -4.7, p < .01$), and team satisfaction ($\beta = -.54, p < .01$).

In the current study, a test of the internal consistency of each of the four conflict scales was also conducted. The Cronbach’s alpha coefficient for relationship conflict was .853. For task conflict, it was .723. For logistical conflict, it was .747. For contribution conflict, it was .819.

The current data also provided additional evidence in support of the convergent validity, construct validity, and discriminant validity of Behfar et al.’s (2011) four-scale instrument. Factor analysis on the current data with the method of maximum likelihood extraction and oblique rotation has produced a factor pattern matrix where four factors emerge. Factor 1 (contribution conflict) contains three items with loadings ranging from .507 to .791. Factor 2 (task conflict) contains three items with loadings ranging from .589 to .693. Factor 3 (relationship conflict) contains three items with loadings ranging from .564 to .848. Factor 4 (logistical conflict) contains four items with loadings ranging from .520 to .764. As can be seen, items measuring a particular construct of conflict type tend to have high loadings on the factor that represents that particular conflict type (convergent and construct validity). In addition, items that do not purport to measure a particular construct of conflict type tend to have very small or negligible loadings on the factor that represent the specific conflict type (discriminant validity). This pattern of factor loadings roughly corresponds to the results in Behfar et al. (2011), with only one
exception in item 52 (i.e., How much are personality conflicts evident in your team?). Item 52 was originally developed to describe relationship conflict. In the current study, it loads more strongly on logistical conflict than on relationship conflict. This suggests that more work is needed to refine the current instrument measuring the four types of group conflict.

Furthermore, the following facts provide additional evidence in support of the discriminant validity of the current four-type conflict scale. The correlations of task conflict with the other three conflicts are relatively smaller (ranging from .224 to .457), compared with all the other correlations (ranging from .462 to .681). This piece of evidence is roughly similar to the results found in Behfar et al. (2011).

### 3.1.2 Perceived social loafing

We used an 11 item scale to measure the perceptions of social. Four items were exactly the same as those in Mulvey and Klein (1998). Seven items were adapted from George (1992) by replacing those specific terms (e.g., salesperson, customer service) in the original instrument with general terms (e.g., group members, substantive contribution). The Cronbach’s alpha for this 11-item scale that measures social loafing is .943.

### 4 Results

The first set of hypotheses addressed the different patterns of the association between perceived social loafing, negative emotions, and conflict types in groups. Two kinds of association were proposed: mediation and moderation. The mediation relationship could be tested with the path analysis technique. To be specific, relationship conflict and contribution conflict were treated as two exogenous variables that covaried with each other while negative emotions and perceived social loafing were treated as two endogenous variables with negative emotions as the mediator. Figure 1 graphically depicts the mediational model. In addition, the model also proposed that the main effects of relationship conflict and contribution conflict on perceived social loafing did not disappear even in the presence of the mediating variable – negative emotions. On the other hand, a moderation effect was proposed to account for the relationships between task conflict and perceived social loafing and also between logistic conflict and perceived social loafing, with negative emotions acting as a moderator in the two proposed relationships. It was proposed that with the presence of negative emotions, task (or logistic) conflict and perceived social loafing would be differentially associated. Multiple regression analysis was employed to test the moderation effect. Figures 2 and 3 graphically depict the moderating roles that negative emotions play in the relationship between task (and logistic) conflict and perceived social loafing.

Table 1 presents the means, standard deviations, and zero-order correlations for all the variables of interest in the current analysis. As it reveals, the means of all those variables did not exceed the number of 3 (i.e., the middle level of group members’ overall awareness of the problematic interactions in the group), suggesting group members’ overall awareness of conflicts, social loafing, and negative emotions in their recent group activities was relatively low. In addition, among the four conflict types, the level of the
awareness of task conflict ($M = 2.48, SD = .72$) was relatively higher than the awareness levels of the other three conflict types (contribution conflict: $M = 1.94, SD = .85$; logistic conflict: $M = 1.84, SD = .64$; relationship conflict: $M = 1.77, SD = .67$), suggesting the attention to tasks and goal accomplishment was a major theme in group life, relative to the attention to relational maintenance, procedural process, and reward distribution. Furthermore, with respect to the zero-order correlations, it is seen that all the four conflict types were significantly interrelated with one another, with the lowest correlation between task conflict and contribution conflict (i.e., $r = .22, p < .01$), and the highest correlation between relationship conflict and contribution conflict (i.e., $r = .681, p < .01$). It is also seen that task conflict had two non-significant correlations, one with perceived social loafing (i.e., $r = .045, p = ns$), and the other with negative emotions (i.e., $r = .117, p = ns$). Such a pattern of non-significant correlations will be analysed in depth when the moderating effect of negative emotions is being explored in the relationship between task conflict and perceived social loafing.

**Figure 1** General theoretical model relating contribution conflict, relationship conflict, negative emotions to perceived social loafing

**Figure 2** General theoretical model relating task conflict to perceived social loafing, moderated by negative emotions (Hypotheses 5a and 5b)
Figure 3  General theoretical model relating logistic conflict to perceived social loafing, moderated by negative emotions (Hypotheses 6a and 6b)

![Diagram](#)

Table 1  Means, standard deviations, and correlations of the variables in the path analysis

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social loafing</td>
<td>2.43</td>
<td>1.02</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Relationship conflict</td>
<td>1.77</td>
<td>.67</td>
<td>.55*</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Task conflict</td>
<td>2.48</td>
<td>.72</td>
<td>.05</td>
<td>.31*</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Logistic conflict</td>
<td>1.84</td>
<td>.64</td>
<td>.31*</td>
<td>.63*</td>
<td>.46*</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Contribution conflict</td>
<td>1.94</td>
<td>.85</td>
<td>.62*</td>
<td>.68*</td>
<td>.22*</td>
<td>.46*</td>
<td>–</td>
</tr>
<tr>
<td>6</td>
<td>NEI</td>
<td>1.84</td>
<td>.49</td>
<td>.58*</td>
<td>.65*</td>
<td>.127</td>
<td>.43*</td>
<td>.46*</td>
</tr>
</tbody>
</table>

Notes: *p < .01; NEI: negative emotion index.

A path analysis using AMOS (v.18) was conducted to examine the effects of relationship conflict and contribution conflict on perceived social loafing, and the possible role (i.e., mediating) negative emotions played in those effects. It was hypothesised that both relationship conflict and contribution conflict had positive correlations with perceived social loafing after controlling for the influence of negative emotions (H1a and H2a). In addition, both relationship conflict and contribution conflict also had positive correlations with negative emotions (H1b and H2b). Next, negative emotions would have positive correlation with perceived social loafing (H3). Finally, relationship conflict and contribution conflict covaried (H4).

Figure 4 lists the standardised parameter estimates of the various effects. Table 2 lists the unstandardised parameter estimates as well as the standard errors for full model. It is seen that negative emotions fully mediated the relationship between relationship conflict and perceived social loafing, thus statistically supporting H2b and H3 (H2b: \( \beta = .63, p < .01; H3: \beta = .37, p < .01 \)), but not H2a (\( \beta = .01, p = .944 \)). In other words, the correlation between relationship conflict and perceived social loafing dropped to zero after accounting for the influence of negative emotions. While H1a was statistically supported (\( \beta = .44, p < .01 \)), H1b was not (\( \beta = .03, p = .724 \)). In other words, negative emotions did not act as a mediator in the relationship between contribution conflict and perceived social loafing, but the main effect of contribution conflict on perceived social loafing was significant. Finally, the hypothesis on the covariation between relationship conflict and contribution conflict (H4) was statically supported, \( r = .68, p < .01 \).
Figure 4  General theoretical model relating contribution conflict, relationship conflict, negative emotions to perceived social loafing: standardised parameter estimates (see online version for colours)

Table 2  Unstandardised path coefficients, standard errors, and t-values for general theoretical model

<table>
<thead>
<tr>
<th>Estimate</th>
<th>SE</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship conflict to negative emotions (H2b)</td>
<td>.464</td>
<td>.060</td>
<td>7.756</td>
</tr>
<tr>
<td>Contribution conflict to negative emotions (H1b)</td>
<td>.017</td>
<td>.047</td>
<td>.354</td>
</tr>
<tr>
<td>Negative emotions to perceived social loafing (H3)</td>
<td>.774</td>
<td>.154</td>
<td>5.027</td>
</tr>
<tr>
<td>Relationship conflict to perceived social loafing (H2a)</td>
<td>.010</td>
<td>.138</td>
<td>.070</td>
</tr>
<tr>
<td>Contribution conflict to perceived social loafing (H1a)</td>
<td>.534</td>
<td>.093</td>
<td>5.773</td>
</tr>
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</table>

Table 3  Fit indices of the full path model and the revised model

<table>
<thead>
<tr>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full model</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>–</td>
<td>1</td>
</tr>
<tr>
<td>Revised model</td>
<td>.13</td>
<td>2</td>
<td>.937</td>
<td>1</td>
<td>.998</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: GFI = goodness of fit index; AGFI = adjusted goodness of fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

To evaluate the overall model fit, several fit indices were used: $\chi^2$ goodness-of-fit statistic, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). A model is considered to have very good fit if the $\chi^2$ statistic is non-significant, the GFI, AGFI, and CFI are greater than .95, and the RMSEA is below .05. According to Browne and Cudeck (1993), RMSEA values less than .08 correspond to an acceptable fit, whereas
a value greater than .10 suggests poor fit. As is seen in Table 3, the RMSEA value for the full model is .549 (greater than .10), indicating poor fit for the full model. Therefore, the full model was revised, with the two non-significant pathways (i.e., the pathway from relationship conflict to perceived social loafing, and the pathway from contribution conflict to negative emotions) removed in a stepwise way. Figure 5 lists the standardised parameter estimates of the revised model after both of the non-significant pathways were removed. Table 4 lists the unstandardised parameter estimates and standard errors of the revised model. As can be seen, all the pathway coefficients are significant at $\alpha = .01$. The magnitude of each significant pathway coefficient is almost the same as that in the full model. Furthermore, relevant statistics in Table 4 also suggest goodness of fit for the revised model: Not only do the GFI, AGFI and CFI values are greater than .95, but the RMSEA value hits zero as well, suggesting better goodness of fit for the revised model.

**Table 4** Unstandardised path coefficients, standard errors, and $t$-values for revised model

<table>
<thead>
<tr>
<th>Estimate</th>
<th>SE</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship conflict to negative emotions</td>
<td>.478</td>
<td>.044</td>
<td>10.915</td>
</tr>
<tr>
<td>Negative emotions to perceived social loafing</td>
<td>.779</td>
<td>.130</td>
<td>5.976</td>
</tr>
<tr>
<td>Contribution conflict to perceived social loafing</td>
<td>.538</td>
<td>.076</td>
<td>7.120</td>
</tr>
</tbody>
</table>

With respect to testing the moderation effect of negative emotions on the relationship between task conflict and perceived social loafing (H5a and H5b), hierarchical multiple regression analysis was conducted. Table 5 reports all the relevant results in terms of the standardised and unstandardised regression coefficients for the two independent variables and the interaction term, the total variance explained in the form of $R^2$-squares, the significance of the regression coefficients, and significance of the $R^2$-square change after
the interaction term was included in the regression analysis. It can be seen that H5a and H5b do not receive strong support, with both the interaction term and R-squares change non-significant at $\alpha = .05$ (task conflict × negative emotions: $\beta = -.103, p = .115; \Delta R^2 = .010, p = .115$). Thus, the moderation effect of negative emotions on the relationship between task conflict and perceived social loafing is not supported by the data in the current study.

Table 5  
Hierarchical multiple regression analysis predicting perceived social loafing from task conflict, negative emotions and the interaction between task conflict and negative emotions

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Unstandardised</th>
<th>Std. error</th>
<th>$\beta$</th>
<th>$p$</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task conflict</td>
<td>-.032</td>
<td>.092</td>
<td>-.023</td>
<td>.727</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative emotions</td>
<td>1.210</td>
<td>.135</td>
<td>.579</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task conflict</td>
<td>-.055</td>
<td>.093</td>
<td>-.039</td>
<td>.555</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative emotions</td>
<td>1.217</td>
<td>.135</td>
<td>.582</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task conflict × negative emotions</td>
<td>-.332</td>
<td>.209</td>
<td>-.103</td>
<td>.115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$n = 164$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: $^a$ All predictors were mean-centred before being entered into the regression analysis in SPSS.  
$^b p < .01$.  
$^c F$ statistic for $\Delta R^2$: $F (1, 160) = 2.518, p = .115$.

With respect to testing the moderation effect of negative emotions on the relationship between logistic conflict and perceived social loafing (H6a and H6b), hierarchical multiple regression was employed. Table 6 reports all the relevant results in terms of the standardised and unstandardised regression coefficients for the two independent variables and the interaction term, the total variance explained in the form of R-squares, the significance of the regression coefficients, and significance of the R-square change after the interaction term was included in the regression analysis. It can be seen that H6a and H6b do not receive statistical support, with both the interaction term and R-squares change non-significant at $\alpha = .05$ (task conflict × negative emotions: $\beta = -.070, p = .346; \Delta R^2 = .003, p = .346$). Thus, in the relationship between logistic conflict and perceived social loafing, negative emotions do not act as a moderator.

To recapitulate, five conclusions can be made. First, relationship conflict only had an indirect influence on perceived social loafing, as was evidenced by the statistical result that the relationship between relationship conflict and perceived social loafing was fully mediated by negative emotions. Second, contribution conflict had a direct influence on perceived social loafing, and such a relationship was not mediated by negative emotions. Third, negative emotions had a direct effect upon perceived social loafing. Fourth, negative emotions did not moderate the relationship between task conflict and perceived social loafing. Fifth, the relationship between logistic conflict and perceived social loafing was not moderated by negative emotions, either. It is interesting to note that contribution conflict seemed to be more strongly related to perceived social loafing than
did relationship conflict or logistic conflict, as only contribution conflict had its direct
effect on the perceived social loafing while the other two types of conflict did not. Task
conflict should be least associated with perceived social loafing because the zero-order
correlation between these two variables is not significant.

Table 6  Hierarchical multiple regression analysis predicting perceived social loafing from
logistic conflict, negative emotions and the interaction between logistic conflict and
negative emotions

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Unstandardised</th>
<th>β</th>
<th>p</th>
<th>R²</th>
<th>ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistic conflict</td>
<td>.126</td>
<td>.114</td>
<td>.079</td>
<td>.269</td>
<td></td>
</tr>
<tr>
<td>Negative emotions</td>
<td>1.133</td>
<td>.149</td>
<td>.542</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistic conflict</td>
<td>.165</td>
<td>.121</td>
<td>.103</td>
<td>.175</td>
<td></td>
</tr>
<tr>
<td>Negative emotions</td>
<td>1.167</td>
<td>.153</td>
<td>.558</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Logistic conflict × negative emotions</td>
<td>-.120</td>
<td>.127</td>
<td>-.070</td>
<td>.346</td>
<td></td>
</tr>
</tbody>
</table>

n = 164

Notes: *All predictors were mean-centred before being entered into the regression
analysis in SPSS.

b p < .01.

F statistic for ΔR²: F (1, 160) = .894, p = .364.

Table 7  Correlations between perceived social loafing and conflict types, and comparisons
between correlations

<table>
<thead>
<tr>
<th>rSL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ConCft</td>
<td>.615</td>
<td>–</td>
<td>1.373(.172)b</td>
<td>4.596 (.000)b</td>
</tr>
<tr>
<td>2 RelCft</td>
<td>.548</td>
<td>.681</td>
<td>–</td>
<td>4.097 (.000)b</td>
</tr>
<tr>
<td>3 LgtCft</td>
<td>.314</td>
<td>.462</td>
<td>.628</td>
<td>–</td>
</tr>
<tr>
<td>4 TskCft</td>
<td>.045</td>
<td>224</td>
<td>.309</td>
<td>.457</td>
</tr>
</tbody>
</table>

Notes: ConCft = contribution conflict; RelCft = relationship conflict; LgtCft = logistic
conflict; TskCft = task conflict; rSL = correlation of perceived social loafing with
each of the conflict types.

aThe correlations between conflict types are listed below the diagonal. The
t-statistics for comparisons are listed above the diagonal, with p values in the
parentheses.

bTo adjust for type I error, the null hypothesis that there is no difference between
each pair of correlations in the population should be evaluated with the Bonferroni
adjustment by setting the α-level at = .05/6 = .0083.

Table 7 (see also Table 1) reveals the ascending order of the magnitude of the
correlations between perceived social loafing with the four conflict types: task conflict
(r = .045, p = ns), logistic conflict (r = .314, p < .01), relationship conflict (r = .548,
p < .01), contribution conflict (r = .615, p < .01). The t-statistics of the comparisons
between pairs of correlations are reported above the diagonal in Table 7. It is seen that
the strength of the association between contribution conflict and perceived social loafing
is not statistically greater than that of the association between relationship conflict and
perceived social loafing, \( t(161) = 1.373, p = .172 \). However, the association between contribution conflict and perceived social loafing is greater in strength than either the associations between logistic conflict and perceived social loafing \( [t(161) = 4.596, p < .0083] \), or the associations between task conflict and perceived social loafing \( [t(161) = 7.262, p < .0083] \). So, contribution conflict is associated with perceived social loafing more closely than are logistic conflict and task conflict, but the strength of its association with perceived social loafing is not statistically greater than the strength of the association between perceived social loafing and relationship conflict.

5 Discussions

What this study has contributed to academic insights is twofold. First, it has shown that task conflict is actually a double-edged sword in group interaction. On the one hand, task conflict facilitates group members’ proper understanding of the task content and group goals, which may further stimulate group’s creativity and improve group’s productivity (Amason and Schweiger, 1997; Jehn, 1995; Simons and Peterson, 2000; Van de Vliert and De Dreu, 1994). On the other hand, within task conflict lie the seeds of all the other types of conflict, which may bring negative impacts upon group processes. It seems quite contradictory that task conflict can both promote and undermine group performance. Simons and Peterson (2000) resolved this contradiction by pointing out that task conflict finally degenerates into relationship conflict because of group members’ misattribution of task conflict as relationship conflict. This study has not only reconfirmed the Simons and Peterson’s misattribution explanation, but also addressed clearly the content involved in the misattribution: it is the negative implications about one’s ability, value, or worth imbedded in logistic conflict that start relationship conflict; it is also the perception of injustice in reward distribution resulted from logistic conflict that arouses relationship conflict. The empirical results found here can shed light on group practitioners’ consultation about conflict management in times of crisis.

Second, this study has approached the problematic interactions in group from both the instrumental perspective and the developmental perspective. Findings derived from those two perspectives have built up a holistic picture of how perceived social loafing, different types of conflict, and negative vs. positive emotions are interrelated and fluctuate with each other over time in the course of group development. Such a holistic picture is especially necessary for future researchers to make further integration of these two perspectives into one overarching, unified model that can simultaneously explain or predict perceived social loafing from conflict, emotion, and stages of group development. It will also provide group practitioners with the specific knowledge of timely intervention with proper strategies to reduce conflict, regulate emotions, restrain social loafing, and finally increase group cohesiveness, morale, and performance.

For application purposes, the following suggestions can be implied from the findings in the current dissertation regarding lowering the perception of social loafing in the group. First, the rules and norms guiding conflict management and emotional displays should be established and consensually accepted at the beginning of group formation. Those rules and norms can also be revisited or streamlined later if need be. Second, group members’ productivity, quality of output, and punctuality in job completion should be constantly monitored. Third, timely feedback regarding the whole group and individual’s
progress toward the group’s goal achievement should be shared with each member in the group. Fourth, group members’ emotional and relational needs should be well attended to so that positive emotions are well maintained, while critical thinking should be advocated and upheld by all the group members. Fifth, special attention should be given to resolving logistic conflict and contribution conflict. That is, individual task-related responsibility should be clearly, appropriately, and fairly delegated so that every member understands what is expected of him or her, recognises that the assigned portion of the work matches the corresponding job-related ability, and believes that personal gains in the group are attached to the personal contribution to the group. Finally, debates or discussions about the task should be confined to the addressing of the confusions about or disagreements over the content of the job. Any insinuation or attack at personal values, abilities, and worth should be discouraged and zero-tolerated. With all the above six pieces of advice, the perception of social loafing can and should be lowered.

References


Effect of conflict and emotions on perceptions of social loafing in groups


